**Securing the Global Oceanic Commons: A Proposed Architecture***

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## Introduction

The 21st Century is characterised by two major trends in the context of the oceanic commons. First is the re-emergence of non-State violence - *barbarism* - defined as acts of mindless violence, is a repudiation of the social contract enshrined in the Peace of Westphalia, that has taken several centuries, countless wars and endless conflicts to forge as a civilized instrument of social conduct. No institutionalised arrangement exists for resolving violent disputes between non-nation State actors – barbarians, terrorists, extremists – and the nation-state viewed as a comity of nations.

The other trend is that of ultra-rapid industrialisation across the developing world. The projections are that the world economy would grow by 4.20 per cent until 2015, with the non Organisation for Economic Cooperation and Development (OECD) countries growing at 6.70 per cent against only 2.30 per cent of the OECD countries.1 What this translates to, in security terms, is that as economies develop the race for resources, commodities and markets becomes very intense between the economies who already have these resources and the others who need these very resources for their own growth. Market forces, in the long run, may not be able to balance demand and supply of resources causing State intervention in the national interest. Resource geo-politics is the grand strategy that is now being played out in the international arena and is the central source of possible conflict in the future, particularly, at sea.

## Threats to Maritime Security

From these emerging trends of the 21st century, seen in the context of ocean spaces, arise the contemporary threats to maritime security that in turn challenge the peace of the oceanic commons. The threat to maritime order at sea and the vulnerability of the maritime frontier can be from nation-states, hybrids (State sponsored terrorists), barbarians and environmental threats – either human induced or engineered or divinely ordained as natural outcomes of non-sustainable development. That these threats are serious, from a global perspective, can be gauged from the fact that two-thirds of all humanity and much of the global commercial and industrial infrastructure is contained within 100 nautical miles from the coastline.

Oceans are the global common for the intercontinental transportation of goods; it is a source of minerals, hydrocarbons and energy; and it facilitates the global weather system and its transoceanic currents sustain the earth's weather system. The sea is also the earth's largest garbage dump. The seas also simultaneously offer great opportunities for miscreants of all types to create insecurity not only in the oceans but also in the littorals. Hybrid terrorists (terrorists sponsored by state) operations have the potential to put at risk cities and ports, nuclear and industrial installations, leisure and adventure tourism centers all along the coast and the island territories.

The opaque vastness, veiled anonymity and limited governance of the oceans create their own challenges for legitimate state forces to maintain maritime order and hence states shun responsibility and accountability since legitimate authority in these waters do not exist. Therefore, it is important at this juncture to reassess threats, quantify risk associated with these risks and prioritise its programmes in the interest of developing a model for comprehensive maritime security. These assessments, seen at both domestic and international level can provide direction towards a new architecture and a multilateral mechanism to secure the oceanic commons on which much of international commerce, regional stability and national security rides.

## Maritime Security Concerns

For India specifically, the threat to national sovereignty emerges mainly from a few State actors. The prospect of a regional clash escalating to an international conflict that would draw in extra-regional powers is unlikely but cannot be totally discounted. In the Indian context, the capability growth of some navies is a matter of serious concern, particularly when bilateral disputes about land and maritime boundaries, EEZ delineation, water use and resource sharing exist. So long as these capabilities do not impact the right to freedom of navigation and unimpeded lawful commerce that feed the Indian economy, they can be sidelined as the legitimate right and a sovereign decision of that country.

For the world also, the oceans have become a source of insecurity. Some nation-states, such as Iran, have defied UN resolutions2 and have strategised to develop anti-access capabilities through shore-based interdiction mechanisms such as long range missiles and coastal batteries, and consequently indirectly threaten maritime trade as a hedge against international action for their transgressions. In the process about 60 per cent of the World's oil and 40 per cent of the World's gas resources are vulnerable.

In some parts of the world, internal politics and social deprivation have created a virtually floating refugee population that no nation would voluntarily accept and hence seaborne human smuggling into other states is assuming serious proportions as it directly impinges upon demographics and social stability of the host nation. All of these immigrations sail across the maritime frontier, since seaborne illegal migration is facilitated by relative lack of policing and the consequential porous nature of the coastal regions of the world. However, the security implications remain the same. The reason that coastlines are not accorded the same prioritisation that land borders enjoy is because transgressions over land frontiers constitute visible violation of sovereignty whereas, ingress through the coastal frontier somehow is not seen as violation of State sovereignty.

Barbarians have also begun to move seawards to launch their hideous operations that threaten population and assets on maritime frontiers. Seaborne violence, as evidenced from the Bali bombings and the recent Mumbai attacks, is emerging as a viable alternative and perhaps even a supplement to land-based attacks. At sea, today the visible manifestation of barbarism is piracy and armed robbery. Valuable cargoes carried in equally expensive ships are seized by pirates off the coast of Africa, in the Straits of Malacca and off harbours in South Asia and released only after

handsome ransoms are paid for lives of seamen and goods. What the future portends can be even more drastic – these very ships can be used by terrorists as weapons in attacking ports and harbours with devastating effect on the economy and downstream turbulence on international trade and relations, since each ship has several nationalities as stakeholders like the crew, owners, insurers or the charterers.

Non State terror groups such as the Al-Qaeda and previously the Liberation Tigers of Tamil Eelam (LTTE) own vessels of their own. The potential to cause massive mayhem and simultaneous disruption to the economy is evident when one imagines the impact of blowing up a hijacked mid-sized Liquefied Natural Gas (LNG) carrier in a busy harbour such as Mumbai.3 Everything within about 1,500m would be engulfed in flames (discounting secondary fires), potentially 500,000 people would be direct casualties and property worth several billions would lie in ruins. Toppling a container carrier in the narrow channel or fairway would block traffic and stop port operations for several months with enormous impact on port revenues and national economy.

With the requirement for fitment of Automated Information Systems(AIS) having become mandatory on vessels having displacement of greater than 300 tonnes, the Container Security Initiative (CSI) gaining increasing acceptance and the implementation of the International Ship and Port Security Code, the option of using small vessels for terrorist operations is attractive. Small crafts and submersibles for smuggling of not just drugs, commodities, metals, small arms and light weapons but also seaborne terrorist strikes have become the forte of barbarians. High-speed crafts packed with Improvised Explosive Devices (IEDs) and high explosives have also been used on suicide boats to ram into bigger vessels and such an operational strategy is not difficult to implement, even today, in a busy port. The threat envelope at sea, particularly in closed harbours and ports, therefore, now includes small vessels and shallow semi submersibles also.

In the future, weapons of war and mass destruction shipped by sea could possibly be traded at sea to finance terror and destabilisation operations ashore. Technology has enabled the use of sophisticated seaborne vessels, including submarines, by drug syndicates and human traffickers to facilitate contraband transfers. Thus, more than nation-states, transnational barbarians have become the immediate larger threat at sea. Unlike air traffic which is highly regulated with each airborne aircraft being under the control of one or the other Air Traffic Control Centre, ships at sea do not report to a maritime traffic centre and there is ambiguity about the definite position of ships at sea.

Faced with these threats from the sea, fundamental changes in the international maritime security environment have been engineered through regulation of international shipping with the introduction of the International Ship and Port Facility Security Code, CSI, Proliferation Security Initiative, and so on. In addition, advanced technologies of automatic messaging, sophisticated online ship/crew database, seamen screening systems have provided some respite.

However, no one nation or agency can mitigate against disruptive maritime threats on its own strength and regrettably the global oceanic commons today are no more secure than they were at the end of the 20th century.

**International Affirmative Action**

At the international level, there is the foremost requirement to regulate global seaborne traffic more reliably, accurately and timely since early detection of emerging threats allows better resource application. This would require basically two divisions of work. First, is the surveillance and monitoring aspect and the second, is the enforcement function. So far as surveillance and monitoring is concerned, rapid strides have been made through the aegis of the IMO in the last decade. The next step, it is proposed, would be to adopt an internationally accepted Maritime Routing and Reporting System (MARRS). It could be operationalised through the respective Navigational Warning Area (NAVAREA) coordinators with the objective of globally consolidating real-time maritime domain awareness through a shared common operational picture. The basic concept would be to organise the sea lanes of communication (SLOCs) into specified routes (outbound and inbound) with geographic reporting points (usually crossing points between different routes) that would be managed by the NAVAREA coordinator. Transfer of the operational plot, AIS or Long Range Identification and Tracking (LRIT) 4 information, would be formalised in a manner that when vessels transfer from one NAVAREA to another, control and monitoring responsibilities are also transferred concurrently in a formal manner.

The proposal is akin to the ‘flight plan’ concept followed in the aviation sector which necessarily has to be filed before any aircraft is allowed to get airborne. Similarly a ‘passage plan’, with specified Estimated Time of Arrival (ETA) at different points of the route, supplemented with a position, course and speed report rendered every four hours would pretty much map the entire seaborne traffic. Delays in ETA or diversion without intimation at the next reporting station would set off alarms and such violations are immediately recognised and corrective actions initiated before these assume critical proportions.

Though the international mandate is for fitment of AIS and LRIT only on vessels of displacement more than 300 tonnes, national legislation should reduce this requirement to vessels up to 10 tonnes with Distress Alarm Transmitters (DAT) included. Navies could cite security and other constraints to share information on warship movements, but this would have to be overcome by larger considerations and warships must not be exempt from these devices. They may however, incorporate appropriate security overlays to protect operational security. Working on such an agreed protocol may take many years but work must begin now.

The second aspect is that of enforcement of international law in the global oceanic commons. India, together with other powers, could take the initiative of creating a voluntary Indian Ocean Constabulary Force (IOCF), a regional instrument of law enforcement with specific jurisdiction limited to the high seas. The maritime asset base to operationalise the Force may be drawn not only from coast guard, naval or marine police but also from merchant marine resources of say, Australia, France, India, Japan, South Korea, South Africa, and the USA. This force could implement the MARRS architecture proposed in Figure 1. Subsequently membership could be expanded on ‘each according to his capacity’ basis. It would help immensely if such a force has UN recognition or mandate. ‘Violators’ of the sanctity of the global oceanic commons could be tried in the International Court of Justice under the aegis of the UN and not by any one participating nation. Of course, a common criminal procedure code would need to be also agreed to.

Though this concept is not easy to implement, particularly on jurisdictional issues and complex authority-responsibility relationships, it would perhaps find lesser opposition if a civilian character of a law enforcement agency is imparted to it. Therefore, assigning a 'Commander Task Force' (CTF) designation to such a constabulary function would most certainly be a proposal killer. Instead assigning a civilian title such as 'Superintendent', Indian Ocean Constabulary Force, would allay some fears. The Superintendent should be supported by international legal and state policing authorities on his staff/team.

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| Objective | Globally Consolidate real time maritime domain awareness through a shared common operational picture of all seaborn traffic |
| Concept | Organise the SLOCs as:-<br>Specified Point Outbound and Inbound routes<br>Definite Geographic Reporting Points |
| Operationalisation | Monitored by the NAVAREA Coordinator that integrates :-<br>AIS Architecture<br>LRIT Systems<br>Satellite Based Surveillance Systems |
| Technology | ITeS for consolidating seaborne traffic database IMO, Lloyds National Shipping and Fishing Registries. |

**Figure 1. Maritime Routing and Reporting System (MARRS)**

**The National Agenda**

Whilst at the international level the proposal for MARRS and the IOCF can be debated and refined and implemented for the global good, maritime security risks in the territorial waters must also be addressed as a common national agenda for all maritime nations. In India, the civilian segment of maritime security is especially at risk because of inadequate focus on this aspect of national security. Coastal security and policing of territorial waters needs preponderant priority and cannot be relegated to the back burner in any State since this is the interface between the oceans and the land. Here again a similar model of surveillance and rapid reaction support forces can be conceptualised. For meeting surveillance functions a mix of integrated coast radar/AIS/LRIT stations, High Frequency Surface Wave Radars for long range warnings, Unmanned Aerial Vehicles, port access and harbour defence systems can be conceived which all together converge actionable information at the national coastal security headquarters. This headquarters would be the national interface with the MARRS and the IOCF.

The second arm of this initiative would address force protection measures. In India, first intervention rapid reaction forces would be from the newly commissioned *Sagar Prahari Bal*. This initial 1000 strong force with support of about a 100 Fast Interceptor crafts has been approved by the Government and would be fully operational in a few years. Obviously this is hardly adequate to cover the 186 ports and the 7615 kms of coastline but it is a beginning. *The Sagar Prahari Bal,* once it assumes a responsible mass, would work with the IOCF and thus integrate into the international maritime security architecture for securing the oceanic commons.

Needless to say, a central organisation at the national level would be required to oversee the smooth functioning of these measures and resources. The foremost task would be to review force structures and force composition so that the entire threat and vulnerability spectrum of hybrid maritime security is seamlessly addressed. Such an exercise would be more about force restructuring within available resources, as different from force modernisation. It would, of course, make far more sense if all maritime force structure planning is centrally organised so that not only are duplications and overlaps definitely avoided between the competing maritime agencies but more importantly, voids overlooked by individual maritime agencies are determined and filled as part of a national exercise in ensuring comprehensive maritime security. Such an exercise should be undertaken under the auspices of the Adviser, Maritime Security, leading a team of non-partisan maritime security experts.

**Tier III Action**

Seaborne threats to maritime security, in the final analysis, have their origins ashore. Therefore, the interface between the sea and land needs to be also addressed to ensure security of the global oceanic commons. Therefore, the third tier would be the maritime states and districts of the Country. The requirement would be to sensitise the local population about seaborne threats and intrusions to the same extent as the frontier states of the hinterland have been sensitised to land border incursions. The administrative machinery may need to be realigned to these realities so that civic action supplements state action in the intelligence gathering, monitoring and reporting chain. Local coastal defence craft as a first intervention force would be required to be located at the minor ports which are most vulnerable to security transgressions. These coastal stations could be linked with the national coastal security headquarters and in turn to MARRS.

**Conclusion**

It is now given that as the global economy develops and world trade increases the flow of goods and resources across the global oceanic commons will witness a sea change in volumes and complexity. The SLOCs will be under threat from state, hybrid and barbaric forces acting to further their narrow interests and in conflict with the global good. Armed intervention by the states to seize assets and territories calls for cooperation between all stakeholders to overcome:-

(a) Anti-access and area denial strategies of some states, if need be by unified force.

(b) Hybrid actors promoting active illegal immigration and terrorism from the sea.

(c) Barbarians unleashing terror through capture and killing of innocents at sea and damage / destruction of property and merchandise.

(d) Illegal dumping of toxic and nuclear wastes which is endangering the oceanic eco-system and threatening the very survival of humankind.

The global oceanic commons cannot be governed, controlled or even managed by the action of any one state, however powerful or omniscient. Neither can ectopic crisis management organisations such as ad hoc task forces provide a lasting solution. These at best, achieve consequence management and impart an avoidable military character to what are essentially constabulary functions as for example, the control of piracy off the East Coast of Africa. Instead, policing forces are a more acceptable format in democracies and countries with liberal values. The stakeholders are numerous and their efforts and interests are dispersed. Collating a common operational picture through seamless transfusion of information, and backed up by first-line reaction forces – either international, regional or national and voluntarily organised or forcefully implemented – is a must if comprehensive maritime security is to become a reality in the future for the global good.

This paper has proposed the creation of a Maritime Automated Routing and Reporting System (MARRS) to address reliable, accurate and timely surveillance of the oceanic commons. This would be supplemented with national effort through an integrated coastal surveillance network. Towards authoritative governance of the oceanic commons this paper has proposed the creation of an Indian Ocean Constabulary Force under a commonly agreed framework and constabulary powers of law enforcement. At the national level, maritime states, in their own interest, must create rapid reaction forces, such as the Indian Sagar Prahari Bal, with the appropriate resources for interdicting potential threats in territorial waters. These forces would integrate with the IOCF in the long term.

Finally, the paper recognises that these are but ideas and for them to fructify into reality much more granularity in concept definition, study of international and national legal frameworks of action and capturing technology supplements to human endeavour would need to be incorporated.

*This Paper is based upon “Maritime Threats, Risks and Priorities: An Indian Perspective” presented by Commodore Sujeet Samaddar, NM (Retd), at New Delhi, in January 2010 at the Centre for Naval Analyses-National Maritime Foundation Conference.

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