1. Maritime Safety and Security

The UN Convention on the Law of the Sea (UNCLOS) has been described as the ‘constitution for the oceans.’ UNCLOS neither defines the term ‘maritime safety’ nor ‘maritime security’. The two terms are best defined by the references to them and, in particular, by the special regimes established for their implementation in UNCLOS, although these regimes do not address all concerns as ‘safety’ and ‘security’ concerns.

On that basis, maritime safety includes, amongst others, issues such as: safety of navigation; the construction and sea-worthiness of ships; the qualifications and training of marine personnel and their safety; the safety of passengers and cargo; mandatory equipment and publications; and the prevention, reduction and control of marine pollution.

Maritime security is conceptualised in UNCLOS as threats directed against or threatening the notion of the sovereignty of states.

In literature, there is a tendency to qualify so-called new threats under the umbrella of the protection of security. Such approaches disregard the approach to ocean governance adopted in UNCLOS, especially in relation to fisheries and the protection of marine environment, camouflaging the very clear division of UNCLOS concerning the applicable legislative, implementation and juridical regimes concerned.


Piracy and Armed Robbery

Half of the world’s container traffic and approximately 30% of world trade is handled by ports in the Indian Ocean region; and 60% of oil shipments and 33% of the world’s bulk cargo passes through its waters. The Indian Ocean is also unique, relative to the larger Atlantic and Pacific

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1 Background Paper prepared by the Max Planck Foundation for International Peace and the Rule of Law, Germany.
Oceans, as it has several prominent choke points, including the Malacca Strait, each of which are critical to global trade.\(^5\) Thus, as the Indian Ocean region is essential to ensure global trade and energy security, the issues of piracy and armed robbery of ships are crucial.

Considering the objective of not infringing on the sovereignty of coastal states, the UNCLOS regime concerning piracy is narrowly defined and confined to clearly described acts on the high seas and exclusive economic zones.\(^6\) Accordingly, the regime against piracy does not cover such acts in the territorial seas or in certain straits, for example, the Malacca Strait,\(^7\) since the majority of it is comprised of the territorial seas of three littoral States: Indonesia, Malaysia, and Singapore.\(^8\) This also renders the UNCLOS provisions on hot pursuit redundant, as the right ceases when the ship being pursued enters the territorial waters of its own State or a foreign State.\(^9\) It is evident that in such areas, a regional agreement is warranted.\(^10\)

Any response to piracy and armed robbery in the Indian Ocean would also need to appreciate the unique nature of these threats in different Indian Ocean sub-regions. For example, analysing all reports on acts of piracy and armed robbery in Somalia, the Western Indian Ocean, reveals that 154 incidents were reported in international waters; twelve in territorial waters; and three in the port area.\(^11\) This is in contrast with Bangladesh, in the Indian Ocean region, where seven incidents were reported in international waters; 74 in territorial waters; and 143 in the port area.\(^12\) In Somalia, the perpetrators used guns 74 times (and used knives not at all),\(^13\) whereas in Bangladesh, the perpetrators used knives 104 times and used guns four times.\(^14\) Given the clear divergence in the patterns of the incidents, and the manner and intensity of the perpetrators’ efforts, a one-size-fits-all solution to piracy and armed robbery in the Indian Ocean region would be unsuitable.

**Maritime Domain Awareness**

The response to any maritime security threat requires accurate knowledge of maritime activities. The collective knowledge of what happens at sea, including knowledge about

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\(^7\) ibid.

\(^8\) ibid.

\(^9\) UNCLOS, Art 111(3)

\(^10\) Rheny Pulungan (n 5).


\(^12\) ibid.

\(^13\) ibid.

\(^14\) ibid.
criminal and illegal activities, and an understanding of maritime patterns of life, is known as Maritime Domain Awareness (MDA).\textsuperscript{15} The state of MDA in the Indian Ocean varies on a sub-regional basis, for example, the Western and the South-East Asian Indian Ocean. Overall, it is evident that the whole Indian Ocean region needs to develop its MDA capabilities.

In the Western Indian Ocean region, a majority of MDA functions are provided by international actors, such as the European Union’s Naval Force Atalanta, or within the framework of internationally funded projects.\textsuperscript{16} One such project is the Djibouti Code of Conduct (DCoC)\textsuperscript{17} process, a regional agreement for training and information-sharing\textsuperscript{18} under which three information-sharing centres have been established in Yemen, Kenya and Tanzania. In 2017, the scope of the DCoC was considerably broadened beyond piracy and armed robbery against ships to include other transnational organised crime in the maritime domain.\textsuperscript{19} Another MDA project in the Western Indian Ocean region is the Programme to Promote Regional Maritime Security, which has launched two centres for information-sharing and operational coordination under the Indian Ocean Commission.\textsuperscript{20} Despite these initiatives, it has been argued that the region is not ready to take over from international actors and provide MDA functions, and that little progress has been achieved in this regard.\textsuperscript{21}

In the South and South-Eastern Indian Ocean region, several MDA initiatives exist. One such framework is the Information Fusion Centre (IFC), which is an initiative of the Singaporean Navy. The IFC is linked to nearly 45 agencies from 28 countries and works to generate a maritime situation picture.\textsuperscript{22} Another initiative is the Information Management and Analysis Centre (IMAC) by the Indian Navy, which connects maritime surveillance systems and shares intelligence and information about unusual or suspicious movements and activities at sea for use by Indian agencies.\textsuperscript{23} Another significant framework is the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against ships in Asia (ReCAAP), which was the first regional government-to-government agreement to promote and enhance cooperation against piracy and armed robbery of ships in Asia.\textsuperscript{24} It established the ReCAAP Information Sharing Centre for the sharing of piracy and armed robbery related information, which also cooperates with DCoC. The IFC and IMAC have been critiqued by some for lacking

\textsuperscript{16} ibid.
\textsuperscript{17} Djibouti Code of Conduct concerning the Repression of Piracy and Armed Robbery against Ships in the Western Indian Ocean and the Gulf of Aden 2009.
\textsuperscript{18} The DCoC was initiated and is supported by the UN International Maritime Organization and the European Union.
\textsuperscript{19} The Jeddah Amendment to the Djibouti Code of Conduct 2017.
\textsuperscript{20} Christian Bueger (n 15).
\textsuperscript{21} ibid, 3-5.
\textsuperscript{23} ibid.
\textsuperscript{24} ‘About ReCAAP’ (ReCAAP) available at http://www.recaap.org/about_ReCAAP-ISC.
institutional and technological networking to generate a common maritime picture for Indian Ocean countries; and for not being linked to other regional MDA systems.\textsuperscript{25}

There is a need to clarify the relationships between national and regional MDA.\textsuperscript{26} This would increase synergies and enhance the common interest in more accurate and up-to-date maritime intelligence in the region. Another possibility is the idea of a pan-Indian Ocean MDA arrangement. The Indian Ocean Rim Association (IORA), which is the only multilateral forum connecting the littoral states of the Indian Ocean region,\textsuperscript{27} is one possible forum for such a framework. Promisingly, the Jakarta Concord, signed by the Heads of State of all IORA members, commits all states to promote maritime safety and security in the region by strengthening regional cooperation to address transboundary challenges, including piracy, armed robbery at sea, terrorism, trafficking in persons, people smuggling, irregular movement of persons, illicit drugs trafficking, illicit trafficking in wildlife, crimes in the fisheries sector, and environmental crimes.\textsuperscript{28} Also, the IORA Action Plan 2017-2021 states the intention to explore a regional surveillance network of existing member states institutions, including sharing of data and exchange of information on maritime transportation systems as a long-term goal.\textsuperscript{29}

Many MDA initiatives, including DC\textsuperscript{o}C and ReCAAP, were implemented to respond to piracy and armed robbery against ships. However, accurate and high-quality intelligence is not limited to these issues, and it comprises of the backbone of any law enforcement effort at sea given the vast space that needs to be policed with limited resources.\textsuperscript{30}

\textit{Terrorist acts Involving Shipping and Other Maritime Interests}

The Indian Ocean region has experienced terrorist attacks on maritime targets, including the attack on the USS Cole in 2000 and the MV Limburg in 2002 off the coast of Yemen by Al-Qaeda; the 2008 Mumbai attacks by Lashkar-e-Taiba; the 2004 attack on SuperFerry 14 in the Philippines by the Abu Sayyaf Group; and the 2014 attempt on a Pakistani navy ship by Al-Qaeda in the Indian Subcontinent.\textsuperscript{31} Further, terrorist groups such as Al-Qaeda and ISIS are reportedly active in many countries in the Indian Ocean region. Combined with the analysis about the importance of the Indian Ocean to trade and energy security globally, maritime terrorism is a pertinent threat in the region.

\textsuperscript{25} Vijay Sakhuja (n 22).
\textsuperscript{26} Christian Bueger (n 14) 7-8.
\textsuperscript{28} IORA, Jakarta Concord (March 2017) para 16(a).
\textsuperscript{29} IORA, IORA Action Plan 2017-2021, IOR/COM/20ANNIV/17/DOC3.1.
\textsuperscript{30} Christian Bueger (n 14).
Outside UNCLOS, but in conformity with it, a legal regime has developed to counter terrorist attacks against vessels and maritime installations. This regime differs from the one on piracy. One has to distinguish between preventative measures and those being of a repressive character.

Preventative measures are predominantly reliant upon information gathering. In this respect, coastal states have wide discretion and some preventative measures have been detailed in international agreements associated with UNCLOS. For example, the International Convention for the Safety of Life at Sea (SOLAS), Chapter V, sets out provisions on vessel monitoring systems; namely automatic information systems and long-range identification and tracking systems. However, automatic information systems are only required to be fitted aboard all ships of 300 gross tonnage (GT) and upwards engaged on international voyages, cargo ships of 500 GT and upwards not engaged on international voyages and all passenger ships.\textsuperscript{32} Also, SOLAS Chapter XI-2 incorporates the International Ship and Port Facility Security Code, which includes measures that enhance maritime security on board ships and at ship/port interface areas.\textsuperscript{33} However, the Code only applies to passenger and cargo ships of at least 500 GT, and excludes fishing vessels regardless of their size.\textsuperscript{34} Both measures exclude smaller vessels, which have previously been used in terrorist attacks,\textsuperscript{35} including the Mumbai attack, when terrorists used a fishing vessel to bypass security.\textsuperscript{36} Preventative measures are more effective if supported by cooperative efforts of states, particularly on a regional basis.

The ASEAN region has adopted a collaborative approach to countering terrorism, by improving the geopolitical climate through confidence building measures; shared intelligence; and capacity building and enhanced interoperability.\textsuperscript{37} Confidence building measures include numerous platforms relating to maritime security, such as the ASEAN Regional Forum, the ASEAN Defence Ministers’ Meeting and the ADMM-Plus Maritime Security Working Group.\textsuperscript{38} Shared intelligence has been fostered by cooperation between ReCAAP ISC, IFC, regional intelligence agencies, navies, coast guards and the shipping community.\textsuperscript{39} The region has reaped the benefits of intelligence sharing, for instance in 2014, the perpetrators responsible for hijacking oil tanker V.L.14 in the South China Sea were interdicted within 16 hours.\textsuperscript{40} Interoperability is enhanced by multilateral maritime exercises at sea, such as Maritime Information Sharing Exercise and the Western Pacific Naval Symposium’s Multilateral Sea
Exercise. These information exchanges strengthen interoperability between navies and other maritime agencies, allowing for quick and decisive responses to threats. The ASEAN model exemplifies the benefits of a collaborative and regional concerted effort to respond to maritime security issues.

**Drug Trafficking**

Drug trafficking is a major issue within the Indian Ocean region, which consists of the so-called ‘Golden Triangle’ and ‘Golden Crescent’. UNCLOS provides that all states must cooperate in the suppression of illicit traffic in narcotic drugs and psychotropic substances engaged by ships on the high seas, and states may request cooperation from other states when they have reasonable grounds to believe that a ship flying its flag is engaged in illicit traffic. Coastal states have prescriptive and enforcement jurisdiction to respond to drug trafficking within their territorial waters and contiguous zone and may also exercise criminal jurisdiction over vessels passing through their territorial waters, where such measures are necessary for the suppression of illicit traffic in narcotic drugs and psychotropic substances. Although, the obligation to stop trafficking of narcotic drugs is of a universal character, not all coastal states are able or willing to fulfil that obligation.

The specific provisions in the UN Drugs Convention concerning illicit traffic by sea includes the requirement of cooperation between parties; enabling parties to notify flag states of suspicious activity, and to take actions, such as boarding and search of the vessel with the authorisation of the flag state.

Certain regional arrangements provide for enforcement activities in the territorial waters of foreign States. For example, the 2003 Caribbean Agreement includes provisions allowing for the possibility of third states to exercise law enforcement powers within the territorial seas of State parties. Additionally, states have also entered into ‘shiprider’ agreements, whereby officials of one state that have embarked on the vessel of another state grant the latter permission to conduct law enforcement activities in the former’s waters. Such collaborative and regional approaches are crucial in order to fill the void left by the inability and unwillingness of certain coastal states to suppress drug trafficking.

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41 ibid.  
42 Bhagya Senaratne (n 3) 15.  
43 UNCLOS, Art 108.  
44 For example, UNCLOS Arts 19(2)(g) and 33.  
45 UNCLOS, Art 27(1)(d).  
47 UN Drugs Convention, Art 17.  
48 Agreement concerning Cooperation in Suppressing Illicit Maritime and Air Trafficking in Narcotic Drugs and Psychotropic Substances in the Caribbean Area 2003.  
49 N Klein (n 2) 79.  
50 ibid, 312.
Illegal, Unreported and Unregulated Fishing

The fight against illegal, unreported and unregulated (IUU) fishing is an essential element in the worldwide approach towards the sustainable management of fisheries. The regimes provided by UNCLOS and the Implementation Agreement concerning the management of straddling fish stocks, attempts to safeguard the fisheries resources for the generations to come, and to provide a balance between the various interests of coastal states, as well as long distance fishing fleets. In considering the existing regimes, account has to be taken of the fact that states have different competencies in respect to certain zones (territorial sea and exclusive economic zones), and to different species (long distance fish resources, such as tuna; coastal stocks; catadromous species; and anadromous species, such as salmon).

IUU fishing is a serious issue in the Indian Ocean, caused by high demand, depletion of fish stocks in other parts of the world, an increased number of fishing vessels from outside the region; the lack of effective regional fisheries management organisations; the increased sophistication of fishing vessels and equipment; subsidies; and the limited state resources to invest in policing the exclusive economic zones.51

Increasingly, we are witnessing the emergence of new cooperative efforts by Regional Fisheries Management Organisations (RFMOs) to combat IUU fishing. This includes reporting on fishing activities by the RFMO members through monitoring and inspections; catch documentation schemes; and the compilation of lists of vessels suspected of IUU fishing to increase scrutiny of such vessels and with the intention of encouraging the relevant flag States into compliance.52 These measures seek to capitalise on regional cooperation to create a more effective regime to combat IUU fishing. One example of a regional collaboration that has improved policing abilities is the FISH-i Africa initiative that has been implemented in East Africa to improve information sharing, training and enforcement.53 Its successful VIGILANCE programme operates at a national, regional, and global level, to check and verify the identities of licensed and flagged fishing vessels together with their owners and operators that operate in the region.54 The FISH-i Africa partnership has resulted in the denial of fish landings at multiple ports and millions of dollars in fines.55

52 Natalie Klein (n 2) 317.
55 Pew Trusts (n 52).
In the attempt to fight IUU fishing, new forms of implementation have been developed due to the efforts of the RFMOs. A prime example of this has been the recognition of Port State Jurisdiction. Under the Port State Measures Agreement (PSMA),\(^{56}\) Port States may require, at a minimum, information from foreign vessels seeking to enter their ports as to the identity and journey of the vessel, its fishing and transhipment authorisations, the catch on-board and the catch to be offloaded.\(^{57}\) Based on this information, Port States determine if there is sufficient proof that the vessel has engaged in IUU fishing or activities in support of such fishing, and if so, may deny entry into its port.\(^{58}\) In order to promote the effective implementation of the PSMA, state parties are required to cooperate and exchange information related to the objective of the PSMA with relevant states, international organisations, and regional fisheries management organisations; and to cooperate at a sub-regional, regional and global level in the effective implementation of the PSMA.\(^{59}\)

In assessing the regime on fisheries, consideration of the limits of coastal states envisaged in the implementation of their legislation concerning fisheries is required. Only legislation in conformity with UNCLOS may be enforced and further limitations are contained in Article 73 of the UNCLOS. The jurisprudence of ITLOS confirms that the confiscation of fishing vessels is possible, although it also provides for juridical challenge of the measure (see UNCLOS, Article 292).\(^{60}\)

*Damage to the Environment*

Usually, damage to the environment in the context of conversations about maritime safety and security would refer to vessel, land and other source pollution, and intentional severe pollution of the marine environment. While this would be true in the Indian Ocean region as well, there are several unique environmental threats in the region, especially in the South Asia region.

The Indian Ocean region is prone to natural disasters.\(^{61}\) The impact of natural disasters on Indian Ocean states is exacerbated by several factors, including densely populated areas; poverty; and low levels of development.\(^{62}\) Moreover, there are no regional arrangements for early warning, risk reduction, disaster mitigation, regional responses, post-disaster relief and rehabilitation.

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\(^{57}\) Port State Measures Agreement, Art 8 and Annex A.

\(^{58}\) Port State Measures Agreement, Art 9.

\(^{59}\) Port State Measures Agreement, Art 6.


\(^{62}\) ibid.
IORA could be a potential forum for such an initiative.63 The suitability of IORA is supplemented by the fact that its scope and mandate has been widened to include disaster risk management as a priority.64 The Jakarta Concord affirms the member states’ undertaking to strengthen regional disaster preparedness and to enhance cooperation with stakeholders in addressing issues related to natural disasters through, inter alia, capacity building and sharing of information.65 The IORA Action Plan 2017-202166 also includes several intended measures in this regard, including the long-term goal of developing resilience through early warning systems and regional exercises, and training for coordinated disaster risk reduction.

Climate change and rising sea levels have potentially serious implications for states. One such concern is that the rising sea-level could move maritime baselines inward, thus displacing the territorial sea and exclusive economic zones that are drawn from baselines. Another critical threat is the submergence of small island nations.

This threat is particularly acute in the Indian Ocean region. Migration has already been caused by rising sea levels with the submergence of Bangladesh’s Bhola Island.67 There is also the threat of the submergence of Maldives in the future, given that 80% of its territory has an elevation of one meter or less above the sea level.68

Again, it has been suggested that IORA may be the regional forum that is suited to address this issue. In this regard, initial steps appear to be the acknowledgement in the Jakarta Concord of the vulnerability of coastal and Small Island Developing States due to climate change and ocean acidification; the need to work together to implement the Paris Agreement on climate change; and the need to enhance cooperation with stakeholders in addressing issues related to climate change.69

**Collaboration between Port State Control Regimes**

Port State Control is the inspection of foreign ships in ports to verify that the ship and its equipment comply with international rules and regulations, and that the ship is manned and operated in compliance with such rules.70 Generally, it is implemented through regional memoranda of understanding (MOUs), and currently, nine such regional MOUs have been

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63 ibid.
64 IORA, ‘Priorities and Focus Areas’ available at http://www.iora.int/en/priorities-focus-areas/overview; Also see IORA Charter, Art 3(c).
65 IORA, Jakarta Concord 2017, para 16(d).
68 ibid.
69 IORA, Jakarta Concord 2017, para 16(d).
signed. These MOUs are not treaty instruments, but are administrative agreements between the maritime authorities of the states concerned.

Recently, there has been recognition of the need to improve the Port State Control regime, especially to boost collaboration, harmonisation and information sharing amongst states and with the IMO. Some of the matters discussed include the possibility of promoting compatibility between the regional MOUs; mutual recognition of other regimes activities and inspections; and the development and maintenance of a coordinated list of under-performing vessels.

Reformation of the current Port State Control regime is in its nascent stages and much needs to be done before harmonisation and information sharing can become a reality. Such a global approach would create synergies that would enhance and further global interests in maritime safety and security.

Questions for Discussion

1. How much of a threat is piracy in the Indian Ocean and what needs to be done to facilitate more effective prosecution of piracy in the region?

2. The Indian Ocean is marked by a variety of sub-regional information-sharing and naval cooperative mechanisms, which however lack grounding in a robust legal framework. How can the relationship between national and sub-regional MDA initiatives be improved in the Indian Ocean region, including with regard to natural disasters?

3. How can SOLAS, ISPS and other applicable IMO instruments and their implementation be improved to better respond to the threat of maritime terrorism?

4. What are some of the measures that can be implemented to improve the capacity of coastal states to repress and prevent drug trafficking?

5. Can cooperation on so-called non-traditional threats be used to initiate further dialogue and confidence-building on inter-state security concerns, especially regarding naval activities?

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71 Europe and North Atlantic (Paris MOU); Asia and the Pacific (Tokyo MOU); Latin America (Acuerdo de Viña del Mar); Caribbean (Caribbean MOU); West and Central Africa (Abuja MoU); the Black Sea region (Black Sea MOU); the Mediterranean (Mediterranean MoU); the Indian Ocean (Indian Ocean MOU); and the Riyadh MOU. The United States Coast Guard maintains the tenth PSC regime. IMO, Port State Control.


74 Ibid.