COASTAL SECURITY

The Indian Experience

PUSHPITA DAS

COASTAL SECURITY:
THE INDIAN EXPERIENCE

PUSHPITA DAS

idsa

INSTITUTE FOR DEFENCE
STUDIES & ANALYSES

CONTENTS

ACKNOWLEDGEMENTS

MAP 1

India's Coastline

INDIA

Arabian Sea

Mumbai ★

Kolkata ★

Vishakhapatnam ★

Bay of Bengal

Mangaluru ★

Chennai ★

Lakshadweep

Andaman & Nicobar

Legend
— India's Coastline
★ Coastal Places

Coastal area:
Length = 7516.6 km
Stretches over nine states and 4 union territories
Forces deployed= Navy, coast guard, marine police
Coastal police stations = 55
Check posts = 9

MAP NOT TO SCALE

INTRODUCTION

India's coasts have always been vulnerable to criminals and anti-national activities. Numerous cases of the smuggling of goods, gold, narcotics, explosives, arms and ammunition as well as the infiltration of terrorists into the country through these coasts have been reported over the years. The smuggling of explosives through the Raigad coast in Maharashtra and their use in the 1993 serial blasts in Mumbai, and the infiltration of the ten Pakistani terrorists through the sea route who carried out the multiple coordinated attacks in Mumbai on November 26, 2008, are the most glaring examples of how vulnerable the country's coasts are.

The Indian government had been aware of the criminal activities that are carried out through the country's coasts and had been implementing corrective measures from time to time. However, these measures have been mostly reactive and piecemeal in nature. Preoccupation with the defence and security of land borders had prevented the Indian policymakers from recognising the urgency of securing the coasts against sea-borne threats and challenges. As a result, the component of coastal security did not figure prominently in the national security matrix until the terror attacks of November 26, 2008. The magnitude of the attacks was so intense that the government was galvanized into putting in place a mechanism for securing the coasts. Since then, coastal security has become a buzzword in the national security discourse.

Even though coastal security has emerged as an important topic for the deliberations, no definitive definition of the subject has been put forth. The lack of definition, however, does not imply that an understanding of the topic does not exist among policymakers. Broadly, coastal security is understood as a subset of maritime security that involves securing the country's coasts by guarding its maritime approaches against any threat or challenge that originates from the sea. These threats and challenges are sub-conventional in nature having a

lower threshold of violence. In other words, coastal security can be defined as protecting the country's coasts by securing the adjacent sea against the activities of non-state actors and criminal groups.

As mentioned above, India's coasts have been susceptible to various kinds of sea-borne threats and challenges. This vulnerability stems from a number of factors, the most important being the configuration of the country's shoreline and its geographical location. And it is compounded by the unsettled and disputed nature of some of India's maritime boundaries. The existence of vital strategic installations, together with increased maritime traffic along the coasts adds to the problem.

Topography

India has a 7,516.6 kilometre long coastline, which includes 5,422 kilometres of coastline in the mainland and 2,094 kilometres of coastline bordering the islands. The peninsular coastline of the country is shaped by the Bay of Bengal in the east, the Indian Ocean in the south and the Arabian Sea in the west, and is spread over nine states and four union territories, namely, Gujarat, Daman and Diu, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Puducherry, Andhra Pradesh, Odisha, West Bengal. In addition are the two island groups: Lakshadweep and Minicoy in Arabia Sea, and the Andaman and Nicobar in the Bay of Bengal.[1]

India's coasts are characterised by a diverse range of topography such as creeks, small bays, back waters, rivulets, lagoons, estuaries, swamps, mudflats, as well as hills, rocky outcrops, sandbars, beaches and small islands (inhabited as well as uninhabited). The waters bodies and river channels run deep inside the coasts, making the shoreline highly indented. Due to their remoteness these coastal approaches to the mainland often remained unguarded, or poorly guarded, thereby providing ideal spots for the clandestine landings of arms, explosives and other contraband by smugglers as well as infiltration by terrorists.[2] Boats can easily land

---

[1] *Annual Report 2011-2012*, Ministry of Home Affairs, Government of India, New Delhi, 2012, p. 57.

[2] There are 1,376 landing points along the entire coast. Data provided by the Department of Fisheries, Ministry of Agriculture, Government of India.

and disappear in stealth, and avoid detection by taking advantage of the topography.[3]

The creek areas of Gujarat and the Sunderbans in West Bengal are, in particular, vulnerable to such criminal and anti-national activities. Northern Gujarat and southern West Bengal (the Sunderbans) have several large creeks, some of which lie astride the international borders with Pakistan and Bangladesh. These creeks are all inter-connected by smaller water bodies and, together, they create an intricate maze of shallow and deep channels. The interconnectivity of the creeks has made the border porous for infiltrators, smugglers and terrorists, who have been using these routes to sneak in and out of India. Mangroves in the intervening islands, and sand bars which emerge during low tide, provide refuge. The situation is made worse by the non-availability of any approach channels from the Indian side to many of these smaller channels. For instance, in Gujarat, a channel nick named the *Harami Nala*, which originates from India, enters Pakistan, and re-enters India, has become a preferred route for infiltrators and smugglers. Several Pakistani and Bangladeshi infiltrators with arms, ammunition and explosives have been apprehended in this area by the Indian security forces.[4]

Location

The physical proximity of India's coasts to politically volatile, economically depressed and unfriendly countries such as Sri Lanka, Bangladesh, Pakistan and Gulf countries adds to its vulnerability. India has been facing Pakistan sponsored cross-border terrorism for decades. Terrorists with arms and explosives have been infiltrating into the country from Pakistan through the land borders. However, over the years, with the increased deployment of security forces and surveillance

---

[3]   Pushpita Das, 'Coastal Security Arrangement: A Case Study of Gujarat-Maharashtra Coast', *IDSA Occasional Paper no. 6*, November 2009, p. 9.

[4]   ibid. Also see, 'Pakistani boat apprehended near Harami Nala', *Business Standard,* Kutch, December 28, 2012, at http://www.business-standard.com/article/pti-stories/pakistani-boat-apprehended-near-harami-nala-112122800242_1.html. (Accessed on January 11, 2013), '2 Pakistani nationals held by BSF in Harami Nala', *The Times of India,* Ahmedabad, October 20, 2011*,* at http://articles.timesofindia.indiatimes.com/2011-10-20/surat/30302478_1_harami-nala-pakistani-nationals-shallow-water-channel-spread (Accessed on January 11, 2013).

equipment as well as the construction of fences, security along the land borders has been sufficiently tightened. On the other hand, security over the ocean domain has been extremely lax, with the sea routes remaining poorly guarded. Forced to explore new routes for infiltration because of near foolproof security along the land borders, terrorists started looking towards the sea as an alternate route to slip into India undetected.

India's western coast also lies close to the Gulf countries. The distance between Gujarat and the United Arab Emirates is less than 2,000 kilometres. This nearness had facilitated seaborne trade between India's western coast and the Gulf as well as the East African countries for centuries. Large wooden boats (also known as *dhows*) carrying cotton textiles, rice, and leather items used to sail out from the ports of Kutch, Porbandar, Veraval, Jamnagar and Surat in Gujarat to ports in Dubai, Muscat, Somalia and Ethiopia.[5] These trade connections remain operational till today, and presently around 350 *dhows* operate between Gujarat and the Gulf and African countries.[6]

However, with places such as Dubai becoming a source and destination for smuggled and trafficked items, *dhows* plying from Dubai to Mumbai and Gujarat got involved in smuggling gold and luxury items, especially during the 1960s and 1970s. In subsequent years, they even started smuggling heroin, *hashish*, and precursor chemicals out of India to Dubai. In return, they smuggled in heroin, arms and explosives from Pakistan either via Dubai or when they make a stopover at the Karachi port.[7] This illegal practice continues even today. Although these *dhows* are registered under the Mercantile Marine Department (MMD), no security agency maintains a database about the owner, crew and their movement. These *dhows* are monitored neither by the DG (Directorate

---

[5]   Ruby Maloni 'Straddling the Arabia Sea: Gujarati Trade with West Asia during the 17th & 18th Century', in S. Jayaseela Stephen (ed.), *The Indian Trade at the Asian Frontier*, (Delhi: Gyan Publishing House, 2008), p. 193.

[6]   'Pirates threat: Gujarat *dhows* not allowed to sail beyond Salalah', *DeshGujarat*, Bhuj, February 23, 2012, at http://deshgujarat.com/2012/02/23/pirates-threat-gujarat-*dhows*-not-allowed-to-sail-beyond-salalah/ (Accessed on January 11, 2013).

[7]   'Coastal smuggling gets rich again', *MidDay*, Mumbai, January 18, 2011, at http://www.mid-day.com/news/2011/jan/180111-Dawood-Ibrahimsmuggling-drugs-Kutch-Pakistani-ports.htm (Accessed on January 14, 2013).

General) shipping nor by the Customs Department.[8] This fact was reinforced after the end of a three month security exercise off the coast of Maharashtra when it was revealed that the location of 98 out of 100 *dhows*, which were apparently plying between the Indian coasts and the Gulf countries and were registered with the MMD in Mumbai, could not be established.[9] It is also observed that most of the *dhows* built are not registered at all and also there is no mechanism to monitor the movement of these unregistered *dhows*.[10]

The geographical closeness of the southern coast to a conflict ridden Sri Lanka also poses security challenges for India. Sri Lanka had been witnessing the violent insurgent movement by the Liberation Tigers of Tamil Eelam (LTTE) and other Tamil groups in the Tamil dominated northern and eastern provinces since 1983. Prolonged and fierce war between the Sri Lankan security forces and the LTTE resulted in large scale migration of both the civilian population as well as LTTE cadres from Sri Lanka to the shores of Tamil Nadu. The presence of the LTTE militants seriously undermined India's internal security as they started indulging in the smuggling of essential items, diesel, arms, explosive, drugs etc. to sustain their war in Sri Lanka. They also created an extensive criminal network to smuggle Sri Lankan refugees from India to developed countries to generate funds for their struggle.

The eastern Indian seaboard has been increasingly witnessing a steady increase in illegal migration from Bangladesh. Various 'push and pull' factors such as poverty, demographic pressure, religious persecution in Bangladesh, and the promise of better opportunities in India have contributed to this migration. Earlier, almost all of the illegal migration from Bangladesh used to take place into the Northeastern states of India through the poorly guarded land border. But now, with the construction of fences along the land border, Bangladeshis are

---

[8]   This information is based on the author's interview with senior officials of the Customs Department in Gandhinagar, and senior naval officers at New Delhi in March 2013.

[9]   'Non-existent boats pose real threat to National Security', *News Bharati*, May 16, 2013, at http://www.newsbharati.com/Encyc/2013/5/16/-Non-Existent-boats-pose-real-threat-to-National-Security.aspx (Accessed on June 20, 2013).

[10] The author's interview with the Customs and Coast Guard Officials at Gandhinagar and Veraval in March 2013.

increasingly exploiting the sea route to enter India. Although these illegal migrants do not pose a direct security threat to India, the probability that terror operatives could sneak into the country in the guise of migrants remains.

Disputed Maritime Boundary

Unsettled maritime boundaries not only pose serious security challenges but also hinder offshore development. India's maritime boundaries with Pakistan and Bangladesh are not delineated because of overlapping claims. As far as the settlement of the maritime boundary with Pakistan is concerned, it hinges upon the settlement of the riverine border along the Sir Creek. The dispute regarding the delineation of border in the Sir Creek dates back to the colonial times when, in 1908, the rulers of Kutch and Sindh fought over a pile of wood lying on the banks of Sir Creek, which divided the two provinces. The dispute was resolved in the years 1914 and 1924 but was resurrected in 1965 when Pakistan claimed half of the Rann of Kutch. The dispute was referred to an international tribunal for arbitration. The tribunal pronounced its judgment in 1968, upholding 90 per cent of India's claim in the Rann of Kutch. The tribunal did not take into consideration the issue of the delimitation of the boundary along Sir Creek as it deemed the issue as already resolved.[11]

Sir Creek is a 96 kilometre long estuary which is located in the Rann of Kutch between India and Pakistan. India asserts that the boundary in the Sir Creek should be defined according to the 'thalweg principle', i.e. the boundary line lies in the middle of the channel. Pakistan contests this, and argues that the Sir Creek is not a navigable channel and, therefore, the principle of mid-channel does not apply. It claims that the boundary lies on the eastern bank of the channel, which makes the Sir Creek part of Pakistan. It also insists that the boundary along the Sir Creek has to be delineated first in order to delimit the maritime boundary between the two countries.[12] India, on the other hand,

---

[11]   A.G. Noorani, 'Easing the Indo-Pakistani Dialogue on Kashmir: Confidence-Building Measures for the Siachen Glacier, Sir Creek and the Wular Barrage Dispute', *Occasional Paper No. 16*, The Henry L. Stimson Center, Washington, April 1994, pp. 26-27.

[12]   Rahul Roychoudhury, 'Trends in delimitation of India's maritime boundaries', *Strategic Analysis*, 22 (10), 1999, p. 1518.

maintains that the maritime boundary should be determined first, which can be done 'by beginning with mutually acceptable points from the shore line of India and Pakistan, 250 kilometre out to sea, and working inwards to plot the boundary'.[13]

With Bangladesh, the dispute is over the principle on which the maritime boundary between the two countries should be delineated. India insists on the 'equidistant/'median-line' principle i.e. 'low water' sea baseline; Bangladesh prefers an 'equitable' principle i.e. 'straight baseline' based on 10-fathom depth criteria to offset the concavity of its coastline. The appearance of a small island near the confluence of Ichhamati and Rai Mangal rivers in the aftermath of cyclone Bhola in 1970 further complicated the dispute as the island was claimed by both India and Bangladesh. The 3-kilometres long and 3.5 kilometres wide island was called the New Moore in India and Talpatti in Bangladesh. Negotiations to resolve the dispute between India and Bangladesh first started in 1982, but were not successful. The talks were revived again in 2008, but no solution came forth.[14] Meanwhile, in 2009, the New Moore Island disappeared.[15] This incident, however, did not contribute to the resolution of the dispute. On October 6, 2009, Bangladesh instituted arbitral proceedings for the delimitation of the maritime boundary with India under Annex VII of UNCLOS,[16] the verdict of which will be pronounced in 2014.

The maritime disputes with Pakistan and Bangladesh have been further complicated by the prospects of the discovery of huge hydrocarbon

---

[13] Manoj Joshi, 'The troubled waters of Sir Creek: Gujarat CM's demand for a freeze on the disputed creek complicates issue', *Mail Today*, New Delhi, December 16, 2012, at http://indiatoday.intoday.in/story/sir-creek-dispute-gujarat-chief-minister-narendra-mod-rann-of-kutchmaritime-boundary/1/237992.html (Accessed on January 14, 2013).

[14] Stephen Fietta, 'Controversy in the Bay of Bengal: Issues surrounding the Delimitation of Bangladesh's Maritime Boundaries with India and Myanmar', *ABLOS Conference 2010,* Monaco, at http://www.gmat.unsw.edu.au/ablos/ABLOS10Folder/S5P3-Pres.pdf (Accessed on January 14, 2013).

[15] 'New Moore isle no more, expert blames warming', *The Times of India*, Kolkata, March 10, 2012, at http://articles.timesofindia.indiatimes.com/2010-03-25/global-warming/28119002_1_ghoramara-global-warming-rise-in-sea-level (Accessed on January 14, 2013).

[16] *Bangladesh vs. India*, Permanent Court of Arbitration, at http://www.pca-cpa.org/showpage.asp?pag_id=1376 (Accessed on January 14, 2013).

reservoirs in the offshore disputed areas. Oil and gas reserves have already been discovered in the Kutch basin as well as in the Bay of Bengal basin, while similar explorations are continuing elsewhere in the basins. However, with India and its neighbours laying claims on these basins as part of their EEZ, oil exploration and extraction in these basins have been hampered. India's attempts at exploring oil and gas in the Bay of Bengal were met with stiff resistance from Bangladesh.[17]

As far as Sri Lanka is concerned, the maritime boundary has been settled with the signing of three agreements in June 1974, March 1976 and November 1976.[18] In 1974, the issue of 'historic waters' was resolved and the maritime boundary along the Palk Bay was delimited. Under the agreement of 1974, the Indian government acceded sovereignty over the island of Kacchativu located in the Palk Bay to Sri Lanka. The agreement, however, allowed Indian fishermen and pilgrims free access to the island. It also stipulated that vessels from Sri Lanka and India would continue to enjoy the rights in each other's waters as they had been doing till then.[19] Curiously, these privileges were taken away from the Indian fishermen in 1976 through the Exchange of Letters between the foreign secretaries of the two countries.[20] In the same year, the maritime boundary between India and Sri Lanka along the Bay of Bengal and the Gulf of Mannar was delimited. A few months later, India signed a trilateral agreement with Sri Lanka and Maldives to determine the tri-junction point between the three countries in the Gulf of Mannar.[21]

The demarcation of the maritime boundary between Sri Lanka and India did not however change the situation on the ground as both

---

[17] 'Bangladesh to protest India's oil exploration in Bay and Bengal', *India Today*, Dhaka, December 27, 2008, at http://indiatoday.intoday.in/story/Bangladesh+ to+protest+India's+oil+exploration+in+Bay+of+Bengal/1/23711.html (Accessed on January 14, 2013).

[18] Rahul Roychoudhury, no. 12, p. 1515.

[19] V. Vivekanandan, 'Crossing Maritime Borders: The Problem and Solution in the Indo-Sri Lankan Context', in K.G. Kumar (ed.), *Forging Unity: Coastal Communities and the Indian Ocean's Future*, (Chennai: International Collective in Support of Fishworkers, 2003), pp. 78-79.

[20] ibid.

[21] Rahul Roychoudhury, no. 12.

Indian and Sri Lankan fishermen continued to fish in each other's territorial seas and EEZ, resulting in the arrests of fishermen of both the countries and, in extreme cases, deaths of Indian fishermen at the hands of the Sri Lankan navy.[22]

Strategic Installations

Indian coasts are prosperous, and support a dense population residing in numerous big and small towns and cities that dot the coastline. Access to the sea through the major and non-major ports has facilitated the setting up of Special Economic Zones (SEZs) which have resulted in the growth of a number of industrial cities such as: Kandla SEZ in Gujarat; Santacruz Electronics Export Processing Zone SEZ in Maharashtra; Madras Export Processing Zone SEZ in Tamil Nadu; Cochin SEZ in Kerala; Falta SEZ in West Bengal; and Vishakhapatnam SEZ in Andhra Pradesh.[23]

This process of industrialisation along the coast has been further boosted by the import of crude oil and liquefied natural gas (LNG). In the case of Gujarat, the Gulfs of Kutch and Khambhat have emerged as major corridors for importing crude oil for the country. This, in turn, has opened up avenues for the establishment of oil refineries and storage tanks by major oil companies, especially along the Saurashtra coast in Vadinar, Salaya, Sikka and Jamnagar as well as LNG terminals in Hazira and Dahej.[24] Similarly, the import of LNG through various ports in the west coast has led to the planning and construction of a number of terminals at Dabhol, Kochi, Mundra, Ennore, Mangalore and Mundra.[25] In addition, single mooring points (SPM) or single buoy

---

[22] Indian, Lankan navies plan maritime boundary patrolling to prevent attacks on fishermen', *The Times of India*, New Delhi, October 14, 2011, at http://articles.timesofindia.indiatimes.com/2011-10-14/india/30278723_1_sri-lankan-navy-maritime-boundary-fishermen (Accessed on January 15, 2013).

[23] *Special Economic Zone*, Ministry of Industry and Commerce, Government of India, at http://www.sezindia.nic.in/about-introduction.asp (Accessed on January 15, 2013).

[24] Pushpita Das, no. 3, p. 14.

[25] *World LNG Liquefaction Plants and Regasification Terminals, as on January 2013*, at http://www.globallnginfo.com/World%20LNG%20Plants%20&%20Terminals.pdf. (Accessed on January 15, 2013).

points (SBMs) have been constructed in the seabed from where these oil refineries, storage tanks and LNG terminals receive oil and gas.[26]

The discovery of oil and gas in the sea has also led to the development of offshore oil and gas platforms in the coastal waters of the country. Along the west coast, the Mumbai offshore basin has the largest oil and gas producing field which includes the fields of Mumbai High, Heera, Neelam and Bassein.[27] The basin produced an average 348,740 barrels of crude oil per day, and 48.19 million standard cubic metres of gas per day in the fiscal year ending March 2011.[28] In the eastern seaboard, huge off-shore oil and gas reserves have been discovered in the Cauvery and Krishna-Godavari (K-G) basins. For example, in 2002, the Reliance Company discovered 40 trillion cubic feet in block D6 in the K-G basin. The Oil and Natural Gas Corporation (ONGC) has 24 blocks in the K-G basin, which currently produces approximately 800 tonnes of oil per day, and 3.2 million metric standard cubic meters of gas per day.[29] The K-G Basin extends over 28,000 sq. km onshore, 24,000 sq. km in shallow waters, and 18,000 sq. km in deep waters.[30] In the Cauvery basin, three offshore oil and gas fields have been discovered, and extraction of oil and gas has started.

The Indian coast also has a number of strategic installations such as naval bases, nuclear power plants, satellite and missile launching ranges, and ports. The eastern, western, southern, and far eastern naval

---

[26] Prabhakaran Paleri, *Role of the Coast Guard in the Maritime Security of India*, Knowledge World, New Delhi, 2007, p. 252.

[27] S. K. Verma, 'Showcasing Indian fields-Offshore', *Conference on IOR-EOR: Challenges, Process and Technologies*, New Delhi, April 15, 2010, at http://petrofed.winwinhosting.net/upload/15-16_April_10/Day%201/Session%201/1_S%20K%20Verma.pdf (Accessed on January 15, 2013).

[28] 'ONGC's discovery near Mumbai High may raise output by 25,000 bpd', *The Economic Times*, New Delhi, August 10, 2012, at http://articles.economictimes.indiatimes.com/2012-08-10/news/33137829_1_mumbai-high-oil-discovery-standard-cubic-meters (Accessed on January 15, 2013).

[29] 'ONGC to start exploration in Krishna-Godavari basin', *Rediff Business*, December 12, 2012, at http://www.rediff.com/money/report/ongc-to-start-exploration-in-krishna-godavari-basin/20121212.htm (Accessed on January 15, 2013).

[30] *Krishna-Godavari Basin: Oil and Gas Resource*, October 6, 2009, at http://www.kgbasin.in/ (Accessed on January 15, 2013).

commands are located in Vishakhapatnam, Mumbai, Kochi, and Port Blair respectively. In addition, India's largest naval base, with a capability of housing 30 warships, is being built at Karwar along the Karnataka coast.[31] Several nuclear power plants, such as at Tarapur, Kudankulam, Kalpakkam and the proposed plant at Jaitapur have been established close to the sea. Satellite launching and missile testing facilities such as the Satish Dhawan Space Centre and the Wheeler Islands missile facility are also located along the coast. Furthermore, India has 13 major ports such as Kandla, Jawaharlal Nehru, Mangalore, Haldia, and 187 non-major ports,[32] which handle 90 per cent of the country's maritime trade.

It is quite obvious that these strategic installations are vital for the security, development and prosperity of the country, but they are also high value targets for the terrorists because an attack on any of these sites would not only cause enormous loss of life and property and adversely impact the Indian economy but would also give a lot of publicity to terrorists groups.

Maritime Traffic

Indian coasts witness a wide range of maritime activities such as internal and international trade and travel, offshore oil exploration, fishing, hydrographic survey, patrolling, etc. All these activities result in the movement of a range of marine vessels such as cargo ships and passenger launches, containers, oil tankers, *dhows*, barges, fishing trawlers and boats, patrol vessels, warships, barges, dredgers and tugs, and so on. It is estimated that, on a single day, Indian coastal waters witness the passage of 2115 ships, 690 coastal vessels, 850 *dhows*, 400 barges, 1000 dredgers and thousands of fishing vessels.[33]

---

[31] 'Karwar to get India's largest Naval base', *The Indian Express*, New Delhi, December 10, 2012, at http://newindianexpress.com/nation/article1373362.ece (Accessed on January 15, 2013).

[32] For details see, *Statewise Names of Minor Ports*, Ministry of Shipping, at http://shipping.nic.in/writereaddata/l892s/37906741-NonMajorp.pdf (Accessed on January 15, 2013).

[33] J.K. Dhar, 'Safer Maritime Navigation on Indian Coast', *National Maritime Day* March 29-April 5, 2012, Mumbai, p. 5, at http://www.dgshipping.com/dgship/final/themepaper_nmdc_280312.doc (Accessed on January 15, 2013).

In recent times, economic reforms and opening up have led to India's increased trade with the rest of the world, a substantial part of which is conducted by sea. Consequently, India has been witnessing a manifold increase in maritime traffic, a fact that is reinforced by the steady increase in the amount of cargo traffic handled by various ports in the country over the years. For instance, the total amount of cargo handled by all the major ports in 2006-07 was 463.78 million tonnes which increased to 560.13 million tonnes in 2011-2012.[34] This accounted for 61.4 per cent of India's total seaborne cargo. Energy imports consisting of petroleum, oil and lubricants (POL), and coal constituted 46 per cent of the total cargo traffic.[35] Similarly, these ports also saw growth in container traffic, which increased six fold from 13.08 million tonnes in 1993-94 to 93.4 million tonnes in 2008-09.[36]

In addition to international trade, India's ports—both major and non-major—also handle coastal traffic. Coastal trade in India is carried out in 40 districts of five states on the west and four on the east coast, and Pudduchery. The islands of Andaman and Nicobar, Lakshadweep and Minicoy also form part of the coastal trade as these islands depend on coastal shipping for the movement of cargo and passengers between their islands as well as with the mainland. Moreover, the exploitation of minerals such as bauxite, iron ore, limestone, etc. and the development of extractive industries in the resource rich coastal districts of the country have also contributed to the rise in coastal trade.[37] The Indian coast has been witnessing a constant rise in the range and number of vessels that ply in its coastal waters. Monitoring these vessels and regulating their movement offer quite a challenge for the security forces as well as the law enforcement agencies.

---

[34] 'Update on Indian Port Sector', Ministry of Shipping, at http://shipping.nic.in/showfile.php?lid=954 (Accessed on January 15, 2013).

[35] ibid.

[36] 'Performance of Major Ports', at http://shipping.nic.in/writereaddata/l892s/PerformanceofMajorPorts-24060860.pdf (Accessed on January 15, 2013).

[37] 'Coastal Shipping', Ministry of Shipping, Government of India, at http://www.dgshipping.com/dgship/final/manual/mchapter22.htm (Accessed on January 16, 2013).

The above mentioned factors contribute to the vulnerability of Indian coasts to sea-borne criminal activities and terrorists threats, and consequently shape concerns regarding coastal security.

Rationale for the Study

Coastal security is an emerging subject of research in India. There are only a handful of books, articles and published government documents which deal with this relevant yet overlooked topic. And what limited literature that is available has been generated in the aftermath of the November 26, 2008 Mumbai incident. Therefore, a majority of these are essentially short commentaries,[38] highlighting the threat of maritime terrorism and analysing various measures that were implemented post 26/11 to secure the country's coast. There are also a couple of books and articles which have dealt with the topic of coastal security. Writing immediately after the Mumbai attacks, Vijay Sakhuja described the various measures that had been proposed to strengthen coastal security.[39] More recently, K. R. Singh[40] identified maritime terrorism as a major threat to coastal security, and discussed at length various international and domestic legal norms available to deal with the menace. P. Paleri[41] has described the evolution of the Indian Coast Guard. Articles by A. X. Alexander's[42] and V. Suyanarayan[43] deal exclusively with the challenges

---

[38] Arun Kumar Singh, 'Coastal security in deep water', National Maritime Foundation, at http://maritimeindia.org/article/coastal-security-deep-water (Accessed on January 11, 2013). See also, P.K. Ghosh, 'India's Coastal Security: Challenges and Policy Recommendations', *Issue Brief No. 22*, August 2010, at http://www.observerindia.com/cms/sites/orfonline/modules/issuebrief/attachments/Ib_22_1283150948708.pdf (Accessed on January 11, 2013).

[39] Vijay Sakhuja, 'Securing India's Littorals,' *Journal of Defence Studies*, 3 (2), April 2009, pp. 157-171.

[40] K. R. Singh, *Coastal Security: Maritime Dimensions of India's Homeland Security*, United Service Institution of India, New Delhi, 2012.

[41] Prabhakaran Paleri, *Role of Coast Guard in the Maritime Security of India* (Second Edition), Knowledge World, New Delhi, 2007.

[42] A. X. Alexander, 'Coastal Security of Tamil Nadu', at http://www.csa-chennai.org/Files/Coastal%20Security%20in%20TN.pdf (Accessed on January 11, 2013).

[43] V. Suryanarayan, 'Challenges of Coastal Security-Tamil Nadu's Case', Paper No. 3565, Centre of Asian Studies, December 24, 2009, at http://asiastudies.org/file/pdf_new/Challengesofcostalsecurity-TamilNadu'scase.pdf (Accessed on January 11, 2013).

faced by the Tamil Nadu coast and the measures undertaken to address the challenges. On the whole, the available literature focuses on specific areas and falls short of providing a comprehensive analysis and evaluation of the policies that have been evolved and implemented over the years to secure India's coasts.

This monograph aims at understanding India's approach towards coastal security as it has evolved since Independence. It describes the kinds of threats and challenges that India's coasts have been facing, or are likely to face in the future. It critically analyses various strategies and polices that the Indian government has devised over the years as a response to these threats and challenges and argues that the implementation of these measures has resulted in the establishment of a well-defined coastal security architecture. However, the formulation of these measures without first preparing the ground for their implementation has led to a number of inadequacies in the architecture, which have hampered its smooth and effective functioning.

The study is based primarily on information gathered during the field trips to coastal states over the course of five years. The states visited were West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra and Gujarat. Data for the study has been obtained through personal observations as well as a combination of personal and group interviews. A number of naval, coast guard, and police personnel as well as officials of various ministries and departments engaged in the various dimensions of coastal security at the national, state and local levels were interviewed. Informal interviews were also carried out with fishermen associations, individual fishermen, and local people in the selected states. Deliberate sampling is used to define the sample size. The monograph has also drawn information and insights from several relevant journal articles and commentaries, books, newspaper reports and articles, website reports, and analysis as well as annual reports and other reports of the concerned ministries and departments.

I   THREATS AND CHALLENGES TO COASTAL SECURITY

India faces a number of threats and challenges that originate from the sea and which are mainly sub-conventional in nature. These threats and challenges can be categorised under five broad categories: maritime terrorism; piracy and armed robbery; smuggling and trafficking; infiltration, illegal migration and refugee influx; and the straying of fishermen beyond the maritime boundary. Of these, maritime terrorism features as the most potent threat.

Maritime Terrorism

Maritime terrorism is defined as '…the undertaking of terrorist acts and activities within the maritime environment, using or against vessels or fixed platforms at sea or in port, or against any one of their passengers or personnel, against coastal facilities or settlements, including tourist resorts, port areas and port towns or cities'.[1] Thus, major population centres, onshore and offshore strategic installations, commercial facilities, industrial complexes located along the coast as well as coastal waterways can be identified as high value targets for terrorist attacks.

Sea based terrorism is not a new phenomenon. The world has been witnessing various forms of maritime terrorism for more than five decades, beginning with the hijacking of a cruise liner *Santa Maria* in January 1961 by Spanish and Portuguese rebels.[2] Since then, various

---

[1]   This definition of Maritime Terrorism is provided by the Council for Security Cooperation in the Asia Pacific (CSCAP) Working Group, at http://www.maritimeterrorism.com/definitions/ (Accessed on December 3, 2012).

[2]   The luxury cruise liner *Santa Maria*-with 600 passengers from different countries on board-was hijacked on January 22, 1961, by a group of 70 Portuguese and Spanish rebels in the Caribbean waters. By this act, the rebels wanted to highlight their revolt against the dictatorships of Franco in Spain and Salazar in Portugal. Fortunately, the 11 day hijacking incident ended peacefully after all the passengers were disembarked, and the leader of the rebel group Captain Galvao surrendered and accepted asylum in Brazil.

rebel and terrorist groups such as the anti-Castro rebels, the Portuguese, Angolan, Palestinian, Sri Lankan Tamil, Filipino and Irish insurgents as well as Al Qaeda and Laskar-e-Toiba (LeT) have perpetrated acts of terrorism that include hijacking, attacking, and sinking ships, taking hostages, sabotaging pipelines, port facilities and attacking cities and strategic installations like naval bases and petrochemical storages.[3]

Nevertheless, according to a RAND terrorism database, sea borne attacks have constituted only two per cent of all international terrorist related incidents over the last 30 years.[4] Experts believe that terrorist groups have not been able to fully exploit the maritime domain primarily because operating at sea requires specialized training, skills and assets. The high cost and unpredictable nature of the domain also constrain cash strapped terrorist groups from undertaking maritime operations. Added to this is the mobile and relatively 'out of sight' nature of the maritime targets, which fail to elicit the kind of publicity usually desired by terrorist groups.[5]

Despite these considerations, concerns about sea borne terrorist attacks have heightened the world over. The vulnerability of maritime targets, increased dependence on sea borne trade and commerce, and the relatively ungoverned high seas and un-patrolled coastal waters are some of the factors which add to this concern. Based on the study of the various incidents and patterns of maritime terrorism, potential targets for terrorist attacks can be identified against which the country has to be ever vigilant. These are as follows:

a) *Attacks on commercial centres*: Coastal raids on hotels, beach resorts, shopping malls in major coastal cities is a 'well established naval method', which the terrorists have carried out successfully although infrequently.[6] Typically, in such a raid, terrorists come ashore using

---

[3] Brian Michael Jenkins, et al., *A Chronology of Terrorist Attacks and Criminal Actions against Maritime Targets*, September 1983, at http://www.dtic.mil/dtic/tr/fulltext/u2/a145248.pdf (Accessed on December 3, 2012).

[4] Michael D. Greenberg, et al., *Maritime Terrorism: Risk and Liability*, RAND Corporation, Santa Monica, 2006, p. 9, at http://www.rand.org/content/dam/rand/pubs/monographs/2006/RAND_MG520.pdf. (Accessed on December 3, 2012).

[5] ibid, p. 10-11.

[6] Martin N. Murphy, 'Suppression of Piracy and Maritime Terrorism: A Suitable Role for Navy?,' *Naval War College Review*, 60 (3), Summer 2007, p. 26

small boats, seize a commercial complex such as a hotel, and take hostages. They also resort to indiscriminate firing and bombings with the objective of killing the maximum number of civilians to make a bigger impact. Such a coastal raid was first witnessed on March 4, 1975 in Israel when eight members of the Palestinian Liberation Organization (PLO) alighted on the shores of Tel Aviv by small boats, attacked Hotel Savoy and took 13 hostages. The incident ended with the killing of seven terrorists and the capture of one.[7] In later years, the Abu Sayyaf Group in Philippines, employing similar tactics, also took hostages from beach resorts.[8]

India is no stranger to such acts of terror having been exposed to similar attacks on November 26th, 2008 when ten Pakistani terrorists landed on the shores of Mumbai, and seized two iconic hotels (the Taj Palace and Towers and the Oberoi Trident) and a Jewish centre (the Chabad House). During the assault, they killed a number of guests in the hotels, and took the rest hostage. These terrorists also targeted a railway station, a café, and a hospital, killing a number of people in these places.[9] Like the Hotel Savoy incident, the whole carnage ended with the killing of nine terrorists and the capture of one. India has to be alert towards the possibility of the re-occurrence of similar attacks given that the inspiration as well as the logistical infrastructure and networks to carry out such attacks are still intact in Pakistan.

b)   *Attacks on Ports and other strategic facilities*: Ports handling large volumes of traffic especially oil and other goods and having a large population centre in its vicinity are most valued targets for the terrorists. By targeting major ports, the terrorists could maximise economic damage because such attacks would not only cause extensive damage to life and property but would also cripple the targeted country's economy if the port remains shut even for a

---

[7]   Rohan Gunaratne, 'Mumbai Investigation: The Operatives, Masterminds, and Enduring Threats', *Peace and Security Review*, 2 (1), First Quarter, 2009, p. 2.

[8]   Martin N. Murphy, no. 6.

[9]   'Mumbai Terror Attack Final Form Report', at http://www.hindu.com/nic/mumbai-terror-attack-final-form.pdf (Accessed on December 3, 2012).

few days. Terrorists could attack a port by various means - by ramming an explosive laden boat against a port facility; by smuggling explosives in a ship and blowing it up once it is berthed in a port; by sinking a huge oil tanker at the entrance of the port thereby blocking the entry and exit of traffic from the port; by firing rockets from sea borne platforms at a port; by attacking ships destined for a particular port to dissuade them from using the targeted port.

In fact, the attack on *Sea Coral*, a Liberian oil tanker off the Strait of Bab-el-Mandep in June 1971 by a Palestinian group was carried out specifically to deter oil tankers from using the Israeli port of Eilat on the Red Sea.[10] Another example of a terrorist attack on a port was recorded in September 1978 when an unsuccessful attempt was made by Palestinian terrorists to hit the same port in Eilat by rockets and ram a boat loaded with 300 tons of explosives on to its crowded beach.[11] The suicide attack on an oil tanker *MV Limburg* in October 2002 exemplifies a successful attempt by terrorists against the Yemeni port of Aden. The shutting down of the port caused an estimated loss of US$ 3.8 billion to the Yemeni economy.[12]

Besides ports, attacking oil supplies is another effective way of disrupting the global economy. With increasing global dependence on oil and gas as sources of energy and with little scope for their surplus production, any disruption in supplies will have a devastating impact on the world economy. Terrorists are aware of the political and economic benefits of attacking these strategic infrastructures and therefore, over the years, have targeted pipelines, oil platforms, single buoy moorings, pumping stations, and tankers 'in some of the world's most important energy reservoirs, including Iraq, Nigeria, Saudi Arabia, and Yemen'.[13] For example, in 2004, Jamaat

---

[10]   Brian Michael Jenkins, et al., no. 3, p. 9.

[11]   ibid.

[12]   Michael D. Greenberg, et al., no. 4, p. 16.

[13]   Gal Luft and Anne Korin, 'Terrorism Goes to Sea,' *Foreign Affairs*, 83 (6), November-December, 2004, p. 65.

al-Tawhid, a terrorist group operating in Iraq, attacked two oil terminals, forcing them to shut down for two days which resulted in a revenue loss of nearly US$ 40 million.[14] Closer home, in October 2001, the Liberation Tigers of Tamil Eelam (LTTE) rammed an explosive laden boat against an oil tanker *MV Silk Pride* in northern Sri Lanka, killing four people.[15]

Naval bases, industrial hubs, and other strategic setups such as nuclear power plants are also potential targets for terrorists. Naval bases have always been on the radar of terrorist groups. The LTTE suicide bombers had frequently targeted Sri Lankan naval bases since 1990. In one such incident in 1995, a LTTE suicide bomber blew himself up in a naval facility in Trincomalee killing nine naval personnel.[16] Similarly, the capture of several Al Qaeda operatives in Singapore and Indonesia revealed that they were planning to target naval bases in these countries, particularly those frequented by US warships.[17]

c) *Attacks on Ships*: Ships are soft targets for the terrorist groups as, except for their enormous size, they have practically no means of protection. Ships that are targeted could be passenger ships, luxury cruise liners, oil tankers, or naval craft. These ships could be hijacked, attacked by rockets, grenades and firearms, or packed with explosives and destroyed. Of all the tactics, hijacking in coastal waters or at high seas has been the most preferred means of terrorism because a large number of passengers can be held hostage which provides maximum publicity. Following the hijacking of *Santa Maria* in 1961, numerous incidents of the hijacking of ships

---

[14] Michael D. Greenberg, et al., no. 4, p. 22.

[15] 'Sri Lankan suicide attack at sea', *CNN*, October 30, 2001, at http://articles.cnn.com/2001-10-30/world/slanka.tiger.attack_1_suicide-attack-parliamentary-election-suicide-bombers?_s=PM:asiapcf (Accessed on December 5, 2012).

[16] 'Suicide Attacks by LTTE,' *South Asia Terrorism Portal*, at http://www.satp.org/satporgtp/countries/shrilanka/database/data_suicide_killings.htm (Accessed on December 5, 2012).

[17] 'US fears terrorists at sea: tracking ships is difficult,' *The Washington Post*, December 31, 2002, 'The Jemaah Islamiyah arrests and the threat of terrorism,' White Paper, Ministry of Home Affairs, Republic of Singapore, pp. 27-30.

have been recorded, the most famous being the case of *Achille Lauro.* This Italian cruise ship, with 450 people on board, was hijacked by a Palestinian terrorist group in Egyptian territorial waters on October 7, 1985. Although the hijacking did not lead to the release of 50 Palestinian prisoners as demanded by the hijackers, it did grab media attention all over the world.[18]

Terrorist groups have also bombed and sunk ships to generate publicity. There are a number of cases of such acts of terror. For example, in one of the deadliest terrorist strikes, a Philippines passenger ship, *SuperFerry14*, which was sailing from Manila to Bacolod and Davao, was bombed in 2004 by operatives of the Abu Sayyaf Group. The attack led to 116 fatalities.[19] Four years earlier in 2000, Al Qaeda operatives rammed an explosives laden boat against a US naval ship *USS Cole* in Aden. The suicide attack killed 17 sailors and wounded 39 others.[20] Perhaps the first recorded bombing of a ship was in 1960-the blowing up of a French freighter that was unloading explosives by Cuban Rebels. The attack killed around 100 persons and injured 200 others.[21]

Terrorist attacks in the maritime domain, therefore, remain a clear and present danger. Security analysts have conjured up several probable scenarios in which terrorist groups could carry out maritime terror acts. Some of these are:[22]

- using cargo ships or containers to smuggle in explosives to attack major commercial ports

---

[18]   Malvina Halberstam, 'Terrorism on the High Seas: The Achille Lauro, Piracy and the IMO Convention on Maritime Safety,' *The American Journal of International Law*, 82 (2), April 1988, p. 269.

[19]   Simon Elegant, 'The Return of Abu Sayyaf,' *Time*, August 24, 2004, at http://www.time.com/time/magazine/article/0,9171,686107,00.html (Accessed on December 5, 2012).

[20]   Raphael Perl, et al., 'Terrorist Attack on USS Cole: Background and Issues for Congress,' *CRS Report for Congress*, January 30, 2001, pp. 1-2, at http://digital.library.unt.edu/ark:/67531/metacrs1541/m1/1/high_res_d/RS20721_2001Jan30.pdf (Accessed on December 5, 2012).

[21]   Brian Michael Jenkins, et al., no. 3 p. 7.

[22]   Michael D. Greenberg, et al., no. 4, p. 27.

- using small boats, such as fishing trawlers, dinghies etc. to land terrorists, along with arms and explosives, to carry out large scale attacks in major population hubs

- using small boats, or high speed boats, laden with explosives to attack an oil tanker or offshore energy platform

- hijacking an oil tanker, then detonating it as a floating bomb, or using it as a collision weapon

- hijacking a ship/s and using it/them as a launch platform for terrorist strikes on vital installations on the shore,

- attacking and sinking ships in choke points to disrupt maritime traffic

- mining navigable waters.

Piracy and Armed Robbery

Piracy and armed robbery pose a major threat to sea navigation. Piracy by definition takes place on the high seas[23] and, therefore, does not fall under the ambit of coastal security. However, in the case of India, the shallow waters of the Sunderbans have been witnessing 'acts of violence and detention' by gangs of criminals that are akin to piracy. The gangs attack fishermen, hijack their boats, hold them hostage for

---

[23] Piracy is defined as:

> a) any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:
>
> > a. on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft;
> >
> > b. against a ship, aircraft, persons or property in a place outside the jurisdiction of any State;
>
> b) any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;
>
> c) any act inciting or of intentionally facilitating an act described in sub-paragraph (a) or (b).

Article 01 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS), at http://www.imo.org/ourwork/security/piracyarmedrobbery/pages/default.aspx (Accessed on December 19, 2012).

months, demand ransoms, rob them of their catch and personal belongings, and sometimes kill them. The West Bengal Police describe such acts as piracy.[24]

Piracy of such a nature has been a recurrent feature in the Sunderbans for decades. To fight this menace, the affected fishermen of the area even formed the Sunderbans Fishermen and Fish workers Union (SFFU) as long ago as 1982.[25] However, attacks on the fishermen have not abated, and continue even today. A study of the trends reveals that piracy reached alarming proportions in 1988 when, within a span of just two months, pirates killed three fishermen and extorted Rs. 25 lakhs in ransom.[26] After a lull for a decade, a massive attack by pirates was reported in December 2000.[27] Again, in 2002, pirates reportedly held 31 fishermen hostage and demanded a huge ransom.[28]

Since then, numerous incidents of piracy in the Sunderbans have been reported at regular intervals. Two cases of piracy were reported in January 2012 itself. On January 6, a gang of pirates attacked the Bangoduwari Island and abducted three persons. Fortunately, they were released later. Again, on January 28, pirates attacked a group of fishermen, killing three of them and injuring eight before taking eleven other fishermen hostage, along with their trawler.[29] Earlier, in July 2011, pirates attacked a group of eight fishermen and looted money, food

---

[24] The author's interaction with senior marine police officials at Kolkata and in the Sunderbans during her field visit in May 2012.

[25] Suhrid Shankar Chattopadhyay, 'Terror in the Sunderbans,' *Frontline*, 18 (15), July 21-August 03, 2001, at http://www.frontlineonnet.com/fl1815/18150390.htm (Accessed on December 19, 2012).

[26] ibid.

[27] 'Sunderbans pirate attack: Centre, state unfazed,' *The Times of India*, January 30, 2012, at http://articles.timesofindia.indiatimes.com/2012-01-30/kolkata/31005012_1_pirates-gangs-coast-guard (Accessed on November 2, 2012).

[28] 'Pirates active in Sunderbans,' *The Times of India*, Kolkata, September 8, 2003, at http://articles.timesofindia.indiatimes.com/2003-09-08/kolkata/27176663_1_pirates-forest-guards-trawler (Accessed on December 19, 2012).

[29] 'Three Indian fishermen killed by pirates,' *The Hindu*, Kolkata, January 28, 2012, at http://www.thehindu.com/news/states/other-states/article2840181.ece (Accessed on November 2, 2012).

items, fishing gear and the engines of the mechanized boats.[30] In all, seven cases of attacks by pirates were reported in 2011from the Sunderbans.[31]

While attacks on fishermen by pirates are reported from all over the Sunderbans, Kendudweep and the mouths of the Rivers Matla, Bidya and Thakuran are particularly vulnerable. Pirates operating in the Sunderbans usually belong to Bangladesh, hailing from the districts of Jessore, Satkhira and Khulna. They take advantage of the poorly guarded border and frequently enter the Indian side of the Sunderbans. These pirates are helped in their adventure by Indian criminal gangs operating in the area. Indian smugglers and their agents facilitate piracy by indicating to the pirates the Indian fishing trawlers which could be potential targets as well as the escape routes that should be taken.[32] In return, pirates provide the Indian gangs safe havens in Bangladesh when they are chased by the security forces and law enforcement agents in India. The nexus between the Bangladeshi pirates and Indian criminal groups does not bode well for the security of the country. It is suspected that this nexus provides logistical support to several Bangladeshi terror operatives operating inside Indian territory.[33]

Besides piracy, petty thefts in ships berthed in the anchorage areas are also a cause for concern as they expose gaps in the security arrangements of the affected ports and ships. The Directorate General, Shipping defines petty theft 'as robbery where loose items of a ship i.e. paint, rope, wire, tools, brass and other metallic items…are stolen for monetary

---

[30] 'Pirates loot fishermen in Sunderbans in WB,' *The Hindu*, Canning, July 5, 2011, at http://www.thehindu.com/news/states/other-states/article2161273.ece (Accessed on November 2, 2012).

[31] 'Pirates in Indian ocean bane for Indian, Bangladeshi fishermen,' *The Xinhua*, Sunderbans, October 20, 2012, at http://news.xinhuanet.com/english/world/2012-10/20/c_131918889.htm (Accessed on November 2, 2012).

[32] 'Sunderbans piracy a threat to security,' *DNA*, Kolkata, December 28, 2008, at http://www.dnaindia.com/india/report_sunderbans-piracy-a-threat-to-security_1216850 (Accessed on November 2, 2012).

[33] ibid.

gain'.[34] Several cases of thefts have been reported from various ports in the country. For example, it was reported that, on November 30, 2012, three robbers boarded a tanker anchored at Cochin port and stole the ship's stores.[35] In a similar case in September 2011, robbers reportedly boarded a general cargo ship in the Kakinada anchorage and stole the ship's stores.[36] In 2010, four cases of thefts were reported from the Vishakhapatnam, Vizag, and Kakinada anchorages.[37] Petty theft was also reported from the offshore oil rigs and platforms of Bombay High in 2011-12. In this case, thieves had allegedly stolen copper wires and plates from the rig and its platform.[38]

Smuggling and Trafficking

Indian coasts have been susceptible to smuggling. Gold, electronic goods, narcotics, and arms have been smuggled through the sea for a long time. Factors such as ban on the import or export of items such as gold combined with high import duties especially on electronic goods, high domestic demand for such items, traditional smuggling routes, the availability of a wide range of sea-going vessels, and lax coastal surveillance have created a favourable atmosphere for the smugglers to clandestinely transfer these items in and out of the country. In the initial years after Independence, the smuggling of gold was rampant; but, in subsequent years, smugglers diversified into the trafficking of narcotics and drugs; and, in more recent years, they have turned to the trafficking of arms and explosives as well as people.

---

[34] 'Anti piracy/armed robbery/ petty theft/ unauthorized boarding – measures by ports and ships,' N.T. Branch Circular No: NT/ISPS/SECURITY/NO.02/2008, Directorate General Shipping, Government of India, at http://www.dgshipping.com/dgship/final/notices/ntcir2_08_isps_security.htm (Accessed on December 19, 2012).

[35] *Live Piracy and Armed Robbery Report 2012*, at http://www.icc-ccs.org/piracy-reporting-centre/live-piracy-report (Accessed on December 19, 2012).

[36] *Live Piracy Report*, at http://www.icc-ccs.org/icc/piracy-reporting-centre/live-piracy-map/details/76/354 (Accessed on December 19, 2012).

[37] *IMB Piracy Map*, at http://www.icc-ccs.org/icc/piracy-reporting-centre/live-piracy-map/piracy-map-2010 (Accessed on December 19, 2012).

[38] 'Security concerns at ONGC's Offshore oil field after three thefts in six months,' *The Hindustan Times*, Mumbai, May 14, 2012, at http://www.hindustantimes.com/India-news/Mumbai/Security-concerns-at-ONGC-s-offshore-oil-field-after-three-thefts-in-six-months/Article1-855348.aspx (Accessed on December 19, 2012).

While the entire coast of the country is vulnerable to clandestine landings of contraband, the Gujarat-Maharashtra coastline, the Tamil Nadu coast, the Sunderbans in West Bengal, and the Andaman and Nicobar Islands have been particularly prone to such activities. Geographical location, peculiar terrain, and close trans-border ethnic ties have made these stretches conducive for smuggling and trafficking.

The Gujarat-Maharashtra coast has always been vulnerable to smuggling. Physical proximity to the Gulf countries as well as Pakistan, a highly indented shoreline, a well established criminal network, etc. have favoured wide scale smuggling through these coasts. During the decades when trading in gold was banned in India, a huge quantity of gold was being smuggled from Dubai to India via this route. The magnitude of gold smuggling was so high that it created a parallel economy, and established a strong and elaborate network of gold smugglers and criminal groups.[39] This network was later exploited for the trafficking of heroin and *hashish* produced in the 'Golden Crescent' to the western countries through India. The consignments, which arrived from Pakistan and Iran on *dhows* plying to Gujarat-Maharashtra coastline are further dispatched to Nigeria, Europe and America from the Mumbai port.[40]

The Tamil Nadu coastline has been witness to the smuggling of gold, electronic goods and other essential items such as spices and coconut products from Sri Lanka, and textiles from India for decades.[41] However, with the start of civil war in Sri Lanka and the influx of Sri Lankan refugees and militant cadres into India, additional items such as arms, ammunition, gelatine sticks, detonators, boat engines, diesel,

---

[39]   Himadri Bhattacharjee, 'Deregulation of Gold in India; A Case Study in Deregulation of a Gold Market,' Research Paper No. 27, Centre for Public Policy Studies, London, 2002, p.11. Also see, A. Vaidyanathan, 'Consumption of Gold in India: Trends and Determinants,' *Economic and Political Weekly*, 34 (8), February 20-26, 1999, p. 471.

[40]   'Coastal smuggling gets rich again,' *MidDay*, Mumbai, January 18, 2011, at http://www.mid-day.com/news/2011/jan/180111-Dawood-Ibrahimsmuggling-drugs-Kutch-Pakistani-ports.htm (Accessed on December 17, 2012).

[41]   The liberalisation of the Sri Lankan economic contributed substantially to smuggling of electronic goods and gold. For details see Muttukrishna Sarvananthan, 'Contraband Trade and Unofficial Capital Transfers between Sri Lanka and India', *Economic and Political Weekly*, 29 (3), July 23, 1994, p. 1949.

etc. were smuggled out of the shores of Tamil Nadu.[42] Indian intelligence agencies have identified a number of vulnerable points along the Tamil Nadu coast. These are Karaikal, Mandapam, Vedaranyam, Pudupattinam, Vilunthanavadi, Velanganni, Point Calimere, and Nagapattinam. The findings of the Jain Commission, which was set up to investigate into the assassination of Rajiv Gandhi, states,

> "the smuggling activities of the LTTE had an influence on the economic activities in the State. Owing to the large scale requirements of the LTTE, a thriving black market flourished with regard to commodities such as diesel, petrol and pharmaceuticals; smuggling of gold into the State went up considerably. This vitiated the economic climate in the State."[43]

By the mid-1990s, heroin originating in Afghanistan and Pakistan began to be smuggled out of the Tamil Nadu coast.[44] Drug consignments used to be smuggled out of the state using small fishing boats, which were then transferred to small islands located near the Tamil Nadu coast, from where they were shipped to northern Sri Lanka. Even after the end of the civil war in Sri Lanka, the smuggling of gold and drugs has continued unabated. The strong links between criminal groups and ex-LTTE rebels that were established during the years of war have remained unbroken, thus facilitating the smooth running of their operations.[45]

Difficult terrain, porous borders, strong linkages between people residing on either side of the border, and poor surveillance has made

---

[42] 'Growth of Sri Lankan Tamil Militancy in Tamil Nadu: Chapter II- Phase III (1989 - May l991),' Jain Commission Interim Report, at http://tamilnation.co/intframe/india/jaincommission/growth_of_tamil_militancy/ch2index.html (Accessed on December 17, 2012).

[43] ibid.

[44] *Annual Report 2005-06*, Directorate of Revenue Intelligence, Ministry of Finance, Government of India, New Delhi, 2006, p. 35. Also see, Molly Charles, 'Drug Trade dynamics in India,' *Max Planck Institute of International Criminal Law* and *Rand*, at http://laniel.free.fr/INDEXES/PapersIndex/INDIAMOLLY/DRUGSDYNAMICSININDIA.htm (Accessed on December 17, 2012).

[45] '3 held for smuggling gold from Sri Lanka,' *The Times of India*, Trichy, November 12, 2012, at http://articles.timesofindia.indiatimes.com/2011-11-12/madurai/30390666_1_gold-bars-customs-officials-air-intelligence (Accessed on December 17, 2012).

the Sunderbans a smuggler's paradise. Essential items such as rice, diesel, and saris, together with timber, antiques, etc. are smuggled in and out of the region rampantly.[46] In addition, wildlife—such as tigers, turtles, and protected species of fish such as shark and stingray—are also regularly poached.[47]

The poaching of diverse marine species such as sea cucumbers, corals, fish, shells and crocodiles is also common in the Andaman and Nicobar Islands. Prospects of a good catch and good prices back home lure foreign poachers into the waters of the Islands. The islands where poaching is rampant are Hut Bay, Little Andaman, Interview, Kamorta, and Tilang Chong.[48] Poaching is also prevalent in the waters between Vishakhapatnam and Chennai in the east coast, and between Kochi and Mumbai in the west coast as well as in the Palk Bay. The Gulf of Mannar is particularly vulnerable where poaching of sea cucumbers in rampant.[49] Poaching in Indian waters is carried out both by highly mechanised fishing trawlers owned by fishing firms in Malaysia, Thailand, Taiwan, China, and Indonesia as also by poor fishermen from Myanmar, Sri Lanka, and Bangladesh.

The prime motivation for smuggling has always been financial. Criminal groups engaged in smuggling have been exploiting price differentials on luxury and consumer items between countries to amass enormous wealth. Till the time they confined themselves to smuggling petty items, they posed a challenge only for the law enforcement agencies. But once they started networking with terrorist groups and engaging in the business/logistics end of terrorism, they have become a threat to national security. For instance, the Dawood Ibrahim group, hitherto known to be a criminal gang, perpetrated the 1993 serial bomb blasts

---

[46] 'Antiques smuggled through Sunderbans,' *The Times of India*, Kolkata, January 9, 2012, at http://articles.timesofindia.indiatimes.com/2012-01-09/kolkata/30606965_1_buddha-bust-antiquities-fishermen (Accessed on December 17, 2012).

[47] 'Shark and ray fish consignment seized from Sunderbans,' *The Hindu*, Kolkata, September 4, 2012, at http://www.thehindu.com/todays-paper/tp-national/tp-otherstates/article3856855.ece (Accessed on December 17, 2012).

[48] The author's interactions with senior police, coast guard and naval officials in the Andaman and Nicobar Islands in February 2010.

[49]   The author's interaction with police personnel in Ramanathapuram and Thoothukudi in March 2013.

in Mumbai. For the attacks, the group landed arms and explosives on the Shekhadi coast in Raigad district on February 3 and 7, 1993, which were then transported to Mumbai. The routes used for the clandestine landings were the same that were being used by the group for decades to smuggle drugs and other contraband.[50]

A recent intelligence report has also revealed that many Pakistani nationals having close links with criminal groups-such as Dawood Ibrahim's-are exploiting the ship breaking industry to smuggle in contraband into the country. The report states that many aging ships which are dispatched to India for dismantling have been disappearing from the anchorage. Since these ships are berthed without proper security checks, these disappearances have raised fears that they could be used by criminal groups for smuggling arms and explosives to aid the terrorists.[51]

Infiltration, Illegal Migration and the Refugee Influx

India's land boundaries have always been porous to infiltration by terrorists/militants and large scale illegal migration. These large scale influxes over the decades have resulted in widespread political turmoil in the border states. To prevent infiltration and large scale illegal migration, the Indian government implemented widespread security measures, included maintaining strict vigil along the borders, the erection of fences, and the thorough checking of immigrants. The elaborate security arrangements on land forced the terrorists and illegal migrants to look towards the sea where security measures are comparatively lax, enabling them to 'move, hide and strike' with relative ease.[52]

---

[50] '93 blasts: Five get 3-year rigorous imprisonment,' *The Times of India*, Mumbai, May 18, 2007, at http://articles.timesofindia.indiatimes.com/2007-05-18/india/ 27879121_1_special-tada-court-rigorous-imprisonment-serial-blasts (Accessed on December 6, 2012). Also see, 'Dawood sent me back on a Mercedes,' *Express India*, Mumbai, September 22, 2006, at http://www.expressindia.com/news/ fullstory.php?newsid=74274#compstory (Accessed on October 30, 2012).

[51] 'Dawood Ibrahim uses ship business to smuggle drug, arms,' *The Times of India*, Chennai, July 16, 2012, at http://articles.timesofindia.indiatimes.com/2012-07-16/india/ 32697759_1_ship-breaking-alang-end-of-life-ships (Accessed on December 17, 2012).

[52] Rupert Herbert Burns, 'Terrorism in the Early 21ˢᵗ Century Maritime Domain,' in Joshua Ho and Catherine Zara Raymond (eds.), *The Best Times, The Worst Times: Maritime Security in the Asia-Pacific* (Singapore: World Scientific, 2005), p. 157.

The trend of infiltration through the sea route has been observed in recent years with the construction of fencing along the India-Pakistan and India-Bangladesh borders.[53] As far as infiltration by the sea route is concerned, the creek areas of Gujarat have been highly vulnerable. Geographical proximity to Pakistan and a terrain that is conducive for stealth movements make the region ideal for infiltration. This fact is corroborated by the number of arrests made by the Border Security Force (BSF) personnel in the past few years. For instance, on June 2012, the BSF arrested eight Pakistani nationals near Koteswar in Kutch.[54] Earlier, in December 2010, the BSF had arrested six Pakistanis in a small island near Jakhau in Kutch.[55] Although in most cases of infiltration, it has been found that the arrested people were indeed Pakistani fishermen who had inadvertently crossed into India, some cases revealed that a few terrorists had also tried to sneak into the country in the garb of fishermen. For example, an investigation into the arrest of nine Pakistani infiltrators in Kutch in 2009 revealed that they were not fishermen, and had entered India with ulterior motives.[56]

The Indian security and intelligence agencies have also highlighted the fact that suspected members of LeT and other terrorist groups operating from Pakistan could infiltrate through Lakshadweep.[57] Such a possibility cannot be overlooked given that cargo and passenger ships plying between the Indian mainland and the Lakshadweep islands sail

---

[53] India has erected approximately 4600 km long fence along the India-Pakistan and India Bangladesh borders. These fences are also floodlit for easy detection of intrusion at night. *Annual Report 2011-2012*, Ministry of Home Affairs, Government of India, New Delhi, pp. 47-49.

[54] 'Eight Pakistanis arrested in Gujarat,' *The Times of India*, Ahmedabad, June 18, 2012, at http://articles.timesofindia.indiatimes.com/2012-06-18/ahmedabad/32298530_1_pakistani-boat-indian-waters-bsf-officials (Accessed on December 11, 2012).

[55] 'BSF arrests six Pak nationals in Kutch,' *Zee News*, Kutch, December 8, 2010, at http://zeenews.india.com/news/nation/bsf-arrests-six-pak-nationals-in-kutch_673173.html (Accessed on December 11, 2012).

[56] 'BSF arrests nine Pakistani infiltrators in Kutch,' *One India*, Ahmedabad, August 17, 2009 at http://news.oneindia.in/2009/08/17/bsf-arrests-nine-pakistani-infiltrators-in-kutch.html (Accessed on December 11, 2012).

[57] 'Infiltration feared through Lakshadweep-Andaman route,' *The Hindu*, Mumbai, December 2, 2010, at http://www.thehindu.com/news/states/other-states/article926101.ece (Accessed on October 30, 2012).

in and out of the old Mangalore Port unchecked and unmonitored. Under such circumstances, it would be relatively easier for LeT operatives who have allegedly entered the Lakshadweep to sneak into the Indian mainland with arms and ammunition through the poorly guarded port.[58]

While the western coast of the country is vulnerable to infiltration by terrorists from Pakistan, the eastern and southern coasts face the problem of illegal migration and the influx of refugees. Pushed by political turmoil, religious and political persecution, overwhelming poverty, and lack of opportunities in their countries, Sri Lankan and Bangladeshi nationals have been migrating to India illegally for decades. Although such people do not pose a direct threat to India's security, but the probability that terror operatives could take advantage of this and sneak into the country in the guise of migrants and refugees remains. Also, given the harsh economic conditions in the countries from where they come, the propensity towards indulging in illegal activities to earn easy money is also greater in the migrant populations.

The Tamil Nadu coast has been experiencing a steady inflow of Sri Lankan refugees since civil war broke out in that country. The maximum influx of refugees took place in the initial years of the ethnic war. Between 1983 and 1991, a total of 2.56 lakh refugees took shelter in Tamil Nadu. Since then, although the number of refugees entering India has reduced, it has not stopped altogether. Presently, around 3.04 lakh refugees reside in the country.[59] The majority of these entered India illegally through the sea route. Their entry into the country was facilitated by Indian fishermen. These fishermen ferried the refugees from Sri Lanka to Tamil Nadu for either ethnic considerations or financial remunerations.[60]

Over the years, these refugees have become both a security as well as a humanitarian concern for the Indian government. Trafficking in drugs and human beings-in particular through the coast of Tamil Nadu-has

---

58   The author's interaction with senior police and customs officials at Mangalore during her field trip to the Karnataka coasts in July 2012.

59   *Annual Report 2011-12*, Ministry of Home Affairs, no. 53, p. 297.

60   V Adm. G. M. Hiranandani, *Transition to Guardianship: The Indian Navy 1991-2000*, Lancer, New Delhi, 2009, p. 53.

registered an upward trend since Sri Lankan refugees started entering the state. As stated earlier, the influx of refugees from Sri Lanka had given a fillip to the smuggling activities along the Tamil Nadu coast. Likewise, the trafficking of drugs and narcotics also received a boost as the LTTE cadres began trafficking heroin and drugs to Sri Lanka and other West European countries through the Tamil Nadu coast. This fact has been corroborated by the arrests of a number of Sri Lankans in Mumbai by drug enforcement agencies.[61]

Incidents of smuggling Sri Lankan refugees to developed countries have been also widely recorded. Frustrated with their lives in the designated camps in India, and lured by the prospect of a good life in the developed world, many Sri Lankan refugees seek to travel to Australia, Europe and the United States. In their attempt to reach the shores of these countries, these refugees resort to any means. Their desperation is exploited by criminal gangs who promise them a safe journey to their desired destination against the payment of hefty amounts of money. Significantly, most of the journeys to the developed countries are undertaken by sea. While some refugees have been successful in reaching their destinations, many have perished on their way.[62] Earlier, the Tamil Nadu coast was used to smuggle the refugees out of the country. However, because of increased surveillance there, traffickers have shifted their operations to the coasts of Kerala and Karnataka as well.[63]

Illegal migration from Bangladesh into India has been taking place since Independence. While in the earlier decades, the inflow of Bangladeshis was mostly confined to the bordering Northeastern states, the fencing of the border has forced the migrants to turn towards the

---

[61] 'LTTE fall will alter the drug trade in India,' *The Times of India*, Mumbai, May 30, 2009, at http://articles.timesofindia.indiatimes.com/2009-05-30/mumbai/28187683_1_ltte-drug-trade-velupillai-prabhakaran (Accessed on December 12, 2012).

[62] It is believed that more than 600 Sri Lankan Tamils have died during their various sea voyages to distant countries. For details see, 'Lankan Tamils perish in sea,' *The Asian Age*, Chennai, July 10, 2012, at http://www.asianage.com/india/lankan-tamils-perish-sea-628 (Accessed on November 1, 2012).

[63] 'Trafficking of humans through the sea on the rise: Report,' *The Indian Express*, Kochi, September 17, 2012, at http://newindianexpress.com/states/kerala/article608141.ece (Accessed on October 31, 2012).

sea, and clandestinely land their refugee boats along the West Bengal and Odisha coasts. The coastal districts South 24 Parganas and East Medinipur in West Bengal, and Kendrapara, Jagatsinghpur, Bhadrak, and Balasore in Odisha reportedly have huge concentrations of Bangladeshi population. Recently, newspapers reported that more than 1,500 suspected Bangladeshis in the coastal villages of Kendrapara have been asked to produce proof of their nationality.[64] The increasing employment of Bangladeshi migrants in the fishing industry in the coastal states has also raised security concerns. Given that no background checks are carried out for the migrants, it is feared that terrorists could operate in the coastal areas pretending to be migrant labourers.[65]

Straying of Fishermen beyond the Maritime Boundary

The frequent straying of fishermen into neighbouring country waters has not only jeopardised the safety of the fishermen but has also raised national security concerns. Fishermen who trespass into a neighbour country's waters are invariably arrested along with their boats. On many occasions, they have also been fired upon by security agencies of the neighbouring country. Sometimes straying into neighbours waters invites attacks from pirates, as often happens along the India-Bangladesh maritime border. There is a general notion that since some of the maritime boundaries of India are disputed and therefore not clearly demarcated, fishermen inadvertently cross into the waters of neighbouring countries. In reality, however, it has been observed that the fishermen are aware of the maritime boundary but *knowingly* trespass into the neighbours territorial waters for a good catch.[66]

Along the India-Pakistan maritime boundary, trespassing by both Indian and Pakistani fishermen into each other's perceived waters is commonplace. Arrests made by the maritime law enforcement agencies of both countries indicate the regularity with which such trespassing

---

[64] 'Odisha: 312 families likely to be deported,' *Outlook India*, Kendrapara, September 9, 2012, at http://news.outlookindia.com/items.aspx?artid=774710 (Accessed on October 31, 2012).

[65] Observations of the author during her field trips to Maharashtra, Gujarat and Karnataka in 2008, 2009 2012 and 2013.

[66] The author's interaction with fishermen in Jakhau, Okha, Porbander and Veraval during her field visit to coastal Gujarat in September 2008 and March 2012.

occurs. For example, Pakistan had released 676 arrested Indian fishermen by September 2012; however, since October 2012, its Maritime Security Agency (MSA) had arrested 100 more. Presently, around 160 Indian fishermen are in Pakistani jails, and around 120 Pakistani fishermen are locked in Indian jails.[67]

The lure of a good catch, especially of pomfret and red snapper fish—which are abundant in the Indus estuary close to Karachi—is the main inducement that drives Indian fishermen to cross the international maritime boundary into Pakistani territorial waters.[68] In addition, handsome monetary compensations doled by the central as well as state governments to the arrested fishermen coupled with low fines imposed on vessels (only Rs. 1,000 per vessel) found violating the international maritime boundary appear to have blunted the fears of Indian fishermen of being arrested by Pakistani authorities. The arrests of large numbers of Indian fishermen as well the confiscation of their trawlers/boats has, however, raised security concerns. Many security analysts fear that Pakistan's Inter Services Intelligence (ISI) could exploit the domain knowledge of the masters of these boats by extracting information about various landing points in India. They also fear that some of the fishermen could be brain washed and used as agents against India. Moreover, the confiscated trawler could be used to sneak in terror operatives (along with arms) as they could enter into Indian waters without raising any suspicion.

Trespassing by Indian fishermen in Sri Lankan waters also takes place regularly. Here, the issue is not of an unsettled maritime boundary but the refusal of Indian fishermen to recognise the maritime boundary between India and Sri Lanka, especially in the Palk Bay.[69] The Palk Bay

---

[67] '311 Indian fishermen set free from Pakistani prison', *Indian Today*, Karachi, June 27, 2012, at http://indiatoday.intoday.in/story/311-indian-fishermen-set-free-from-pakistani-prison/1/202679.html (Accessed on December 18, 2012). Also see, 'Pakistan releases all Indian fishermen', *The Hindu*, Islamabad, September 8, 2012, at http://www.thehindu.com/news/national/article3874442.ece (Accessed on December 18, 2012). 'Pakistani authorities arrest 12 Indian fishermen', *DNA*, Islamabad, November 18, 2012, at http://www.dnaindia.com/world/report_pakistan-authorities-arrest-12-indian-fishermen_1766111 (Accessed on December 18, 2012).

[68] The author's interaction with fishermen in Gujarat, no. 66.

[69] The author's interaction with fishermen associations in Ramanathapuram in July 2013.

has traditionally been a common fishing ground for fishermen on both the sides. However, the delineation of the maritime boundary has divided the Palk Bay, and stipulates that Indian fishermen cannot fish beyond the international boundary.[70] Indian fishermen defy this prohibition and continue to fish beyond the maritime boundary claiming historical rights to the waters. Besides this, the excessive exploitation of marine resources by the use of mechanised trawlers has denuded the Indian waters of fish, thus forcing the fishermen to explore new fishing grounds. The Sri Lankan waters, which have abundant fish resources[71] was an obvious choice.

The violation of the international boundary and poaching in Sri Lankan waters by Indian fishermen has always drawn the attention of the Sri Lankan authorities. In the years following the maritime boundary agreement, the Sri Lankan navy had shown leniency and used to release the trespassers after holding them briefly. However, the onset of the civil war changed the situation. In order to counter the threat of the 'Sea Tigers', the Sri Lankan navy expanded its fleet and began to patrol Sri Lankan waters more aggressively. In the process, they killed, injured, and arrested scores of Indian fishermen who were found fishing in the Sri Lankan territorial waters.[72]

Even after the civil war had ended, there has been no respite from this problem.[73] The arrest and subsequent release of Indian fishermen by

---

[70]   V. Vivekanandan, 'Crossing Maritime Borders: The Problem and Solution in the Indo-Sri Lankan Context', in K.G. Kumar (ed.), *Forging Unity: Coastal Communities and the Indian Ocean's Future*, International Collective in Support of Fishworkers, Chennai, 2003, pp. 77-79.

[71]   In the north and east coasts of Sri Lanka, fishing had virtually stopped since the outset of civil war in 1983. The war destroyed the socio-economic infrastructure making it impossible for the fishermen to venture out in the sea. The production of fish from Jaffna had dropped from 48,776 metric tonnes in 1983 to 2,211 metric tonnes in 2000. For details see, V. Suryanarayan, *Conflict over Fisheries in the Palk Bay Region*, Lancer, Chennai, 2005, p. 43.

[72]   'From 1983 to 2001, 105 Fishermen have been killed in ûring by the Sri Lanka Navy, 286 Fishermen injured and hundreds of Fishermen arrested'. See, V. Vivekanandan, no. 70, p. 80.

[73]   Defence Minister Shri A.K. Antony, in a written reply to Shri Sivasmi C in the Lok Sabha on December 17, 2012, at http://pib.nic.in/newsite/erelease.aspx?relid=0 (Accessed on December 18, 2012).

Sri Lankan authorities remains a regular feature, though the attacks on Indian fishermen by the Sri Lankan navy have reduced significantly.[74] In fact, the problem has the potential to further aggravate as the Sri Lankan Tamils are gradually taking up fishing—an activity they had left almost twenty five years ago. Incidentally, like their Indian counterparts, the Sri Lankan fishermen also poach in Indian waters. The pattern of arrests of Sri Lankan fishermen in Andhra Pradesh, Gujarat, the Andaman and Nicobar and Lakshadweep Islands indicates that they prefer to venture out further north in the Bay of Bengal and the Arabian Sea and not in the Palk Bay area.[75]

Fishing in each other's waters by the fishermen of India and Sri Lanka has strained bilateral ties. Every time an Indian fisherman is arrested by Sri Lankan authorities, Tamil Nadu puts pressure on the Indian government to lodge a formal protest with the Sri Lankan government.[76] The arrests of Indian fishermen by Sri Lankan authorities are also seen

---

[74] '23 Tamil Nadu fishermen arrested by Sri Lankan Navy released: Krishna,' *The Times of India*, New Delhi, July 27, 2012, at http://articles.timesofindia.indiatimes.com/2012-07-27/india/32887814_1_sri-lankan-navy-tamil-nadu-fishermen-lankan-naval-ships (Accessed on November 1, 2012). 'Six TN fishermen injured in Sri Lankan Navy attack', *The Hindu*, Rameswaram, August 21, 2012, at http://www.thehindu.com/news/states/tamil-nadu/article3802351.ece (Accessed on November 1, 2012). 'Tamil Nadu fishermen "attacked" by Lankan navy', *The Times of India*, Rameswaram, October 25, 2012, at http://articles.timesofindia.indiatimes.com/2012-10-25/india/34729290_1_sri-lankan-naval-personnel-katchatheevu-tamil-nadu-fishermen (Accessed on November 1, 2012). '37 Indian Fishermen arrested by Sri Lanka', *outlookindia.com*, Colombo, December 3, 2012, at http://news.outlookindia.com/items.aspx?artid=782444 (Accessed on December 18, 2012).

[75] The author's interaction with the marine police in Gujarat and Andhra Pradesh in March 2013. Also see, '25 Sri Lankan fishermen arrested for illegal fishing', *The Times of India*, Chennai, February 18, 2012, at http://articles.timesofindia.indiatimes.com/2012-02-08/chennai/31036983_1_sri-lankan-fishermen-illegal-fishing-indian-waters (Accessed on December 18, 2012). 'India to release 10 Sri Lankan fishermen', *The Global Times*, July 5, 2012, at http://www.globaltimes.cn/NEWS/tabid/99/ID/719212/India-to-release-10-Sri-Lankan-fishermen.aspx (Accessed on December 18, 2012).

[76] 'Jaya seeks PM's intervention in securing fishermen's release', Zee *News*, Chennai, December 5, 2012, at http://zeenews.india.com/news/tamil-nadu/jaya-seeks-pm-s-intervention-in-securing-fishermen-s-release_814813.html (Accessed on December 18, 2012). 'Attack on fishermen: Narayanswamy takes up issue with PM', *Zee News*, New Delhi, December 14, 2012, at http://zeenews.india.com/news/tamil-nadu/attacks-on-fishermen-narayanasamy-takes-up-issue-with-pm_816777.html (Accessed on December 18, 2012).

through the prism of the Tamil-Sinhala animosity in Tamil Nadu, which vitiates bilateral relations.[77]

In the case of the India-Bangladesh borders, the straying of Indian fishermen in Bangladesh's territorial waters invariably not only draws the attention of that country's maritime law enforcement and security agencies, but also invite attacks from pirates. The straying of Indian fishermen into Bangladeshi waters happens mainly in the Sunderbans area. The difficult terrain and the absence of the Global Positioning System (GPS) in the fishing trawlers make it difficult for the fishermen to ascertain maritime boundaries and, more often than not, they unknowingly enter into Bangladeshi waters. Once they enter into Bangladeshi waters, besides facing the Bangladeshi law enforcement agency[78] Indian fishermen also encounter pirates. These pirates, who are heavily armed, operate in large groups, and attack Indian fishermen when they sail back after a good catch.

Summing up

India faces many threats and challenges from its maritime domain. Whereas some of these threats and challenges are manifest, others are potential in nature. The scope and intensity of the threats and challenges also varies. While threats - such as maritime terrorism - have the enormous ability to destroy national security, challenges like smuggling and the straying of fishermen can also jeopardise the safety of the nation. Thus, securing the country's coasts and its adjacent seas from these threats and challenges requires a comprehensive strategy. Over the years, Indian policy makers and security establishments have been engaged in devising policies and measures to put in place an effective response mechanism to deal with these threats and challenges. In the following chapter, the various policies and measures that have been adopted by the Indian government to formulate a comprehensive approach towards coastal security will be discussed.

---

[77] 'Fishing in neighbour's waters remains a knotty problem for India, Lanka', *The Times of India*, New Delhi, August 9, 2012, at http://articles.timesofindia.indiatimes.com/2012-08-09/india/33117778_1_sri-lankan-fishermen-indian-fishermen-imbl (Accessed on November 1, 2012).

[78] 'Bangladesh to free 72 fishermen', NDTV, Kolkata, November 27, 2012, at http://www.ndtv.com/article/india/bangladesh-to-free-72-indian-fishermen-298131 (Accessed on December 19, 2012).

II   Evolution of the Coastal Security Architecture

One of the earliest challenges to coastal security that India has had to encounter was sea-borne smuggling. Smuggling of precious metals and luxury items has been quite rampant along the western and southern coasts of India since Independence. While awareness of this problem and its repercussions existed amongst the policy makers, concerted efforts to formulate strategies to counter it were not made for many years. The only plan that was put in place in the early 1960s was to patrol the coastal waters and to conduct anti-smuggling operations by the Customs Department with the help of the Indian navy. But this plan did not prove effective because the Customs Department did not possess enough interceptor boats to patrol and conduct anti-smuggling operations frequently. It operated a total of only six seaward defence boats (SDBs), four of which was deployed along the western coast near Mumbai, and two along the southern coast near Chennai.[1]

The Customs Department and the Indian navy also found it difficult to undertake successful counter smuggling operations because effective intelligence regarding the landings of contraband along the coast was absent. The presence of numerous unregistered boats fishing close to the shores also made it difficult to detect illegal boats, which further aggravated the situation. As a result, sea borne smuggling continued unhindered and, by the end of 1960s, it reached alarming proportions, giving rise to a parallel economy.

Coastal Security Measures after the 1960s

Alarmed by the rising graph of sea-borne smuggling and mindful of the inadequacies faced by the maritime law enforcement agencies, the

---

[1]   These SDBs were operated by the Indian navy on behalf of the Customs Department. See, Prabhakaran Paleri, *Role of Coast Guard in the Maritime Security of India* (Second Edition), Knowledge World, New Delhi, 2007, p. 35.

Government of India (GoI) constituted study groups and committees in 1970 and 1974 to recommend measures to check smuggling. The study groups and committees recommended the creation of a specialised force, suitably equipped for carrying out anti-smuggling operations as the preferred solution. Acting on their recommendations, GoI created two specialised forces within a span of a few years: the Customs Marine Organisation and the Indian Coast Guard.

The Customs Marine Organisation

The Customs Marine Organisation (CMO) was created following the recommendations of the Nag Chaudhari Committee. The objective of the committee was to suggest the optimum assets required for anti-smuggling operations as well as recommend ways to curb smuggling through the sea.[2] The committee, which submitted its report in August 1971, recommended the acquisition of fast interceptor boats, hovercraft and helicopters for conducting effective anti-smuggling operations. Most importantly, it recommended the raising of a specialised force as an effective instrument to counter sea-borne smuggling.[3] Based on the suggestion of the committee, the GoI created the CMO in August 1974, and mandated it to conduct anti-smuggling operations. The CMO was headed by a Director who was a naval officer, deputed to the newly created organisation from the Indian navy. The organisation was staffed by naval officers, both retired and serving, and had under its disposal the newly acquired 20 Norwegian interceptor craft as well as 50 confiscated Arab *dhows* and two jet craft.[4] In the initial years, the organisation made some notable impact in its fight against sea-borne smuggling. However, since the CMO was temporary in nature, not much attention was paid to strengthening the organisation, which would have enabled it to single handedly take on

---

[2] The GoI constituted a study group under the Chairmanship of Dr. B.D Nag Chaudhuri on January 23, 1970. The study group comprised Air Marshall O. P. Mehra and Admiral R. D. Katari (Retd.), among others. The group was to identify the number and nature of craft required; the markets from where they could be sourced; and the suitability of using aircraft and helicopters for anti-smuggling operations. For details see, Prabhakaran Paleri, *Role of Coast Guard in the Maritime Security of India* (Second Edition), ibid, p. 36.

[3] ibid.

[4] ibid, p. 40-41.

the challenge of sea-borne smuggling. Instead, it was left to languish without manpower and assets. And once the Indian Coast Guard was formed, the CMO was merged with the newly created organisation by a Presidential sanction in January 1982 to avoid the duplication of efforts.[5]

The Indian Coast Guard

The idea for the creation of the Indian Coast Guard (ICG) was first put forward by the naval headquarters. The Indian navy was gradually realising that its increased participation in various anti-smuggling operations was not only resulting in the stretching of its resources but also interfering with its training, besides deviating it from its primary role of defending the country during wartime. Therefore, it argued that there was a need to establish a coast guard which would be responsible for law enforcement in India's jurisdictional waters as well as ensure the safety of life and property at sea.[6] Soon, a committee, under the chairmanship of K.F. Rustomji, was formed to look at the prospect of creating a coast guard as well as suggesting anti-smuggling measures.

The committee observed that the lack of effective surveillance of the coastal waters and adjacent seas was one of the main reasons for heightened smuggling activities. It further noted that India had growing interests in its maritime sphere. These included the development of offshore areas for exploration and extraction of oil and gas; efficient management of maritime traffic, especially those of oil tankers in the coastal waters; pollution control; search and rescue; the prevention of poaching; and the prevention of scientific studies being conducted by foreign vessels in Indian waters. Given these considerations, the committee recommended the creation of a coast guard which could perform a variety of duties ranging from patrolling the territorial and contiguous waters; enforcing criminal laws in these waters; ensuring

---

[5]   This organisation was created by the Central Government tinder Ext.P1 notification dated 2nd August 1974. See, *G.K. Nayar and Ors Vs. Union of India (UoI) And Ors, Judgment*, June 25, 1982, at http://indiankanoon.org/doc/1041921/ (Accessed on December 27, 2012).

[6]   The Defence Secretary had written a letter to the Cabinet Secretary in August 1974 advocating the formation of the Indian Coast Guard.

compliance of laws relating to shipping, fishing and pollution; assisting the Customs Department in anti-smuggling operations; and conducting search and rescue and other specified duties.[7]

Meanwhile, various unfolding events in the international arena also contributed to the crystallisation of the idea of the formation of a coast guard. By this time, the world had come to realise the economic potential of the maritime realm, and countries had started laying claims to vast stretches of the oceans to reap benefits for themselves. Amidst this mad rush, the United Nations Convention for Laws of Sea (UNCLOS) convened its third meeting in 1973 to establish an equitable international regime for the exploitation of sea bed resources. During the meeting, the UNCLOS recognised the concept of exclusive economic zone (EEZ). Conforming to the prevailing worldwide trend, India enacted the Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zone Act in 1976.[8] The Act, which is also known as the Maritime Zone of India (MZI) 1976, added 2.02 million sq. km. of EEZ to the country's maritime realm. The inclusion of such a vast expanse of maritime area required a force that would be able to police it as well as safeguard the country's interests within its limits.

Accordingly, the ICG was established on February 1, 1977 on the interim in the naval headquarters, and placed under the ministry of defence (MoD). The newly created organisation was equipped with two frigates provided by the Indian navy and five patrol boats transferred from the ministry of home affairs (MHA). On August 18, 1978, with the enactment of the Coast Guard Act, the organisation formally came into being as the fourth armed force of India. The Act stipulates that the ICG as an armed force would ensure the security of the maritime

---

7   Prabhakaran Paleri, *Role of Coast Guard in the Maritime Security of India (Second Edition)*, no. 1, pp. 44-45.

8   Under this Act, India claimed 12 miles of Territorial sea, 24 miles of Contiguous zone, 200 miles of EEZ and a Continental shelf up to 200 miles or the outer edge of continental margins, whichever is greater. For the full text of the Act see, *Territorial Waters, Continental Shelf, Exclusive Economic Zone and other maritime Zone Act*, 1976, at http://nbaindia.org/uploaded/Biodiversityindia/Legal/19.%20Territorial%20Water,%20Continental%20Shelf,%20Exclusive%20Economic%20Zone%20and%20other%20Maritime%20Zones%20Act,%201976.pdf (Accessed on December 27, 2012).

zones of India, and protect its maritime and national interests in such zones.[9] The Act also specifies the following duties and functions for the ICG[10]:

a) ensuring the safety and protection of artificial islands, offshore terminals, installations and other structures and devices in any maritime zone;

b) providing protection to fishermen, including assistance to them at sea while in distress;

c) taking such measures as are necessary to preserve and protect the maritime environment, and to prevent and control marine pollution;

d) assisting the customs and other authorities in anti-smuggling operations;

e) enforcing the provisions of such enactments as are for the time being in force in the maritime zones; and

f) such other matters, including measures for the safety of life and property at sea, and the collection of scientific data, as may be prescribed.

The Coast Guard Act of 1978 also lists the Acts under which the ICG is empowered to discharge its duties. These include: the Passport (Entry into India) Act 1920; the Emigration Act 1922; the Registration of Foreigners Act 1939; the Foreigners Act 1946; the Merchant Shipping Act 1958; the Customs Act 1962; the Passports Act, 1967; the Foreign Exchange Regulation Act 1973; and the Territorial Waters, Continental Shelf, Exclusive Economic Zone, and Other Maritime Zone Act 1976.[11]

---

9   'Chapter I: Preliminary', *The Coast Guard Act, 1978, (30 of 1978)*, at http://www.indiancoastguard.nic.in/Indiancoastguard/CG%20Act%201978/Chapter1.htm#1 (Accessed on December 27, 2012).

10   'Chapter III: Duties and Functions of the Coast Guard', *The Coast Guard Act, 1978, (30 of 1978)*, at http://indiancoastguard.nic.in/Indiancoastguard/CG%20Act%201978/Chapter3.htm#14 (Accessed on December 27, 2012).

11   'Chapter XIII: Modification of findings and sentences, pardons, commutation and remission and sentences', *The Coast Guard Act, 1978, (30 of 1978)*, at http://www.indiancoastguard.nic.in/Indiancoastguard/CG%20Act%201978/Chapter13.htm#121 (Accessed on December 28, 2012).

In March 1981, a MHA notification extended the provisions of the Criminal Procedure Code (CrPC) and the Indian Penal Code (IPC) over the EEZ. Further, in 1981 and 1982, the Regulation of Fishing by Foreign Vessels in the Maritime Zones of India Act and the Regulation of Fishing by Foreign Vessels in the Maritime Zones of India Rules were passed. These acts and rules laid down the procedures to regulate fishing by foreign vessels in the Indian EEZ, and provided for punishments for violating the rules. Thus, the ICG became the principal organisation for the enforcement of all national legislation in the MZI.[12] In addition, the ICG was also entrusted with the following lead roles:

- The national authority for Offshore Security Coordination Committee (OSCC). The OSCC is a body constituted by the Ministry of Petroleum and Natural Gas for threat assessment and the implementation of contingency plans for the security of offshore assets;

- The national authority for Maritime Search and Rescue Region in the Indian Search and Rescue Region; and

- The Lead Intelligence Agency (LIA) for coastal borders.

However, the process of growth and expansion of the ICG in the years following its inception were not in tandem with the range of responsibilities entrusted to it. The ICG Development Plan 1978-1990, which was prepared to indicate the long term requirement of the ICG was reviewed in 1987 and a 15 year Perspective Plan (1985-2000) was prepared for the growth of the newly created organisation. However, the Perspective Plan (1985-2000) was not approved by the Defence Acquisition Council (DAC). In addition, the Five Year Development Plans also took inordinate time to finalise. These Development Plans were also approved after a long time as manpower and infrastructure proposal were formulated without sound justifications.[13] As a result,

---

[12] V Adm. G.M. Hiranandani, *Transition to Guardianship: The Indian Navy 1991-2000*, Lancer, New Delhi, 2009, p. 285.

[13] 'Chapter-3 Planning and Financial Management', *Report No. 7 of 2011-2012 Performance Audit of Role and Functioning of Indian Coast Guard*, Comptroller and Auditor General of India, New Delhi, pp. 14-18, at http://saiindia.gov.in/english/home/Our_Products/Audit_Report/Government_Wise/union_audit/recent_reports/union_performance/2011_2012/Defence_Services/Report_No_7/Report_no_7.html (Accessed on January 5, 2013).

the ICG could not acquire the desired man power, water and air assets. For example, 17 out of 19 ICG stations that were activated during the Perspective Plan period functioned with "infrastructural/fleet deficiencies".[14] The ICG stations at Diglipur, which was established in 1987, functioned without boats till 2006. Similarly, ICG stations at Campbell Bay, Mumbai, Kochi, Goa, Okha, etc. did not have jetties and fuelling facilities for ships. Inadequate personnel and infrastructure adversely affected the ICG's operational effectiveness.

Coastal Security Measures during the 1990s

A decade after the creation of the ICG, India had to grapple with new challenges that were more potent and posed a serious threat to national security. The activities of the Liberation Tigers of Tamil Eelam (LTTE) engaged in gun running and smuggling was worsening the security situation along the Tamil Nadu coast. In addition, smugglers and criminal groups active along the west coast had forged strong ties with anti-national elements, and were doing their bidding. Countering seaborne criminal activities by highly committed and well-equipped insurgent and criminal groups required a force suitably trained in low intensity maritime warfare. Unfortunately, the fledging ICG, created essentially to thwart petty smuggling but also burdened with a whole host of maritime responsibilities, did not possess the required wherewithal to deal with the insurgents and terrorists.

Thus, the need of the hour was to pool the resources of all security and law enforcement agencies in a coordinated effort to secure the coastal waters against such threats. Taking these considerations into account as well as the unfolding security environment, the GoI launched joint operations along the southern and western coasts of the country, which involved the ICG, the Indian navy, the Customs Department, the Police, and other concerned agencies. Two such joint operations were launched in the early 1990s: Operation Tasha and Operation Swan.

---

[14]   Chapter-4 Infrastructure, Assets and Logistics', *Report No. 7 of 2011-2012 Performance Audit of Role and Functioning of Indian Coast Guard*, ibid, p. 21.

Operation Tasha

As discussed earlier, the civil conflict that broke out in Sri Lanka in 1983 had serious security repercussions on India as well. The LTTE cadres had been actively involved in the smuggling of arms, drugs, fuel, etc. The situation was partially brought under control with the deployment of the Indian navy and the ICG along the India-Sri Lanka maritime border during *Operation Pawan*.[15] However, the termination of *Operation Pawan* in August 1990 meant that the maritime armed forces hitherto deployed along the India-Sri Lankan maritime boundary and the coastal waters would have to be withdrawn. It also meant that the security vacuum created by the withdrawal of the Indian navy and the ICG would enable the LTTE cadres to resume their criminal activities. Expressing similar fears, in February 1990, the Tamil Nadu government requested the GoI to extend central assistance to the state in the form of continued naval presence in its coastal waters. Acceding to the request, the GoI requested the Indian navy to maintain its presence in the state.[16]

Accordingly, the Indian navy launched *Operation Tasha* on June 21, 1990 with the objectives of preventing illegal immigration and the infiltration of LTTE militants to and from Sri Lanka; preventing the smuggling of arms, ammunition and contraband from the Indian mainland to Sri Lanka and vice versa; and, enforcing air surveillance and seaborne patrols to curb the activities of Sri Lankan Tamil militants in the Palk Bay.[17] The operation was conducted through seven naval detachments which were established along the southern Tamil Nadu coast. The ICG and state police provided the required assistance.

Operation Tasha resulted in a layered concept of surveillance. Under this concept, the inner coastal waters were patrolled by hired armed trawlers; the international maritime boundary line was patrolled by the Indian

---

[15] *Operation Pawan* was launched in 1987, under which India sent troops to Sri Lanka to enforce the terms of peace agreement signed between the Sri Lankan government and the LTTE. For details see, Thakur Kuldip S. Ludra, *Operation Pawan*, Strategic Research Centre, Chandigarh, 1999.

[16] V Adm. G.M. Hiranandani, no. 12, p. 52.

[17] ibid.

navy and the ICG ships; and, the air surveillance was carried out by naval aircraft and helicopters.[18] Even though extensive patrolling and surveillance of the coastal waters and the international maritime boundary had been carried out, *Operation Tasha* was not very successful in preventing either illegal migration from Sri Lanka or the smuggling of contraband along the Tamil Nadu coast.

There were a number of reasons for the failure of *Operation Tasha.* Chief among these was the involvement of local fishermen in illegally ferrying passengers and contraband for monetary and other considerations. Since the fishermen were knowledgeable about the sea as well as the landing points along the shore, they could dodge the naval and ICG patrolling units successfully. Other reasons which contributed to its failure were ineffective police presence along the landing points; lenient state policy towards accepting illegal Tamil refugees; and, the lack of credible intelligence for successfully interdicting smuggling.[19] Despite its apparent failure, *Operation Tasha* - initially envisaged to be a short term requirement of three to six months - was extended indefinitely as the Sri Lankan ethnic problem persisted. However, it resulted in no appreciable improvement in the security situation. Interestingly, while *Operation* Tasha was still in force, yet another short term operation - *Operation Nakabandi* - was initiated on August 13, 1996 along the Tamil Nadu coast 'to check the influx of refugees and to curb clandestine activities in Palk Bay and Gulf of Mannar'.[20] *Operation Tasha* continues to be in force till date.

Operation Swan

India's western coast has been subjected to smuggling since independence. Gold, electronic goods and narcotics were regularly smuggled in and out of the country from various points along the Maharashtra and Gujarat coasts. Although smuggling of such contraband had caused concerns among policymakers and counter measures were undertaken to prevent them, it was only after the

---

[18]   ibid, p. 53.

[19]   ibid, p. 54.

[20]   *Annual Report 1999-2000*, Ministry of Defence, Government of India, New Delhi, 2000, p. 44.

revelation that the explosives used for the Mumbai serial blasts in 1993 were smuggled through these coasts that concerted efforts were made to secure this coast. *Operation Swan* was launched in April 1993, in the immediate aftermath of the Mumbai bomb blasts. Its aim was to prevent clandestine landings of contraband and illegal infiltration along the Maharashtra and Gujarat coasts.[21]

Like *Operation Tasha, Operation Swan* was also based on the concept of layered surveillance. Under the plan, while the Indian navy and the ICG patrolled the high seas and the intermediate layer, a joint coastal patrolling (JCP) team, comprising of personnel from the state police, navy, coast guard, and customs undertook the patrolling of shallow waters, creeks and inlets, which had hitherto remained unmonitored. An informal layer comprising fishermen was also added. The fishermen, who were selected by the police, were grouped as the *Sagar Rakshak Dal.* These groups received training in seamanship from the Indian navy.[22] These *Sagar Rakshak Dals* kept watch on suspicious movements along the coasts and at sea and sometimes took part in joint coastal patrolling.[23]

Despite being in operation for almost two decades, *Operation Swan* did not result in a single seizure. Inadequate attention paid to overcome the basic problems of coordination; manpower; equipment, and motivation among the various concerned agencies at the ground level have been the main reasons for its failure.[24]

It is also important to highlight that *Operation Tasha* and *Operation Swan* had resulted in providing focused attention to only those limited stretches of the coastline which had been considered as being extremely vulnerable to smuggling and infiltration. No sustained efforts whatsoever were made to secure the entire coastline and the adjacent

---

[21]   *Annual Report 1993-1994*, Ministry of Defence, Government of India, New Delhi, p. 20.

[22]   *Annual Report 1999-2000*, Ministry of Defence, no. 20, p. 29.

[23]   The author's interview with senior police officials during a field visit to Maharashtra coastal districts in March, 2009 and July, 2013.

[24]   Pushpita Das, 'Why India's Coastal Security Arrangement Falters?', IDSA *Strategic Comment*, August 26, 2011, at http://www.idsa.in/idsacomments/WhyIndiasCoastalSecurity ArrangementFalters_pdas_260811 (Accessed on December 31, 2012).

waters. The failure to have a comprehensive response to coastal security reinforced the fact that much of the efforts put forth by the government were merely knee jerk responses to address the aftermath of a crisis.

Coastal Security Measures Post Kargil war

The closing year of the millennium saw the unfolding of a few events on land that significantly impacted GoI's response to coastal security as well. In May 1999, Pakistani troops crossed the line of control (LoC) and occupied the mountainous heights of Kargil in Jammu and Kashmir. A military response from India against Pakistan's aggression resulted in a brief and limited conflict --- the Kargil war. Following the war, GoI constituted the Kargil Review Committee (KRC) to study the circumstances that had led to the war. The committee was mandated to recommend measures necessary to safeguard the security of the country.[25] In its report, the Kargil Review Committee recommended a comprehensive overhauling of the country's security system.

In response to the KRC report, GoI set up a Task Force on Border Management, with coastal security being a part of it. The Task Force's objective was to 'consider measures for border management and, in particular, to consider the recommendations of the KRC'.[26] For securing India's coasts, the Task Force recommended, *inter alia*, the raising of a 'specialised marine police in the form of coastal police stations'; the strengthening of the ICG by setting up 10 additional ICG stations along the coastline and the procurement of 16 interceptor boats; the formation of fishermen watch groups; the installation of vessel traffic management systems in major ports; the setting up of joint operation

---

[25] The Government of India constituted the Kargil Review Committee on July 29, 1999. The committee comprised of four members under the chairmanship of Shri K. Subrahmanyam. The committee presented its report in Parliament on February 23, 2000.

[26] A Task Force on Border Management under the Chairmanship of Madhav Godbole was constituted as part of the Group of Ministers (GoM) to review the national security system as a whole, and the recommendations of the Kargil Review Committee in particular. The GoM was headed by Shri L.K. Advani, and included the Defence Minister, External Affairs Minister, and Finance Minister. The Group of Ministers' submitted its report to the prime minister on February 21, 2001. See, *Task Force to Consider Measures for Improving Border Management*, No. C-182/1/2000- NSCS (CS), Cabinet Secretariat (National Security Council Secretariat), May 16, 2000.

centres (JOCs); and the establishment of 'an apex body for the management of maritime affairs'.[27]

Thus, for the first time a comprehensive approach towards securing the entire coast of the country was put forward by the Task Force. It is, however, interesting to note that like previous committees set up to suggest means to deal with the challenges to coastal security, the Task Force also recommended the creation of a new organisation, the Marine Police Force, as an instrument to secure India's coastline.

The Marine Police Force

The marine police force was created under the Coastal Security Scheme (CSS) that was launched in 2005. The aim of the CSS was to strengthen infrastructure for patrolling and the surveillance of the coastal areas, particularly the shallow areas close to the coast. The scheme envisaged the establishment of '73 coastal police stations equipped with 204 boats, 153 jeeps and 312 motor cycles for mobility on the coast and in close coastal waters' at a cost of Rs. 37,161.15 lakhs, and over a period of five years.[28] The marine police force was required to work closely with the ICG under the 'hub-and-spoke' concept, the 'hub' being the ICG station and the 'spokes' being the coastal police stations. The marine police was mandated to patrol the territorial waters (12 nautical miles into the sea) and pursue legal cases pertaining to their area of responsibility according to specified Acts. For instance, the Karnataka marine police force has been empowered to discharge their duties under the following Acts:

1. The Coins and Currency Stamps Act (other IPC);

2. The Arms Act of 1958;

3. The Explosives Act of 1884 and 1908;

4. The Narcotic Drugs and Psychotropic Substances Act of 1985;

---

[27] 'Border Management', Reforming National Security, Group of Ministers' Report, Ministry of Home Affairs, Government of India, New Delhi, 2001, pp. 71-75.

[28] *Coastal Security Scheme*, Ministry of Home Affairs, at http://mha.nic.in/pdfs/ Coastalsecurity.pdf (Accessed on December 31, 2012).

5. The Foreigners Act of 1946;

6. The Indian Passport and Immigration Act;

7. The Petroleum Act of 1934;

8. The Benami Transaction Prohibition Act of 1988;

9. The Karnataka Excise Act of 1965;

10. The Karnataka Forest Act of 1963;

11. The Indian Passport (Entry into India) Act of 1920;

12. The Passport Act of 1967 and the Emigration Act of 1983.[29]

Incidentally, the concept of a marine police in different variations had been in existence for sometime.[30] For instance, Tamil Nadu was one of the first states to raise a separate division in the police force to keep a watch over the seas. This separate force was called the Coastal Security Group (CGS) and was formed in 1994. The CGS's aim was to prevent the smuggling of narcotics, fire arms, ammunition, and other essential commodities like fuel and medicines from the Tamil Nadu coast to Sri Lanka. It was also tasked to prevent the infiltration of LTTE militants into the state via the sea by keeping a check on the collusion between fishermen, militants and smugglers.[31] The 1000 strong CGS was staffed by personnel drawn from the special battalion of the Tamil Nadu Police, and its main function was to man the 40 check posts that were established along the entire Tamil Nadu coast. Similarly, Karnataka also established the Coastal Security Police (CSP) in 1999 amidst growing incidents of smuggling and concerns about infiltration by terrorists through its coasts. The CSP was required to carry out intensive vigil

---

[29] Material gathered from coastal police stations during the field trip to coastal Karnataka in July 2012.

[30] The Task Force has referred to the Marine Police of the Andaman and Nicobar Islands. See, 'Border Management', *Reforming National Security, Group of Ministers' Report*, no. 27, p. 72.

[31] 'Coastal Security Group to recruit personnel', *The Hindu*, May 15, 2007, Chennai, at http://www.hindu.com/2007/05/15/stories/2007051515230500.htm (Accessed on January 1, 2013).

and gather intelligence.[32] However, these coastal police did not undertake sea patrolling and their activities remained confined to the shores.

The CSS, which was launched to establish a marine police force, remained a non-starter. Despite facing real and potential threats from the sea, the governments in most of the coastal states remained indifferent to the threats and, therefore, barring one or two, none of the coastal states showed any enthusiasm in implementing the scheme. Most state governments even requested the Central government to shoulder the entire responsibility of implementing the scheme, arguing that they did not have the financial wherewithal. Their indifference can be gauged from the fact that neither land (for the construction of coastal police stations) nor interceptor boats (for patrolling the coasts) were acquired for the establishment of coastal police stations.[33]

At the national level, other recommendations of the Task Force - such as strengthening the ICG; the installation of a static radar chain along the coastline; the setting up of JOCs; the establishing of the Port Authority of India; the issuance of tamper-proof seaman's cards; the tightening of laws and procedures relating to the detention and prosecution of poachers and their confiscated boats etc. - remained in cold storage because the Central government also did not perceive any serious threat emanating from the sea. This lack of appreciation of seaborne threats was reflected even in the deliberations on national security issues which were dominated by issues relating to the security of land borders. In hindsight, such focus on land borders seemed quite natural given that India had fought three wars with Pakistan and a border war with China, and was continuing to grapple with various cross border threats such as terrorism, infiltration, smuggling of arms and drugs, etc. The criminal activities that were being carried along the coasts were, therefore, not considered grave enough to merit any concerted attention.[34]

---

[32] *Karnataka Police*, at http://www.ksp.gov.in/home/aboutus-specialunits.php (Accessed on January 2, 2013).

[33] Pushpita Das, 'Whither Coastal Security', IDSA *Strategic Comments*, November 26, 2009, at http://idsa.in/idsacomments/WhitherCoastalSecurity_pdas_261109 (Accessed on January 1, 2013).

[34] ibid.

Coastal Security Architecture Post '26/11'

The mindset that coastal security is not an essential component of national security eventually changed after the terrorist attacks in Mumbai on November 26, 2008. The fact that ten terrorists from Pakistan could land on the shores of Mumbai after successfully dodging the Indian navy, the ICG at sea, and the marine police near the coast and carry out coordinated strikes in the city, jolted the Indian government. It realised the urgent need to secure the country's coasts and adjacent seas against any future seaborne threat, and announced a slew of measures to plug the gaping holes in the existing coastal security system and introduce fresh measures to make it more robust.[35]

The implementation of these security measures resulted in the creation of a coastal security architecture comprising the following components:

Multilayered Surveillance System

A multilayered system of surveillance of the country's maritime domain involving the Indian navy, coast guard, marine police, customs, and the fishermen had come into being following the series of measures that were implemented over the years to secure India's coasts prior to the Mumbai terrorist attacks in 2008. As discussed earlier, the multilayered surveillance system was, however, functioning only along the Gujarat and Maharashtra coasts. Under the system, the outer layer (beyond 50 nautical) was patrolled by the Indian naval and coast guard ships and aircraft; the intermediate layers (25-50 nautical miles) was patrolled by the ships of the Indian navy and the ICG as well as hired trawlers; and the inner layer i.e. the territorial waters (shoreline to 12 nautical miles), was patrolled by the joint patrolling team and later by the marine police.[36] A similar system was also functional along the Tamil Nadu coast, but with slight modifications.

Post the 26/11 Mumbai attacks, the existing multilayered arrangements have been further strengthened, as also extended to cover the entire

---

[35] The Cabinet Committee on Security issued a series of directives in February 2009 for overhauling the coastal security apparatus. Most of the measures were borrowed from the recommendations of the Group of Ministers' Report of 2001.

[36] 'Chapter 5: Patrolling and Security Issues,' *Report No. 7 of 2011-2012 Performance Audit of Role and Functioning of Indian Coast Guard*, no. 13, p. 47.

coastline of the country. The Indian navy has been brought into the core of the coastal security architecture. It has been designated as the authority responsible for overall maritime security which includes coastal as well as offshore security. The Indian navy is also made responsible for the coastal defence of the nation assisted by the ICG, the marine police, and other central and state agencies. Accordingly, naval commanders-in-chief have been designated as the Commanders-in-chief, Coastal Defence.[37] The ICG has been assigned the additional responsibility for coastal security in the territorial waters, including areas to be patrolled by the marine police. The Director General Coast Guard has been designated as the Commander Coastal Command, and is responsible for the overall coordination between central and state agencies in all matters relating to coastal security.

Furthermore, enhanced procurement and recruitment plans of the Indian navy and the ICG have been approved, and funds have been sanctioned to provide both these services with additional manpower, assets, and infrastructure to augment their capabilities. The budget of the ICG was increased by 36 per cent from Rs. 2,031 crore in 2010-11 to Rs. 2,771 crore in 2012-13.[38] The government also approved the Coast Guard Development Plan 2012-17 (XII Plan) on 11th June 2012 with an outlay of Rs.16,464 crore (Capital - Rs.10,989 crore and Revenue - Rs. 5,475 crore).[39] It is expected that, by the year 2018, the ICG would acquire a force level of 150 surface platforms.[40] Likewise, the Indian navy is gradually increasing its fleet of shallow draft vessels for performing coastal security duties. It has so far procured 6 out of the 15 fast interceptor boats planned to be inducted for coastal security.[41]

---

[37] *Annual Report 2009-2010*, Ministry of Defence, Government of India, New Delhi, 2010, p. 34-35.

[38] 'Notes on Demands for Grants 2012-2013, Demand no. 20', *Ministry of Defence*, Government of India, at http://www.indiabudget.nic.in/ub2012-13/eb/sbe20.pdf (Accessed on January 3, 2013).

[39] 'Shortage of Man and Material in Coast Guard', *Press Information Bureau*, December 19, 2012, at http://pib.nic.in/newsite/erelease.aspx?relid=69464 (Accessed on January 5, 2013).

[40] 'Antony Inaugurates 31st Coast Guard Commanders' Conference', *Press Information Bureau*, New Delhi, September 20, 2012, at http://pib.nic.in/newsite/erelease.aspx?relid=87868 (Accessed on January 3, 2013).

[41] *Annual Report 2011-2012*, Ministry of Defence, Government of India, New Delhi, 2012, p. 38.

The Indian navy is also required to raise a specialised force called the *Sagar Prahari Bal* for protecting its bases and adjacent vulnerable areas and vulnerable points. Once the force is fully raised, it would comprise 1000 naval personnel equipped with 80 interceptor boats to patrol the approaches of the naval bases and other strategic installations.[42]

The marine police force, raised in 2005 under the CSS to patrol the shallow waters, is being similarly strengthened. Under Phase I of the scheme, 73 coastal police stations with 204 interceptor boats had been set up. Under Phase II, which is under way, an additional 131 coastal police stations with 180 interceptor boats will be established. The GoI has also sanctioned the construction of 60 jetties required for berthing the interceptor boats.[43] The marine wing of the Customs Department, which carries out surveillance of sensitive coastline areas and patrols the sea up to 24 nm, has also been brought under the coastal security architecture. The wing has acquired a fleet of 109 interceptor boats, along with 59 very high frequency (VHF) wireless sets.[44] Moreover, its staff has been restructured and additional posts have been sanctioned for strengthening the organisation.

For the security and surveillance of the creeks in Gujarat and the Sunderbans, the water wing of the border security force (BSF) has been deployed along with eight floating border outposts (BOPs). Of these, four are deployed in forward areas in Pabewari and Padala creeks in Gujarat while two are kept in reserve. In the Sunderbans, three floating BOPs were deployed; but one was damaged during cyclone *Alia* in 2009. These floating BOPs maintain vigil over the entire area with the help of patrol boats dispatched frequently for patrolling the creeks. A number of medium craft and interceptor boats also carry out frequent patrolling. In addition, fishing in the Pabewari creek is prohibited in order to prevent any Pakistani terror operative from sneaking into Indian territory in the guise of a fisherman. Aerial

---

[42]   *Annual Report 2011-2012*, Ministry of Home Affairs, Government of India, New Delhi, 2012, pp. 68-69.

[43]   ibid, pp. 64-65.

[44]   *Annual Report 2011-2012*, Ministry of Finance, Government of India, New Delhi, 2012, pp. 104, 121.

reconnaissance by unmanned aerial vehicles (UAVs) is also undertaken for tracking infiltrators.[45]

The physical security of India's major ports is being ensured through the deployment of the Central Industrial Security Force (CISF), whose personnel also participate in coordinated joint operations. The CISF personnel are being trained in seamanship to handle any threat from the seafront.[46] All major and a few non-major ports are also being made International Ship and Port Facility Security-code (ISPS-Code) compliant. Under the Code, every port must have a security plan, port security officers, and security equipment. Vessel Traffic Management Systems (VTMS) are also being installed in all the major and a few non major ports to monitor and regulate maritime traffic as well as to detect potentially dangerous ships. The ISPS code compliant ports have also been instructed to establish well-defined traffic lanes for fishing vessels and other non-merchant shipping vessels.[47]

An informal layer of surveillance comprising the fishermen community - created following the 1993 Mumbai serial bomb blasts - has also been formalised and activated in all coastal states. By virtue of their role in surveillance and intelligence gathering, the fishermen communities are referred to as the 'ears and eyes' of coastal security and, therefore, their role is deemed extremely crucial in strengthening the coastal security architecture.[48]

These fishermen groups, christened *Sagar Suraksha Dal*,[49] comprising of trained volunteers who monitor the seas and coastal waters, share

---

[45] Pushpita Das, 'Coastal Security Arrangement: A Case Study of Gujarat-Maharashtra Coast', IDSA Occasional Paper No. 6, November, 2009, p. 19. Also the author's interview with senior BSF officials in West Bengal and New Delhi in May 2012.

[46] *Annual Report 2011-2012*, Ministry of Home Affairs, no. 42, p. 67-68.

[47] 'Laning of Fishing Vessel Traffic in Major and Non-Major Ports', *ISPS Circular: NT/ISPS/6/2009*, May 7, 2009, at http://www.dgshipping.com/dgship/final/notices/ntcir6_09_isps.htm (Accessed on December 18, 2012).

[48] 'Antony Inaugurates 31st Coast Guard Commanders' Conference', no. 40.

[49] The fishermen's group is known by different names in different coastal states. For example, in Karnakata it is known as *Karavali Niyantrana Dal*; in Maharashtra it is known as *Sagari Suraksha Dal*.

information about any suspicious activities or vessels at sea with security and law enforcement agencies, and also participate in coastal security exercises conducted by the ICG. For example, in Karnataka, the services of the *Sagar Suraksha Dal* are utilised four times a month, and each volunteer is paid Rs. 170/- per day.[50] Besides, residents of coastal villages are also co-opted for gathering intelligence. For this purpose, the police in all states have formed *Gram Rakshak Dals* composed of a few 'respectable' villagers who keep a vigil on the village and adjoining areas, and serve as sources of information about criminal and anti-national activities. For example, in Andhra Pradesh, the marine police have selected one person each from all the 555 fishing villages to keep a watch on the coastal villages, the landing points as well as serve as contact persons between police and the villagers. The Indian navy, the ICG, and the marine police carry out many community interaction programmes in the coastal villages to sensitise the fishing community on the prevailing security situation, and to co-opt them for intelligence gathering.[51]

Electronic Surveillance

To provide near gapless surveillance of the entire coastline as well as prevent the intrusion of undetected vessels, the GoI has launched the coastal surveillance network project. The network comprises the coastal radar chain, the automatic identification system (AIS), and VTMS. The project involves the setting up of 46 static radars along the Indian coastline, 36 in the mainland and 10 in the island territories under Phase I. An additional 38 radars will be installed under Phase II, which would be supplemented by 8 mobile surveillance systems. Incidentally, these radars are capable of identifying only vessels carrying class A or B types of transponders and therefore will not be effective in detecting any small vessels such as a fishing boat/trawler - which is considered a greater threat. Nevertheless, once operational, the radar chain is expected

---

[50]   Information gathered by author during her field trip to coastal Karnataka in July 2012.

[51]   The Indian Coast Guard has conducted a total of 1641 community interaction programmes since 2009 till 30th September, 2012. See, 'Coastal Intelligence', Ministry of Defence, *Press Information Bureau*, December 17, 2012, at http://pib.nic.in/newsite/erelease.aspx?relid=0 (Accessed on December 18, 2012). Similarly, the Indian navy has conduct 361 awareness programmes, *Annual Report 2011-2012*, no. 41, p. 39.

to 'provide real time surveillance cover up to 25 nautical miles around the areas of high sensitivity and traffic density along our coast line.'[52]

The coastal radar chain is supplemented by the national automatic identification system (NAIS) network. Under this network, 84 electro-optic sensors are installed on lighthouses to track and monitor maritime vessels by receiving feeds from AIS transponders installed in these vessels.[53] The NAIS would facilitate the exchange of information between vessels as well as between a vessel and a shore station, thereby improving situational awareness and traffic management in congested lanes along the country's coastal water ways.[54] Like the coastal radar chain, NAIS will be helpful in tracing only those vessels fitted with AIS transponders and not the fishing vessels, which are not required to compulsorily install AIS transponders. Also, the spoofing of AIS would always remain a possibility which could undermine this surveillance method.[55]

In the later stages, the data generated by the static radar chain and the AIS sensors will be integrated with the data from the VTMS, which are being installed in all major and a few non major ports as well as in the Gulfs of Kutch and Khambhat. These data will also be integrated

---

[52] The data generated by the static sensors will be available through a hierarchical network architecture connecting Coast Guard district headquarters, regional headquarters, and at the Coast Guard headquarters at New Delhi. 'Antony to Open Coastal Radars at Mumbai and Porbandar Tomorrow', *Press Information Bureau*, August 24, 2012, at http://pib.nic.in/newsite/erelease.aspx (Accessed on January 3, 2013).

[53] The NAIS, comprising of 74 sensors for the mainland, has been inaugurated in August 4, 2012. NAIS is networked to Director General Lighthouses and Lightships' Regional Control Stations at Kolkata, Vishakhapatnam, and Chennai to Coastal Control Centre/East at Vishakhapatnam; through the Regional Control Centre at Jamnagar, Mumbai; and from Cochin to Coastal Control Centre at Mumbai. Both these Control Centres are linked to a National Data Centre, Mumbai from where data will be disseminated to various users. In Phase II, 10 sensors will be installed in the Andaman and Nicobar and Lakshadweep islands.

[54] 'Network enables tracking of fishing vessels till 50 km', *The Hindu*, Chennai, August 4, 2012, at http://www.thehindu.com/todays-paper/tp-national/article3725372.ece (Accessed on January 3, 2013).

[55] Matin N. Murphy, 'Lifeline or Pipedream? Origins, Purposes, and Benefits of Automatic Identification System, Long range Identification and Tracking, and Maritime Domain Awareness', in Rupert Herbert Burns, et. al. (eds.), *Lloyd's MIU Handbook of Maritime Security*, CRC Press, Boca Raton, 2009, p. 13.

with those provided by the long range identification and tracking (LRIT) systems into the centralised national command communication control and intelligence Network (NC3I) developed by the Indian navy,[56] which will help create a composite picture of the country's maritime domain.

Monitoring, Control and Surveillance of Fishermen

Monitoring the movements of thousands of fishermen and their fishing boats/trawlers which venture into the sea everyday is essential to ensure foolproof security of India's coastal areas. The fact that ten Pakistani terrorists hijacked an Indian fishing trawler, *MV Kuber*, to sneak into Indian waters in the guise of Indian fishermen after killing the crew of the trawler, has highlighted the issue of safety of the fishermen and their trawlers. Accordingly, steps have been taken to ensure the safety of fishermen, and to prevent the undetected entry of any fishing trawler in the coastal waters. For this purpose, all big fishing trawlers (20 metres and above) are being installed with AIS type B transponders. As for small fishing vessels, a proposal to fit them with the Radio Frequency Identification Device (RFID) is under consideration. Besides, all fishing vessels are also being registered under a uniform registration system, and the data is being updated online.[57] Colour codes are being assigned to them for easy identification at sea. The colour codes are different for different coastal states. For example, for Gujarat, the hull of the fishing boat/trawler is painted black and the cabin is painted orange. For fishing boats in Andhra Pradesh, the hull is painted blue and the cabin is painted yellow. The implementation of colour coding of boats is very slow in the coastal states as it involves additional costs for fishermen, which the fishermen are reluctant to bear.[58]

Furthermore, Distress Alert Transmitters (DATs) are being provided to fishermen so that they can alert the ICG if they are in distress at sea. For the safety of fishermen at sea, the government has implemented a scheme of providing a subsidised kit to the fishermen which includes a Global Positioning System (GPS), communication equipment, echo-

---

[56]   'Antony to Open Coastal Radars at Mumbai and Porbandar Tomorrow,' no. 52.

[57]   *Annual Report 2011-2012,* Ministry of Home Affairs, no. 42, pp. 65-66.

[58]   Observations made during the field visits to Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh in July 2012 and March 2013.

sounder, and a search and rescue beacon.[59] However, the DATs have found few takers among the fishermen. Most of the DATs that were distributed have been returned as they ran out of batteries or were irreparably damaged.[60] Coastal security helpline numbers 1554 (ICG) and 1093 (Marine Police) have also been operationalised for fishermen to communicate any information to these agencies. This measure has received a mixed response. While in states such as Tamil Nadu and Karnataka fishermen are aware of the coastal security helpline numbers and use them, in Gujarat and Andhra Pradesh, because the helpline numbers are partially operationalised and not published, fishermen are not aware and therefore do not use it during the time of distress.[61]

For the identification of fishermen at sea, a scheme for issuing biometric identity cards has also been launched. For this, biometric data of 16 lakh (90 per cent) fishermen have been captured. A scheme for the issuance of multipurpose national identity cards for all coastal villagers, as a part of the project for the creation of National Population Register (NPR), is also being implemented under two phases.[62] The objective of this scheme is to issue standardised biometric cards to all the fishermen that are applicable in all the coastal states and union territories to avoid the duplication of cards. The data generated will be fed into a single centralised database - the National Marine Fishers Database (NMFD) - which could be accessed by all the authorised agencies, both in the Centre as well as in the coastal states and union territories.[63] The issuing of biometric cards in all the coastal states has been substantially completed. However, the efficacy of the cards can only be ascertained once the card readers are made available to the maritime law enforcement agencies and they start checking for the cards at sea.

---

[59] *Annual Report 2011-2012*, Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government of India, New Delhi, 2012, p. 54.

[60] The author's interactions with fishermen during the field visits to Karnataka, Tamil Nadu, and Gujarat in July 2012 and March 2013.

[61] ibid.

[62] In Phase I, the Andaman and Nicobar Islands are covered, and in Phase II, the coastal areas of mainland India will be covered, *Annual Report 2011-2012,* Ministry of Home Affairs, no. 42, pp. 67-68.

[63] *Annual Report 2011-2012*, Department of Animal Husbandry, Dairying and Fisheries, no. 59, p. 68.

Thus, inputs received from the static radar feed, the AIS information from ships and aircraft, the LRIT information, voyage details from Pre-Arrival Notification of Security (PANS), situation reports from patrolling and surveillance sorties, information from marine police and fishermen communities, intelligence from intelligence agencies, etc. would be collated to help create a composite operating picture for Maritime Domain Awareness (MDA), which will be shared by the concerned agencies.[64] It is expected that MDA would help evolve a system of detecting, deterring, and defeating potential sea-borne threats through accurate responses.

Finally, to supervise the implementation of these measures, the Government constituted the National Committee to Strengthen Coastal and Maritime Security (NCSMCS) in August 2009. The committee is headed by the Cabinet Secretary, and consists of representatives of all the concerned Ministries/Departments/Organisations in the Government of India as well as the Chief Secretaries/Administrators of the coastal States/UTs.[65]

Summing Up

Indian policymakers did not take into serious consideration the various sea-borne illegal activities that were undermining the coastal security of the country for a long time. Thus, responses to the threats and challenges were formulated only after the crisis situation had become too intense to be ignored. Most importantly, many of the policies were formulated without preparing the ground for their implementation. This top down and reactive approach towards coastal security has resulted in several inadequacies in the coastal security architecture. These inadequacies are discussed in detail in the next chapter.

---

[64] The National Plan to Achieve Maritime Domain Awareness of the United States defines Maritime Domain Awareness as 'the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of the United States. MDA is a key component of an active, layered maritime defense in depth'. For details see, 'The National Plan to Achieve Maritime Domain Awareness for the National Strategy for Maritime Security', October 2005, at http://www.dhs.gov/xlibrary/assets/HSPD_MDAPlan.pdf (Accessed on January 4, 2013).

[65] *Annual Report 2011-2012,* Ministry of Home Affairs, no. 42, p. 68.

III   Inadequacies in the Coastal Security Architecture

The Indian coastline had witnessed several breaches in its security in the past few years. To cite a few instances: on June 12, 2011, the *M V Wisdom*, a cargo ship on its way to Alang in Gujarat drifted towards the Mumbai coast after breaking its tug, and eventually got stranded on Juhu beach.[1] This incident was followed by another on July 30, 2011 when a Panama flagged ship, *M V Pavit*, ran aground near Juhu beach in Mumbai after it was abandoned by its crew a month earlier near Oman. The most worrisome part was that this ship remained adrift in Indian territorial waters for nearly 100 hours yet remained undetected either by the navy, the coast guard, or the coastal police — the three agencies entrusted with the responsibility of coastal security.[2] A few days later, on August 4, 2011, yet another Panama flagged oil tanker, *M V Rak,* with 60,000 metric tonnes of coal and 340 tonnes of fuel oil on board, sank off the coast of Mumbai. The sinking ship discharged more than 25 tonnes of oil, resulting in a major oil spill which endangered marine life in the area.[3]

---

[1]   'Efforts begin to salvage freighter *MV Wisdom* stranded at Juhu beach', DNA, Mumbai, June 16, 2011, at http://www.dnaindia.com/mumbai/report_efforts-begin-to-salvage-freighter-mv-wisdom-stranded-at-juhu-beach_1555700 (Accessed on January 4, 2013). See, 'Mumbai: *MV Wisdom* finally sails out of Mumbai', *India Today,* Mumbai, July 2, 2011, at http://indiatoday.intoday.in/story/mv-wisdom-finally-sails-out-of-juhu-beach/1/143487.html (Accessed on January 4, 2013).

[2]   'Mumbai: Grounded ship *M V Pavit* exposes loopholes in India's coastal security', India *Today*, Mumbai, August 4, 2011, at http://indiatoday.intoday.in/story/mv-pavit-agrounded-ship-exposes-chinks-in-mumbai-security-co-ordination/1/147071.html (Accessed on January 4, 2013). Also see, 'Coast Guard says *MV Pavit* incident is not a security lapse', *The Hindu*, Mumbai, August 4, 2011, at http://www.thehindu.com/news/national/article2319908.ece (Accessed on January 4, 2013).

[3]   'Oil leak in sunken carrier *MV Rak*: Officials', *The Indian Express*, Mumbai, August 7, 2011, at http://www.indianexpress.com/news/oil-leak-in-sunken-carrier-mv-rak-officials/828365 (Accessed on January 4, 2013).

These incidents highlight the fact that the coastal security architecture built by India has certain inherent inadequacies which impair its effectiveness. These inadequacies may be categorised under broad categories such as the lack of coordination; differing perceptions; inadequate resources; poor training; discontented fishermen communities; miscellaneous factors; and absence of an integrated approach towards coastal security.

Lack of Coordination

An estimated 22 different ministries and departments are involved in securing India's coasts. At the central level alone, these include the Ministries of Home Affairs, Defence, External Affairs, Shipping, Forest and Environment, Earth Sciences, and Finance, as well as the Department of Fisheries. In addition to these are the state governments, the district administration, police, etc. The involvement of such an array of agencies invariably leads to coordination problems. Nonetheless, constant efforts have been made to create greater synergies between them. Some of these efforts are:

(a) *Formulation of Standard Operating Procedures:* Standard Operating Procedures (SOPs) have been formulated between the Indian navy and the ICG, and between the ICG, the marine police, customs, port authorities and other agencies to achieve optimum level coordination and the unhindered flow of information at every level amongst the concerned agencies for coordinated patrol, networking of communication and intelligence grid, and joint operations through specific guidelines laid down for the purpose. The SOPs were promulgated between June 2010 and September 2010.[4]

(b) *The Conduct of Joint Coastal Security Exercises:* Joint coastal security exercises under various names such as *Sagar Kavach*, *Hamla, Raksha, Neptune,* etc. involving all the maritime stakeholders have been

---

4   'Chapter 5: Patrolling and Security Issues', *Report No. 7 of 2011-2012 Performance Audit of Role and Functioning of Indian Coast Guard*, Comptroller and Auditor General of India, New Delhi, p. 67, at http://saiindia.gov.in/english/home/Our_Products/Audit_ Report/Government_Wise/union_audit/recent_reports/union_ performance/ 2011_2012/Defence_Services/Report_No_7/Chap5.pdf (Accessed on January 4, 2013).

regularly conducted in all the coastal states. These exercises are coordinated by the ICG, and conducted bi-annually to create awareness about coastal security among the stakeholders, improve coordination among them, and most importantly, to assess the functioning of the coastal security architecture. Besides this, joint coastal security operations are also carried out by the Indian navy and the ICG to improve coordination between the two services.[5]

(c) *The Setting up of Coordination Committees:* Coordination committees comprising of representatives of different agencies and departments have been formed at the state and district levels in the coastal states and union territories for enhancing cohesion and coordination. The Chief Secretaries and District Collectors/ Superintendent of Police of the coastal states have been designated as the chairmen of the coordination committees. Regular meetings at national, state and district levels are conducted to review all matters concerning coastal security.[6]

(d) *Establishing Joint Operation Centres (JOCs):* For a successful coordinated response, the sharing of information amongst the concerned agencies is vital. In this respect, four JOCs have been established in Mumbai, Kochi, Vishakhapatnam and Port Blair. These JOCs are primary coordination centres for all maritime operations, and are manned and operated by the Indian navy and the ICG. The ICG, which has been designated as the lead intelligence agency (LIA) in 2003, conducts LIA meetings of concerned stakeholders every month, and intelligence is shared. The intelligence/information collected in these meetings are collated, analysed and then passed on to the JOCs. These JOCs also receive inputs directly from marine police, customs, intelligence bureau, ports, etc.[7] Coastal security operation centres have also been created at the regional and state

---

[5] In the year 2011, 19 coastal security exercises and 15 coastal operations were conducted. *Annual Report 2011-12*, Ministry of Defence, Government of India, New Delhi, 2012, pp. 39, 51.

[6] The author's interviews with several senior officials at New Delhi, Kolkata, Bengaluru, Chennai, Gandhinagar and Vishakhapatnam in 2012 and 2013.

[7] *Maritime Security Initiative*, at http://indiannavy.nic.in/operations/coastal-maritime-security-initiatives (Accessed on January 4, 2013).

levels to collect, analyse and disseminate inputs related to coastal security.

However, these measures have not proven adequate for overcoming the strong forces of dissonance among the agencies. As a result, effective coordination remains an elusive goal. This lacuna is often cited as the main reason for the failure of the coastal security architecture. The lack of coordination not only impacts the functioning of the system as a whole but also hampers the formulation of an integrated approach towards coastal security.

The reasons for poor coordination are many. The tendency of each agency to zealously guard its own turf is, perhaps, one of the main reasons. Every ministry and department that is part of the joint effort for coastal security effuses a sense of self and loathes the idea of taking directions from other ministries or departments. They also jealously guard any intelligence gathered, with the objective of scoring brownie points over other agencies. In many instances, it has been observed that they do not even share simple information like details of sea-patrolling with other coordinating agencies, which ultimately results in duplication of efforts. In its Report on ICG, the Comptroller and Auditor General (CAG) revealed that both the Indian navy and the ICG do not share details of the deployment of their assets at sea.[8] Likewise, the Customs Department, and sometimes the coastal police stations also, do not share their patrolling details with the ICG.[9]

The lack of coordination also stems from the absence of proper communication channels between the concerned agencies. The absence of communication leads to confusion among personnel, which results in the concerned ministries and departments acting at cross purposes. The Government of India (GoI) has tried to rectify this problem, and has issued directives that every ministry and department involved in the coastal security system should designate a nodal person for liaison. Despite this, most coastal states have failed to appoint nodal officers

---

[8]   'Chapter 5: Patrolling and Security Issues', *Report No. 7 of 2011-2012 Performance Audit of Role and Functioning of Indian Coast Guard*, no. 4, pp. 61-64.

[9]   The author's interview with senior officials of marine police and customs departs during the field visit to West Bengal, Karnataka, Tamil Nadu and Gujarat in May and July 2012 and March 2013.

in the respective departments. As a result, during times of emergency - or even otherwise - the coordinating agency is unable to contact suitable officials, leading to the creation of a crisis situation. At present, whatever coordination or information sharing takes place between the agencies is largely based on personal rapport among the officials.[10]

Coordination is also hampered by insufficient appreciation of the threat among concerned ministries and departments. Despite several coastal security exercises being conducted, many departments have remained less sensitive towards sea-borne threats¾ perhaps because of their other preoccupations. This disinterest is often manifested in their laid back attitude towards coastal security. Such an attitude often creates friction between them and other agencies, and hinders coordination. This is especially so when any coordinated action has to be undertaken.[11] Smooth coordination is also adversely affected because the coastal security architecture has not been institutionalised, and remains a largely personality driven initiative. In such a situation, the system works perfectly well when the key positions are occupied by officers who understand the importance of coastal security. But once they are transferred, the entire edifice either collapses or starts under-performing.

Differing Perceptions

Another factor undermining the effectiveness of the coastal security mechanism is the differing perceptions among various stakeholders about their roles in ensuring coastal security. Such differences in perception stem from their organisational culture and ethos. Interestingly, every agency which is engaged in coastal security feels that it has different mandated duties, and coastal security is an additional responsibility that has been thrust upon it.[12] For instance, many in the Indian navy contend

---

[10]   Pushpita Das, 'Why does India's Coastal Security Arrangement Falter?' *IDSA Strategic Comment*, August 26, 2011, at http://www.idsa.in/idsacomments/WhyIndias CoastalSecurityArrangementFalters_pdas_260811 (Accessed on January 5, 2013).

[11]   The author's interview with senior officials during the field visit to West Bengal, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh in May and July 2012 and March 2013.

[12]   These inferences are drawn after conducting extensive interviews by the author with several senior officials from the Indian navy, the Indian Coast Guard, state Police, the Customs Department and the civil administration.

that the principal duty of the Indian navy is to defend the country during war and enhance its blue water capabilities. Coastal security duties require the Indian navy to carry out law enforcement duties for which it has neither the training nor the assets. Some naval officials are also unhappy with the present coastal security set up, and they argue that, the navy has been assigned responsibility without authority, and demand the establishment of a single point authority vested in their service. In the case of the ICG, officials argue that their principal mandate includes search and rescue, aid to navigation, and pollution control at sea. Coastal security is not in their charter of duties and, therefore, is an additional responsibility for which they are not provided adequate manpower and infrastructure.

Curiously, the Marine Police, which was solely created to safeguard the country's coastal approaches, also assert that the Police from which they are derived, are essentially a land based organisation and, therefore, do not have the mindset, training and infrastructure to perform sea patrols and operations. According to them, coastal security duties are best shouldered either by the Indian navy or the ICG, who have ample experience in maritime affairs. The Customs Department similarly argues that its mandate is to ensure that the Indian government does not suffer any revenue loss due to smuggling and, therefore, it should not be made a part of coastal security. The Customs officials claim that they specialise in intelligence based operations, and should not be burdened with the task of sea patrolling for which they neither have the manpower nor the training.

Last but not least, the state governments in several coastal states have also been lackadaisical towards coastal security. Many of them do not perceive any kind of seaborne threats. Consequently, they do not accord any priority to coastal security. For instance, in West Bengal, the construction of coastal police stations under Phase II has been reportedly delayed because the land identified for these police stations has still not been transferred to the home department of the state.[13] Similarly in

---

[13] 'Coastal police stations in murky waters', *The Statesman*, Kolkata, July 1, 2011, at http://www.thestatesman.net/index.php?option=com_content&view=article&id=375087&catid=42&show=archive&year=2011&month=7&day=2&Itemid=66 (Accessed on January 5, 2013).

Maharashtra, three coastal police stations sanctioned under Phase I is yet to be constructed land for the police stations have not been sanctioned by the state government stating Coastal Regulation Zone (CRZ) constraints.[14] In states where coastal police stations are established, the governments have not provided them with the required manpower, or fuel for sea-patrols citing inadequate funds/resources. They insist that coastal security should be the responsibility of the central government as it has adequate resources to implement such elaborate schemes. Quite evidently, this indifferent attitude towards coastal security percolates down to the district and sub-division levels, which is reflected in the poor participation of concerned officials in various coastal security coordination meetings. Poor attendance in such crucial meetings, in turn, badly affects information sharing and coordination at the ground level.[15]

Inadequate resources

Insufficient resources have always been an impediment in the implementation of any scheme as it hampers the recruitment of manpower as well as the procurement of assets. The shortage of manpower is an all-pervasive problem that afflicts state and central agencies engaged in coastal security. However, the most affected agency among these is the marine police. All the states have been grappling with the serious shortage of trained police personnel, a fact reflected in the low police-population ratio. This problem is even more acute in the marine police. This is because, firstly, policemen in general are quite reluctant to undertake coastal duties as they think it as punishment posting. Secondly, personnel who are actually deputed by the state police to coastal police stations are considered to be otherwise unfit to perform regular law and order duties. Though schemes to recruit retired naval and coast guard personnel have been implemented to overcome manpower deficiency (technical), they have not been very successful. Poor response to the scheme from the naval and coast guard personnel

---

[14] Authors interview with senior civil and police officials in Maharashtra during her field visit in July 2013.

[15] Pushpita Das, 'Four Year Hence, A Review of the Coastal Security Mechanism', *IDSA Strategic Comment*, November 26, 2012, at http://www.idsa.in/idsacomments/AReviewoftheCoastalSecurityMechanism_pdas_261112 (Accessed on January 5, 2013).

has been because of the low salary, a lower designation, and a short contract period that are being offered by the state governments.[16]

While fishermen are also a preferred choice for recruitment in the marine police because of their sea faring tradition, no concerted efforts have been made by state governments to directly recruit them. One of the reasons cited for non-implementation of such a scheme is the fear that such a move would invite litigations from other sections of the population.[17] However, an indirect process of recruiting fishermen as marine police is being implemented in a few states such as Andhra Pradesh and Gujarat. In this process, talented youth among the fishermen communities are spotted by the marine police. These selected fishermen are then given basic training in sea-navigation, boat handling as well as in the laws and regulations for a period of a few months. And once these youth are trained, it is expected that they will be recruited as marine police through an open examination.[18]

The ICG too faces shortage in its existing levels of manpower. For instance, the ICG has been sanctioned a strength for 12,446 personnel, but in reality it has a strength of only 8,718 personnel - an overall shortage of 34.94 per cent. A break up of the shortage further reveals that there is 41.84 per cent shortage under the civilian category, 36.23 per cent in the officers category, and 26 per cent in case of enrolled personnel.[19] The shortage of manpower invariably results in additional responsibility being put on the available personnel. For instance, the acceptable teeth to tail ratio for maritime forces is 1:2 - i.e. for every man at sea, two persons are placed on the shore. However, in the case of the ICG, it is 2:1. This means that ICG personnel spend a longer

---

[16]   The author's interview with several ex-coast guard and naval personnel as well as police personnel in West Karnataka, Tamil Nadu and Gujarat during her field visits in May and July 2012 and in March 2013.

[17]   The author's interview with senior police officials in West Bengal, Karnataka in May and July 2012 and Gujarat, Tamil Nadu and Andhra Pradesh in March 2013.

[18]   The author's interview with senior marine police officials in Gujarat and Andhra Pradesh, March 2013.

[19]   'Ministry of Defence: Performance of Coast Guard Organization', Thirteenth Report, *Standing Committee on Defence (2011-2012)*, Fifteenth Lok Sabha, Lok Sabha Secretariat, New Delhi, December 2011, p. 64.

time at sea, and face frequent transfers.[20] Successive governments have been aware of this problem, but have done little to augment manpower levels. Similarly, the Indian navy also faces the problem of inadequate manpower. They claim that, given the shortage of manpower, deputing personnel for coastal security duties is putting strain on their functioning. They even withdrew from joint coastal patrolling in Maharashtra in 2006, citing manpower crunch.[21]

Besides this, inadequate infrastructure in the form of the lack of office buildings, weapons, boats and vessels, jetties, workshops for repair and maintenance of boats, etc. also put constraints on the efficiency of all the agencies performing coastal security duties. Presently, the ICG possesses only "65 per cent of the required force level in terms of ships and vessels. With respect to its aviation arm, the corresponding figure is 48 per cent."[22] The severe shortfall is primarily because of the delay in the approval of successive developmental and perspective plans of the ICG by the central government.[23] Although the ICG is in the process of acquiring assets, the process is slow and contingent upon availability of funds. According to the Director General, given the current pace of acquisition, it will take 6 years and more for the ICG to function effectively. The Indian navy also, which took up the responsibility of coastal security more recently, does not have adequate and suitable assets - such as shallow draft vessels - to carry out coastal security duties. The acquisition of assets by the Indian navy also appears to be very slow. For example, it has acquired only six of the 15 fast interceptor boats meant for shallow water patrolling.[24]

As far as the coastal police stations are concerned, all of them have been provided with fast interceptor boats for patrolling purposes. However, in the majority of coastal police stations, these boats lie idle

---

[20] ibid.

[21] Pushpita Das, 'Coastal Security Arrangement: A Case Study of Gujarat-Maharashtra Coast', IDSA Occasional Paper No. 6, November, 2009, p. 21.

[22] 'Ministry of Defence: Performance of Coast Guard Organisation', no. 19, p. 26.

[23] no. 4, pp. 14-15.

[24] *Annual Report 2011-2012*, Ministry of Defence, Government of India, New Delhi, 2012, p. 38.

because they either do not have the technical manpower to maintain the boats or do not have adequate fuel to operate them. Improper repair and maintenance of the boats in case of severe wear and tear is also an issue which remains unresolved. For instance, the GRSE (Garden Reach Shipbuilders and Engineers Ltd.), which has the responsibility for maintaining the interceptor boats in Andhra Pradesh, had replaced damaged bullet proof window screens of some on the boats with bad quality screens, which now hinder visibility. The faulty repair of engines by the agency has also rendered a number of boats unusable.[25]

In addition, surveillance equipment - such as night vision binoculars and modern communication gadgets - have not been provided to ICG and the marine police in several coastal states.[26]

Poor Training

The absence of trained personnel adept at sea patrolling and maritime combat operations is another factor that affects the performance of personnel. This is especially true for the marine police and the customs personnel. The Indian navy and the ICG impart training to the marine police in seamanship, which includes sea patrolling, combat operations, sea-navigation, and the handling of interceptor boats and sophisticated weapons for a period of four to six weeks. The policemen sent for training claim that the duration of the course is too short for them to find their 'sea-legs'. As a result, they lack confidence in venturing out into the sea for patrolling. They also lament the fact that the vessels and equipment in which they are trained are more sophisticated than what is made available to them in the coastal police stations.[27] On the other hand, customs personnel who undertake coastal patrolling duties are hardly imparted any training. They too find it difficult to ward off sea sickness, boredom, and a sense of purposelessness while conducting sea patrolling. The lack of proper training is manifested by the extreme

---

[25]   The author's observation during field visit to Andhra Pradesh in March 2013.

[26]   The author's observation during field visits to West Bengal, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh in 2012 and 2013.

[27]   The author's interviews with police personnel in Maharashtra, West Bengal, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh in 2009, 2012 and 2013.

reluctance of the police and customs personnel to take up coastal security duties.[28]

Moreover, the slow pace of training is an issue with the ICG as well because it delays quick induction of trained manpower in the services. The lack of a dedicated training academy for the ICG is considered to be the main reason behind the slow pace of training.[29] Presently, training to the ICG personnel is imparted in the Indian naval training academy wherein the navy allocates slots for the ICG, which are often inadequate. To address this problem, ICG proposed the establishment of a dedicated training academy in the Coast Guard Revised XI Plan (2007-12). The proposal was approved by the government. Land for the dedicated training Academy was acquired in Azhikkal, in Kerala in February 2011.[30]

Discontent in fishermen communities

Yet another factor that has the potential to interfere with the effective functioning of the coastal security architecture is the growing discontent among fishermen. Fishermen are considered the 'eyes and ears' of the coastal security architecture and, therefore, an integral part of it. Interestingly, while the fishermen have been forthcoming in sharing information with the authorities, they do so only with select officials. They appear to be more comfortable interacting with officials of the Fisheries Department than with the personnel of the ICG or the Indian navy. Accordingly, during times of distress and also upon observing anything suspicious at sea, they inform the Fisheries Department first. However, this information is not passed directly by the fishermen at sea to the fisheries officials. In a typical case, the master of the fishing trawler first informs the trawler owner (his boss), who is based on the shore. The owner, in turn, contacts the concerned fisheries officials, who then pass the information to the marine police, the ICG, or the Indian navy. The reason why the trawler owner informs the fisheries

---

[28] The author's interviews with customs personnel in Maharashtra, West Bengal, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh in 2012 and 2013.

[29] no. 19, p. 39.

[30] 'India's first Coast Guard academy to come up in Kerala', *Rediff news*, February 27, 2011, at http://www.rediff.com/news/report/indias-first-coast-guard-academy-to-come-up-in-kerala/20110227.htm (Accessed on January 14, 2013).

official first is because, being in touch with the official on a day to day basis, he finds it easier to communicate with the official rather than with the police or the ICG officers. Besides, most of the time, the contact numbers of the police and ICG officers are not available with the trawler owners; and also, they are usually unaware of the coastal security helpline numbers.[31]

Yet another reason why fishermen do not contact the ICG and Indian naval officers is because they are uncomfortable with the maritime security forces. The fishermen perceive that the ICG and Indian naval personnel are rude and high handed while dealing with them. They complain of harassment at the hands of the ICG and naval personnel during checks at sea. In addition, the fishermen are also frustrated and angered by the poor response shown by the ICG to their distress calls. According to them, the ICG either does not respond to their calls at all, or responds after much delay.[32]

Moreover, the loss of their 'traditional' fishing harbours to sensitive and strategic establishments like naval bases, coast guard headquarters, coastal police stations, ports, etc. have also led to the generation of tension between the local population and these law enforcement and security agencies.[33] This growing discontent among the fishermen does not augur well for the coastal security architecture as it could alienate them. If their discontentment persists, fishermen will not be willing to cooperate with the security agencies and share vital information. Such a trend could weaken the coastal security architecture by robbing it of a vital component.

Miscellaneous Factors

Difficult terrain, seasonal weather patterns, administrative lapses, etc. all contribute towards introducing gaps in surveillance and the

---

[31]   Insights gathered by the author after interviewing fishermen in Maharashtra, Karnataka, Gujarat, Tamil Nadu and Andhra Pradesh in 2012 and 2013.

[32]   The author's interview with various fishery associations in Maharashtra, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh during her field visits in 2012 and 2013.

[33]   The author's interview with senior officials in the fisheries department at New Delhi as well as state fisheries officials and fishermen communities during a field visit to Karnataka in July 2012 and Tamil Nadu, Gujarat and Andhra Pradesh in March 2013.

monitoring mechanism. One of the areas along the Indian coasts where all these factors play a role is in the Sunderbans. As discussed earlier, the topography of the Sunderbans - with its numerous creeks, intervening islands, and thick mangroves - does not lend itself well to human or electronic surveillance. The situation is further aggravated by the fact that the deployment pattern in the Sunderbans is such that no agency asserts its jurisdiction over large stretches. For instance, the border security force (BSF), which is deployed along the India-Bangladesh border, asserts that the international border ends at Shamsher Nagar, and areas beyond that is the maritime boundary and, therefore, the responsibility of the ICG. The marine police assert that their area of jurisdiction is only five nautical miles around their police stations, and not five nautical miles into the sea. The problem arises because the coastal police stations established in the Sunderbans are located closer to the mainland, and not along the coastline. The ICG, which has a presence in the area, does not have the mandate to patrol the creeks of the Sunderbans as they lie inside the shoreline. As a result, the intervening creek area between the mainland and the sea is left unguarded.[34]

Another area of concern in the Sunderbans is the India-Bangladesh protocol route, which traverses the 'core' area of the Sunderbans. Under the protocol on Inland Water Transit and Trade (IWTT), Bangladeshi vessels enjoyed free access to the waterways running through the Sunderbans en route to the Haldia Docks and the Kolkata Port. The movement of these Bangladeshi vessels is monitored by the BSF; but only along the border. Thereafter, they go unchecked until Namkhana, which is 160 kilometres away. To address the security concerns resulting from this arrangement, a new route has been opened which runs further north, hugging the mainland. Further, a land customs station has been proposed to be opened at Hemnagar, which is 15 kilometres from the international border. But, till date, it has not been made operational.[35]

---

[34] Observations made by the author during her field visit to the Sunderbans in May 2012.

[35] ibid. Also see, 'To rein in illegal migration, check post brought closer to Bangla border', *The Indian Express*, Kolkata, September 10, 2012, at http://www.indianexpress.com/news/to-rein-in-illegal-immigration-check-post-brought-closer-to-bangla-border/1000408/0 (Accessed on January 16, 2013).

Relaxed patrolling and surveillance of the coastal waters during the rainy season also raises security concerns. The southwest monsoon hits India between June and October every year. During this season, the sea becomes very rough because of which most sea faring activities are suspended. Fishermen do not venture out to sea, and marine police do not undertake patrolling during this season as the interceptor boats are too light to withstand choppy waters. Even the ICG and the Indian navy reduce the frequency of their patrolling of the sea. The lower levels of surveillance do not worry the security agencies as they believe that rough seas deter everyone, including smugglers. The fishermen and local people, however, do not share this confidence. They firmly believe that seaborne smuggling does not stop because of the monsoon; instead, it continues as the criminals are aware that the coasts remain unmonitored during the rainy season.[36]

Yet another area of concern is the security of the non-major and private ports. India has 187 non-major ports, spread over nine coastal states and four union territories. The responsibility of providing security to these non-major ports rests on the states and union territories. However, in most of the non-major ports, physical protection arrangements - such as deployment of police personnel, fencing of their perimeter, monitoring of the access points, installation of screening and detecting machines, etc. - do not exist. For example, the minor ports of old Mangalore, Ullal, Malpe and Karwar in Karnataka do not have any visible security in terms of the presence of police personnel or private security guards. Also, the passenger, cargo and fishing vessels that sail out of these ports are hardly checked or monitored.[37] Similarly, in Porbandar port, security is extremely lax despite the presence of GISF (Gujarat Industrial Security Force) and customs personnel. These personnel do not check anyone when they enter the port premises. The security of the port is further compromised by the existence of a bustling fishermen village within the port premises.[38]

---

[36] The author's interaction with fishermen associations of coastal Karnataka in July 2012.

[37] Observations made during field visit to coastal Karnataka in July 2012.

[38] Observations made during a visit to the Porbandar port in March 2013.

Absence of a comprehensive policy formulation mechanism

An integrated approach to coastal security still eludes India. The GoI had constituted the National Committee for Strengthening Coastal and Maritime Security (NSCMSC), but its mandate is limited to overseeing the implementation of various measures initiated in the wake of the Mumbai terrorist attacks. There is no coordinating body which could formulate national strategies for countering existing and emergent threats and challenges to national security as well as ensure smooth coordination among the concerned agencies involved in coastal security.

Summing Up

The coastal security architecture that India has established has been grappling with a number of inadequacies. The lack of coordination among agencies, differing perceptions about their coastal security roles, the lack of resources, poor training, growing discontentment among the fishermen, and miscellaneous factors such as terrain, weather, and administrative lapses have been severely affecting its ability to function effectively. The absence of an integrated approach to coastal security has aggravated the situation further. It is, therefore, imperative that corrective measures are urgently implemented to address these inadequacies. In this regard, a discussion of various international practices regarding coastal security could provide a better understanding of the ways to tackle the shortcomings in India's coastal security structure.

IV International Practices in Coastal Security

Almost all coastal countries of the world have been grappling with threats and challenges emanating from the sea. Maritime terrorism, sea borne criminal activities such as smuggling of drugs, arms, people, and other contraband, as well as illegal migration pose serious challenges to their coastal security. Depending upon their threat assessments, different countries have employed different strategies to deal with these threats and challenges. As discussed earlier, India too faces similar threats and challenges, and has built a response mechanism to tackle them. However, these threats are not static and are constantly evolving. To tackle them, it is necessary that policymakers remain abreast with the changing nature of the problem, and improve the country's response mechanism regularly. In this respect, it is also worthwhile studying the experiences of other countries as they can provide significant insights into ways of dealing with the challenges. In this chapter, a few countries are selected as case studies for discussion and comparison. These countries are the United States of America, Australia, and Israel. Since all three countries face similar sea-borne threats and challenges as those encountered by India, and have employed a range of measures to deal with them, a study of their response mechanisms will help us learn more about the challenges at hand and, wherever possible, adopt or adapt their practices to further strengthen India's coastal security architecture.

The United States of America

The United States of America (USA) has a 20,083[1] kilometre long coastline. Nearly 95 percent of USA's trade is carried out through 361 ports; and nearly 40 per cent of the world's fleet of merchant ships

---

[1]   Janice Cheryl Beaver, 'U.S. International Borders: Brief facts', *CRS Report for Congress*, November 9, 2006, at http://www.fas.org/sgp/crs/misc/RS21729.pdf (Accessed on January 8, 2013).

and approximately 30,000 containers enter American ports annually. Given that the country has such a long coastline, challenges such as illegal migration, drug smuggling, and international organized crime have been persistent for decades. A new threat of maritime terrorism was added to this basket of seaborne threats in the 1990s.

Threats and Challenges

The USA has been witnessing illegal migration from its southern neighbours, especially Mexico, since the 1960s, a challenge that acquired enormous proportions by the 1980s. Apart from Mexicans who entered the US through the land borders, people from Cuba and other Caribbean countries such as Haiti and Puerto Rico came to the USA via the sea. It is estimated that about half a million people from Cuba and thousands of others from Haiti migrated to the USA during the 1970s.[2] The overwhelming numbers of undocumented people in the country compelled the US administration to devise strategies to stem the tide of illegal migration, but these have remained unsuccessful. According to official estimates in 2009, approximately 11 million people resided illegally in the USA.[3]

Another sea-borne challenge that the USA faces is drug trafficking. Drugs are also smuggled in from the Caribbean countries through the southern maritime borders. Like illegal migration, the problem of drug trafficking became severe in the 1980s, compelling the US administration to enact the Anti-Drug Abuse Act in 1986. The Act declared drug trafficking a national security threat.

Terrorist activity emerged as a major threat to the national security during the 1990s. The USA faced several terrorist attacks inside its territory as well as in its military and civilian facilities abroad. For instance, the terrorist attack of February 26, 1993, when the World Trade Centre

---

[2] Michael J. McBrid, 'Migrants and asylum seekers: policy response in the United States to immigrants and refugees from Central America and Caribbean', *International Migration*, 37 (1), 1999, pp. 292-296.

[3] Michal Hoefer et al., 'Estimates of the Unauthorized Immigrant Population Residing in the United States: January 2009', *Population Estimates, Office of Immigration Statistics*, Department of Homeland Security, January 2010, at http://www.dhs.gov/xlibrary/assets/statistics/publications/ois_ill_pe_2009.pdf (Accessed January 8, 2013).

in New York City was bombed, killing six people and wounding another 1,000. Three years later, on June 26, 1996, terrorists struck at a US military facility in Dhahran, Saudi Arabia. In this incident, 19 people were killed and 500 were injured. On August 7, 1998, Al Qaeda operatives bombed the US embassies in Nairobi, Kenya, and in Dar E Salaam, Tanzania. And, two years later, on October 12, 2000, Al Qaeda operatives rammed an explosive laden boat against a US naval ship, the *USS Cole*, in the harbour in Aden, Yemen, killing 17 sailors and wounding 39 more.[4] Finally, on September 2001, Al Qaeda terrorists hijacked four airplanes and carried out multiple attacks against the World Trade Centre and the Pentagon, killing approximately 3000 people.[5]

The terrorist attacks of September 11, 2001 had an immediate and deep impact on the entire national security system of the United States, including its approach to coastal security. Following the attacks, security analysts conducted a review of the ways in which terrorist networks could harm America's interests. The assessment revealed that terrorists could target America's most vulnerable spot, i.e. its economy, by exploiting the maritime transportation system.[6] The US security analysts forecast several ways in which terrorist operatives could carry out attacks on ships and on the maritime infrastructure. One of their biggest concerns even today is that the terrorists could use ships or containers to smuggle in weapons of mass destruction (WMD) into a major port city.

Coastal Security Architecture

In response to the threats posed by terrorism and the concerns raised, the US administration had overhauled the national security apparatus and created the department of homeland security (DHS) in 2002. Under

---

4   'Joint Inquiry Staff Statement', *Hearing on the Intelligence Community's Response to Past terrorist Attacks Against The United States from February 1993 to September 2001*', October 8, 2002, at http://www.fas.org/irp/congress/2002_hr/100802hill.html (Accessed on January 8, 2013).

5   *The 9/11 Commission Report*, pp. 1-14, at http://www.9-11commission.gov/report/911Report.pdf (Accessed on January 8, 2013).

6   *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States,* W.W. Norton, New York, 2004, p. 391, at http://www.fas.org/irp/offdocs/911commission.pdf (Accessed on January 8, 2013).

the DHS, the Transport Security Administration (TSA) was created to strengthen the security of the nation's transportation systems,[7] including maritime transportation. The US Coast Guard (USCG) was transferred to the DHS in 2003, and made the lead federal agency for maritime homeland security as well as the federal maritime security coordinator in US ports. Accordingly, five homeland security missions were assigned to the USCG. These were: (1) ports, waterways, and coastal security; (2) drug interdiction; (3) migrant interdiction; (4) defence readiness; and (5) other law enforcement.[8]

Earlier, in December 2002, the USCG had released the *Maritime Strategy for Homeland Security*. The document detailed the following as its strategic objectives:[9]

- Preventing terrorist attacks within, and terrorist exploitation of, the U.S. Maritime Domain

- Reducing America's vulnerability to terrorism within the U.S. Maritime Domain

- Protecting US population centres, critical infrastructure, maritime borders, ports, coastal approaches, and the boundaries and seams between them

- Protecting the US marine transportation system while preserving the freedom of the US maritime domain for legitimate pursuits

- Minimising the damage and recovering from attacks that may occur within the US maritime domain as either the lead federal agency or a supporting agency.

---

7   *Transportation Security Administration*, at http://www.tsa.gov/about-tsa (Accessed on January 8, 2013).

8   The Homeland Security Act of 2002, Section 888(a)(1) defines the Coast Guard's non-homeland security missions as (1) marine safety; (2) search and rescue; (3) aids to navigation; (4) living marine resources (fisheries law enforcement); (5) marine environmental protection; and (6) ice operations. See, Ronald O'Rourke, 'Homeland Security: Coast Guard Operations: Background and Issues for the Congress', *CRS Report for Congress*, August 14, 2006, p. 1, at http://fpc.state.gov/documents/organization/71876.pdf (Accessed on January 8, 2013).

9   *US Coast Guard Maritime Strategy For Home Land Security*, U.S. Coast Guard Headquarters, Washington D.C., December 2002, p. 2, at http://www.uscg.mil/history/articles/uscgmaritimestrategy2002.pdf (Accessed on January 8, 2013).

In pursuit of these objectives, the USCG patrols US ports and waterways, creates security zones around strategic facilities as well as naval, cruise, and cargo ships. The USCG port security teams inspect high risk vessels and escort certain high value ships out of the harbours. It receives advance notification for vessels arriving in US ports for the better evaluation of terrorist, risk ships, cargoes, and passengers.[10] The USCG also remains in a state of defence preparedness for its integration with the Department of Defense (DoD) for peacetime operations, and also during war. It enforces foreign fishing vessel regulations to prevent incursions and poaching into the US's Exclusive Economic Zone (EEZ).[11] For tracking all vessels operating in the maritime domain, it is implementing the Automatic Identification System (AIS) and Long Range Identification and Tracking (LRIT) system to monitor ships and containers in ports and on the high seas.[12]

The US administration also created the bureau of Customs and Border Protection (CBP) under the DHS in 2003. This was entrusted with the responsibility of securing the country's borders, including the ports.[13] As far as CBP's responsibilities regarding coastal security is concerned, it patrols the coastal waters as well as inspects 'cargoes, including cargo containers that commercial ships bring into U.S. ports and for the examination and inspection of ship crews and cruise ship passengers for ships arriving in U.S. ports from any foreign port'.[14]

The CBP, together with the USCG, seeks to secure the USA by preventing the entry of terrorists and WMD through the borders and ports. For this, the CBP initiated two programmes: the Container Security

[10]   Ronald O'Rourke, 'Homeland Security: Coast Guard Operations: Background and Issues for the Congress', no. 8, p. 11.

[11]   'Annual Review of the United States Coast Guard's Mission Performance (FY 2011)', *Office of Inspector General, Department of Homeland Security*, Washington D.C., September 2012, pp. 24-29.

[12]   *H.R. 889* (*Coast Guard and Maritime Transportation Act of 2006*), at http://www.gpo.gov/fdsys/pkg/BILLS-109hr889enr/pdf/BILLS-109hr889enr.pdf (Accessed on January 8, 2013).

[13]   *Customs and Border Patrol*, at http://www.cbp.gov/xp/cgov/about/ (Accessed on January 8, 2013).

[14]   Ronald O'Rourke, no. 8, p. 10.

Initiative (CSI) and the Customs-Trade Partnership against Terrorism (C-TPAT). While CSI aims at soliciting the cooperation of foreign authorities, C-PAT is an initiative to integrate the private sector into the maritime security system.[15] The CSI's objective is to identify high risk cargo containers originating from foreign ports and prevent their entry into US ports.[16]

Under CSI, CBP personnel are stationed at foreign ports to pre-screen containers. The information regarding high risk containers are gathered through the 'secure freight' scheme in which advance electronic cargo information is required to be provided by vessels arriving at different US ports. This scheme requires that detailed manifest information on all containerised and break bulk, including the ship's schedule, cargo, and crew, is provided to the CBP 24 hours before the cargo is loaded at foreign ports.

The C-PAT is a voluntary scheme in which

> "companies sign an agreement to work with CBP to protect the supply chain, identify security gaps, and implement specific security measures and best practices. Additionally, partners provide CBP with a security profile outlining the specific security measures the company has in place. C-PAT members are considered low-risk and are therefore less likely to be examined".[17]

In addition, the Megaport Initiative launched by the USA in 2003 encourages the detection of radioactive and nuclear materials at foreign ports of departures. This initiative provides detection equipment and trains personnel for checking nuclear and other radioactive materials in CSI compliant foreign ports. For detecting high risk persons from

---

[15] Chris Rahman, 'Evolving U.S. Framework for Global Maritime Security from 9/11 to the 1000-ship Navy', in Rupert Herbet, et al. (eds.), *Lloyd's Handbook of Maritime Security* CRC Press, Boca Raton, 2009, p. 51.

[16] *Container Security Initiative: Fact sheet*, Customs and Border Protection, at http://www.cbp.gov/linkhandler/cgov/newsroom/fact_sheets/printer_fact_sheets/csi_factsheet.ctt/csi_factsheet.pdf (Accessed on January 8, 2013).

[17] *C-PAT: Program Overview*, at http://www.cbp.gov/linkhandler/cgov/trade/cargo_security/ctpat/ctpat_program_information/what_is_ctpat/ctpat_overview.ctt/ctpat_overview.pdf (Accessed on January 8, 2013).

entering into ports and other offshore installations, the MTSA is in the process of implementing the transportation worker identification credential programme to ensure that people who work at the sea, land, and air ports are not security threats.[18]

The implementation of all maritime security procedures involves not only an array of federal, state, local and tribal governments but also requires good synergies between them. Thus, to improve intra-agency coordination, the US administration established the maritime security policy coordinating committee (MSPCC) comprising all concerned government departments and agencies in December 2004. The MSPCC was also mandated to devise a national strategy for maritime security.

The USA has also been the driving force behind the formulation and implementation of a number of measures and regulations for tightening the international maritime security regime. Some of these measures include: the implementation of the International Ship and Port Facility Security Code (ISPS Code) on July 1, 2004, and the October 2005 non-proliferation amendments to the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA) Convention and its protocol.[19] The ISPS Code was developed after making suitable amendments to the 1974 Safety of Life at Sea (SOLAS) Convention in 2002. The Code outlines the minimum security requirements that every ship and port must meet to improve overall security.

All these maritime security initiatives were brought together in a comprehensive document, the National Strategy for Maritime Security (NSMS), which was released in October 2005. The NSMS emphasises that the safety and economic security of the USA depends largely on the security of the oceans, which is an 'unsecured medium for an array of threats by nations, terrorists and criminals'.[20] The document identifies five threats to maritime security:

---

[18]   Bruce B. Stubbs and Scott C. Truver, 'Setting, Strengthening, and Enforcing Standards for U.S. Port Security', in Rupert Herbert Burns, *Lloyd's Handbook of Maritime Security* CRC Press, Boca Raton, 2009, pp. 303-304.

[19]   Chris Rahman, 'Evolving U.S. Framework for Global Maritime Security from 9/11 to the 1000-ship Navy', no. 15, p. 43.

[20]   *The National Maritime Strategy for Maritime Security*, September 20, 2005, p. 2, at http://www.au.af.mil/au/awc/awcgate/dhs/nat_strat_maritime.pdf (Accessed on January 9, 2013).

1) Nation-State, which could provide conventional weaponry or WMD material to other rogue states or terrorist organisations willing to conduct WMD attacks;

2) Terrorist groups, which could launch successful attacks in the maritime domain and disrupt regional and global economies;

3) Transnational crimes and piracy, which use the maritime domain for criminal purposes;

4) Environmental destruction, which could adversely affect the economic viability and political stability of a region.; and

5) Illegal sea-borne immigration, which facilitates terrorists in taking advantage of the human smuggling networks in attempts to enter the USA.

Based on this threat assessment, the NSMS underlines that the preeminent national security priority is the prevention of WMD from entering the USA and averting an attack on the homeland. The NSMS lists the followings as the objectives of the strategy:

• Prevent terrorist attacks and criminal or hostile acts

• Protect maritime-related population centres and critical infrastructure,

• Minimize damage and expedite recovery, and

• Safeguard the ocean and its resources.

According to the NSMS, these objectives would be accomplished by implementing the following strategic actions:

• Enhanced international cooperation to ensure lawful and timely enforcement actions against maritime threats,

• Maximise domain awareness to support effective decision-making,

• Embed security into commercial practices to reduce vulnerabilities and facilitate commerce,

• Deploy layered security to unify public and private security measures, and

- Assure continuity of maritime transportation system to maintain vital commerce and defence readiness.

In addition to the strategy, eight supporting plans[21] to address specific threats and challenges in the maritime domain were also developed. These are:

- National Plan to Achieve Maritime Domain Awareness

- Global Maritime Intelligence Integration Plan

- Maritime Operational Threat Response Plan

- International Outreach and Coordination Strategy

- Maritime Infrastructure Recovery Plan

- Maritime Transportation System Security Plan

- Maritime Commerce Security Plan

- Domestic Outreach Plan

The NSMS and eight supporting plans present a comprehensive national effort to promote and protect global economic stability and legitimate activities as well as prevent hostile and illegal acts within its maritime domain at the same time.[22]

Australia

Australia has a 35,876 kilometre long coastline and offshore territories measuring 8.15 million sq kilometres. Many islands, such as the Cocos and Keeling Islands and the Heard and McDonald Islands, lie some 1500 to 2500 nautical miles away from the mainland. Australia faces a range of non-traditional coastal security threats, including illegal entry of people from Sri Lanka, India, Indonesia, etc., the smuggling of drugs and other contraband, and potential terrorist strikes including a WMD attack.[23]

---

[21]   For details see, *The National Maritime Strategy for Maritime Security*, ibid, p. 27.

[22]   ibid, p. ii

[23]   Sam Bateman, 'Securing Australia's Maritime Approaches', *Security Challenges*, 3 (3), August 2007, p. 109.

Coastal Security Architecture

As a response to these threats and challenges, Australia has formulated a strategy for maritime security. According to the Guide to Australian Maritime Security Arrangement (GAMSA), there are four objectives to maritime security[24]:

- Prevention

- Preparedness

- Response

- Recovery

Prevention and preparedness entail deterrence, disruption, or the prevention of security threats in the country's maritime domain. Prevention and preparedness are achieved through situational awareness, surveillance, intelligence collection and analysis, and deterrence. Response involves the elimination of maritime security risks through the timely detection of the threat. Response is formulated based on reconnaissance and surface response. Recovery means supporting affected individuals and communities. Recovery involves government and industry led recovery programmes, state of emergency declaration, and criminal prosecution.

The Border Protection Command (BPC) is the principal organisation is responsible for protecting Australia's interests in the maritime domain. Established in March 2005 within the Australian Custom and Border Protection Services (ACBPS), the BPC is essentially a multi-agency task force entrusted with the responsibility of coordinating operations and generating awareness against maritime security threats.[25] The BPC coordinates the aerial surveillance programme and the surface response operations by utilising assets assigned from ACBPS and the Australian Defence Force through the Australian maritime security operations centre (AMSOC).[26] Since the BPC's operations are intelligence-led and

---

[24]   *Guide to Australian Maritime Security Architecture*, p. 15, at http://www.customs.gov.au/webdata/resources/files/GAMSA.pdf (Accessed on January 10, 2013).

[25]   *Border Protection Command*, at http://www.bpc.gov.au/ (Accessed on January 10, 2013).

[26]   ibid.

risk based, the Command also carries out tactical, operational and strategic threat and risk assessments, develops intelligence systems for maritime surveillance and enforcement, and manages the Australian Maritime Identification System (AMIS).[27]

The BPC is commanded by a Rear Admiral from the Royal Australian Navy who is designated as the commander, BPC. The Command is accountable to both the Ministry of Home Affairs (MHA) and the Ministry of Defence (MoD). The Command is staffed by personnel from the ACBPS, the Department of Defence, the Australian Fisheries Management Authority, and the Australian Quarantine and Inspection Service. The BPC was initially known as the Joint Offshore Protection Command (JOPC). In later years, the Homeland Security Review headed by Ric Smith suggested renaming the BPC as the Australian Coast Guard.[28]

The ACBPS placed under the MHA is primarily responsible for guarding Australia's borders. It monitors the entry and exit of vessels, aircraft, goods and people as well as inspects vessels at the sea and air ports.[29] The marine unit of the ACBPS services, under the aegis of the BPC, conducts aerial surveillance of Australia's marine domain and patrols coastlines and adjacent waters, including the northern waters and southern oceans to eliminate civil maritime threats. As Australia is formulating new coastal security programmes, and as the ACBPS is acquiring more assets to implement those programmes, it is progressively assuming greater operational responsibility for securing Australia's maritime approaches, in comparison to the Australian defence force (ADF).[30] Like its US counterpart, the ACBPS also employs a layered approach to coastal security. Its strategies include posting ACBPS officers overseas to liaise with offshore partners located in 13 countries as well as the conduct of pre-arrival screening of passengers for identifying high risk cargoes and people.[31]

---

[27]   *Annual Report-2011-2012,* Australian Customs and Border Protection, Australian Government, 2012, p. 60.

[28]   *Border Protection Command*, no. 25.

[29]   *Guide to Australian Maritime Security Architecture*, no. 24, p. 15.

[30]   Sam Bateman, no. 23, p. 112.

[31]   *Annual Report-2011-2012,* Australian Customs and Border Protection, no. 27, p. 4.

Another agency which has been associated with coastal security in Australia is the ADF. The ADF is a major supplier of maritime security assets and maintains capabilities to assist civilian authorities during maritime emergencies. It also develops operational concepts to deal with terrorism and other non-traditional threats.[32] As far as maritime transport security is concerned, the Office of Transport Security (OTS), under the Department of Transport and Regional Services, is the principal security regulator for maritime transport. The main focus of OTS is evolving an effective security policy, and planning and providing risk assessments of ships entering Australian ports through its maritime operation centre.[33] It is also the main implementation body for all maritime security plans, including the ISPS-Code in Australian ports, ships, and offshore oil and gas installations.[34] OTS approves security plans for offshore oil and gas installations and issues guidelines. OTS also implements the maritime security identification card (MSIC) scheme.

Israel

In contrast to the USA (20,083 kilometres) and Australia (35,876 kilometres), both of which have some of the largest coastlines in the world, Israel has a rather small coastline, measuring 218 kilometres only. Yet, given its geopolitical location in the volatile Middle East and its endemic conflict with Palestine, Israel had been facing seaborne terrorist attacks since 1953. Incidentally, among all the terrorist groups, the Palestinian groups such as the Palestinian Liberation Organization (PLO), the Palestinian Liberation Front (PLF), the Popular Front for the Liberation of Palestine (PFLP), the Hamas, and the Palestinian Islamic Jihad (PIJ) possess the skill and capability to launch maritime

---

[32]   *Guide to Australian Maritime Security Architecture*, no. 24, p. 16.

[33]   Devinder Grewal, 'The ISPS Code: The Australian Experience and Perspective', in Rupert Herbert Burns, et al. (eds.), *Lloyd's Handbook of Maritime Security*, CRC Press, Boca Raton, 2009, pp. 329-330.

[34]   Sam Bateman, no. 23, p. 113. For details, also see, *Maritime Security*, Department of Infrastructure and Transport, at http://www.infrastructure.gov.au/transport/security/maritime/index.aspx (Accessed on January 10, 2013). Also see, Lee Cordner, 'Offshore Oil and Gas Industry Security Risk Assessment: An Australia Case Study', in Rupert Herbert Burns, et al. (eds.) no. 33, pp. 169-183.

terrorist attacks. Having experienced numerous episodes, both actual and attempted, of infiltration by Palestinian terrorists through the sea, attacks on ports as well as sea-borne smuggling of arms and ammunition, Israel has been able to put in place an effective mechanism to protect its coasts.[35]

Coastal Security Architecture

Components that constitute Israel's coastal security architecture are sustained patrolling and reconnaissance of the territorial and high seas, physical security of the ports, establishment of maritime security areas, deterrence through counter terrorism operations in neighbouring countries, and intelligence gathering.

Israel views protection of its coasts against terrorist infiltrations, attacks and smuggling as coastal defence and, accordingly, the Israeli navy is entrusted with the task of coastal security. The navy conducts regular aerial reconnaissance and patrolling up to 100 kilometres in the sea, with the aim of deterring, detecting and interdicting potential threats.[36] These patrol sorties are also important sources for gathering situational awareness about the country's maritime domain. In addition, surveillance of the coasts and the adjoining seas are also carried on electronically through a series of nine radars positioned along the entire coastline of Israel. These radars have the capability of detecting boats and ships up to 32 kilometres into the seas as well as tracking 200 targets simultaneously. These radars are controlled by local command centres located at Haifa, Ashdod, and the Red Sea Region, which all feed into the central command centre.[37] Further, Israel has constructed a virtual barrier along its maritime boundaries by embedding sensors in the buoys installed to demarcate its borders with Lebanon and Gaza.[38]

---

[35] Akiva J. Lorenz, 'The Threat of Maritime Terrorism to Israel', *Intelligence and Terrorism Information Center,* October 1, 2007, p. 3, at http://terrorism-information.com/data/pdf/PDF_19294_2.pdf (Accessed on January 18, 2013).

[36] *Israeli Sea Corps*, at http://www.globalsecurity.org/military/world/israel/navy.htm (Accessed on January 18, 2013).

[37] Akiva J. Lorenz, no. 35, p. 39

[38] ibid, p. 40.

As far as Port security is concerned, the Shipping and Port Authority (S&PA) under the Ministry of Transport is the lead agency. It is responsible for 'ensuring a safe, secure and sustainable shipping infrastructure at all times; formulating and monitoring shipping regulations and policies; supervising maritime traffic, ports and moorings; promoting and maintaining international regulations and treaties'.[39] Israel implemented the Port State Control (PSC) inspection system in 1997 under which it got the right to inspect the condition of foreign ships arriving at its ports. Israel has also made its major ports ISPS-Code compliant, and is an active participant of the US's CSI programme.

As part of the security plan of the ports, every ship arriving at Israeli ports has to submit the Notification of Arrival (NOA) 48 hours before it enters the Israeli waters. This provides sufficient time to the Israeli customs, intelligence, and marine units to inspect the ship's registration and cargo. Once the ship enters 25 miles, the captain of the ship has to once again notify its position, and is further questioned by the Israeli authorities. According to the S&PA directives, ships arriving at Israeli ports have to move through designated lanes leading to the ports of Haifa, Hadera and Ashdod/Ashkelon.[40] Israel has also raised a specialised unit called the *Snapir* in 2005 to physically secure ports and naval bases. The *Snapir* units use a small but highly manoeuvrable boat (the hornet) to patrol the shallow approaches to the coasts. They have three branches located at Haifa, Ashdod and Eilat.[41]

Further, Israel has established maritime security areas with the aim of restricting maritime activities along the Palestinian coasts in order to monitor the coastline better. Towards this end, in 1994 under the Gaza-Jericho Agreement, maritime activity zones (MAZ) were created in the

---

[39] *Shipping and Port Authority*, Ministry of Transport, State of Israel, at http://en.mot.gov.il/index.php?option=com_content&view=category&layout=blog&id=31&Itemid=37 (Accessed on January 18, 2013).

[40] *Notice to the Mariners*, http://asp.mot.gov.il/en/shipping/notice2mariners?start=110 (Accessed on January 18, 2013).

[41] 'Snapir unit keeping watch over Gaza', *y.netnews.com*, Gaza, March 26, 2010, at http://www.ynetnews.com/articles/0,7340,L-3868492,00.html (Accessed on January 18, 2013).

Gaza strip.[42] The coastline of Gaza was divided into three zones K, L, M. Zone K was 1.5 nm wide, extended 20 nm into the sea, and acted as a buffer between Gaza and Israel. Similarly, Zone M was one nm wide, and formed a buffer with Egypt. Both K and M zones were designated as 'closed areas', and patrolled by the Israeli navy.

Zone L was an open zone and fishing and other economic activities were permitted but conditional to regulations. For instance, fishing boats venturing out from this zone were not allowed to fish in the open sea. The boats were allowed a maximum speed of 15 knots and were not allowed to carry arms or ammunition. It was also mandatory for the boats to carry licenses and identification markings. Moreover, water jets and marine motor bikes were not allowed to operate. All foreign vessels entering the zone were not permitted to approach the coast beyond 12 nm.[43] This arrangement was operational till Israel withdrew its forces from Gaza in 2005. However, in subsequent years, repeated suicide terrorist attacks compelled Israel to demand restrictions on the movement of Palestinian fishermen along Gaza's waters. Consequently, fishing activities by Gaza fishermen were restricted to 12 nm miles in 2002, which got further restricted to 10 nm in 2005, and to 6 nm in 2006.[44]

The last but the most important component of Israel's coastal security architecture is intelligence. Israel accords top priority to intelligence gathering, a task performed by 'various Israeli intelligence services and the Foreign Ministry'.[45] The fact that, over the decades, Israel has been successful in foiling 80 maritime terror plots indicates how robust its process of intelligence gathering, collation, analysis, and dissemination is.[46]

---

[42] 'Article XI- Security Along the Coastline and in the Sea of Gaza', *Annex I, The Gaza-Jericho Agreement,* at http://www.mfa.gov.il/MFA/Peace%20Process/Guide%20to%20the%20Peace%20Process/Gaza-Jericho%20Agremeent%20Annex%20I (Accessed on January 18, 2013).

[43] ibid.

[44] Sharat G. Lin, 'Gaza's Shrinking Borders: 16 Years Of The Oslo Process', *countercurrents.org*, December 27, 2009, at http://www.countercurrents.org/lin271209A.htm (Accessed on January 18, 2013).

[45] Akiva J. Lorenz, no. 37, p. 3.

[46] ibid, p. 39.

Summing up

From the above discussion, it can be concluded that all the three countries have been facing similar threats and challenges to their coastal security but their scope and intensity are varied. Consequently, their approaches to coastal security have also been similar, albeit with some variations. While the USA and Australia have viewed their coastal security challenges largely as consequences of poor law enforcement in their maritime domains, Israel has seen these challenges as existential threats. Accordingly, the USA and Australia have empowered their law enforcement agencies such as the Coast Guard, customs, immigration and border control agencies to deal with the challenges. These countries have also sought the cooperation of the private sector to secure their coasts. Israel, on the other hand, has entrusted the responsibility of coastal defence to its navy and is heavily dependent on intelligence for thwarting seaborne threats.

V CONCLUSION

Being a coastal nation, India has been witnessing a range of maritime activities taking place along its coasts and adjacent waters over the ages. However, activities such as the smuggling of precious metals and items, trafficking of arms and drugs, and the infiltration of terrorists have adversely impacted the country's economy as well as its security. Factors such as topography, geographical position, and lax enforcement of maritime laws and regulations have provided a conducive atmosphere for criminals and smugglers to carry out their illegal activities.

As the discussion so far has demonstrated, though awareness about the seaborne challenges to coastal security existed among Indian policymakers, they were not sensitised enough to initiate proactive and robust measures to address them. The inability and reluctance to understand the dynamic nature of sea-borne challenges among policymakers stemmed from their preoccupation with the security of the land borders as well as their flawed understanding that sea-borne challenges do not have the potential to become high-intensity security threats. Consequently, counter measures to deal with these security challenges were undertaken only after the challenge had precipitated into crisis.

Interestingly, the response mechanism that was formulated to tackle the threats and challenges had always focused upon creating a new organisation. The Customs Marine Organisation (CMO) was created in the mid 1970s to deal with the challenge of seaborne smuggling. However, it was not adequately strengthened, and was left to languish, rendering it incapable of delivering on its objectives. As the old challenges persisted and newer ones emerged in India's maritime domain, Indian policymakers created another organisation, the Indian Coast Guard (ICG). Again, the Central government did not show any enthusiasm to enhance the capabilities of the ICG so that it could shoulder the new responsibilities entrusted upon it. The developmental

plans of the ICG were not approved on time, which hampered its acquisition programmes. As a consequence, it has remained a weak force. In fact, there was opposition to its very formation from many quarters. A decade after its formation, the idea of abolishing the ICG was floated from the very organisation which had once propounded the necessity of its creation. The arguments forwarded against the ICG were that the creation of the force had robbed the Indian navy of its 'low value units' and 'best training grounds', and therefore, it should be abolished.[1]

In subsequent years, as the coastal waters became more vulnerable to terror related activities and the ICG appeared incapable of handling the threats and challenges in shallow waters, Indian policymakers suggested the creation of a marine police to strengthen vigil along the shores and inland waters. For a long time, the idea of the marine police remained only on paper as the governments of the coastal states did not show any interest in raising an additional force. Even after 26/11, when Central government directives forced the state governments to set up coastal police stations, the marine police force inhabiting them remain ill equipped, ill-trained and de-motivated.

Although new organisations have been created to secure the country's coasts, they were never given the sole responsibility for coastal security. For example, given that the ICG is the national authority on offshore security, is responsible for patrolling the coastal waters, and is the lead intelligence agency for coastal borders as well as the coordinating agency between central and state agencies in matters of coastal security, it should have been the natural choice as the lead agency for coastal security as well. Instead, the Indian navy, being the dominant force, was entrusted with the overall responsibility of coastal and offshore security. Incidentally, unlike the ICG, the Indian navy neither has the assets nor a strong presence along the country's coasts to shoulder the responsibilities of coastal security. Moreover, it has not developed effective communication channels with state and central agencies to carry out coordinated response in case of an emergency.

---

1 For details see, Madhvendra Singh, 'Does India Really Need Two Maritime Services', *Trishul*, Vol. 5 (2), 1992, pp. 13-23.

In addition, the tendency of the Government of India (GoI) to implement corrective measures without preparing a suitable environment at the ground level has introduced gaps in the country's coastal security architecture. Issues of coordination among the agencies, confusion about their roles, inadequate infrastructure and manpower, de-motivation and disenchantment among forces and local people have all contributed to the weakening of the architecture.

Given these inadequacies, the central as well as the state governments need to work concertedly and formulate new initiatives to make the coastal security architecture robust and effective. Towards this end, a few suggestions are forwarded below.

Tasks for the Central Government

- A national coordination body, with representatives from the concerned central and state ministries and departments, should be established to develop national strategies to formulate an integrated response to coastal security threats and challenges. This body should also be mandated to ensure smooth coordination between all agencies concerned with coastal security.

- The ICG should be designated as the single authority responsible for coastal security. Accordingly, the charter of the ICG should be duly amended and the force strengthened and trained. The Indian navy should be eased out from coastal security responsibilities and allowed to concentrate on developing its blue water capabilities and defending the country during times of war.

- The ICG should be treated as a border guarding force and brought under the Ministry of Home Affairs (MHA). This will ensure administrative cohesion and revenue flows for the ICG to grow as an independent entity.

- The MHA should concentrate on the issue of training the marine police as its next step. It should set up specialised marine training institutes in the country, which will provide a comprehensive and uniform course in sea-faring, sea-policing, sea-navigation, as well as laws and regulations pertaining to crimes at sea.

- The GoI should encourage private participation in various coastal security initiatives given that private players are involved in maritime trade and travel in a major way.

Tasks for the State Governments

- State governments should make concerted efforts to spot and nourish talented individuals in the fishermen community so that they can be eventually recruited into the marine police force. State governments could also raise a separate cadre for the marine police.

- Fishing trawlers and other indigenously built heavy boats should be hired locally for patrolling during the monsoon season as well as to reduce the maintenance costs of the interceptor boats. Such initiatives will also provide fishermen and boat-builders additional money during the off season. The MHA can use the security related expenditure (SRE) scheme to reimburse state governments for expenditure on hiring such boats.

- Coastal security exercises need to be conducted regularly, and SOPs should be implemented, duly revised, updated, and widely disseminated and internalised in order to generate awareness about threats emanating from the sea as well as to develop synergies among the concerned agencies.

- Most importantly, state governments should actively participate and cooperate with the Centre in a national endeavour to secure India's coasts.

This monograph aims at understanding India's approach towards coastal security as it has evolved since Independence. It describes the kinds of threats and challenges that India's coasts have been facing, or are likely to face in future. It critically analyses the various strategies and polices that the Indian government has devised over the years as a response to these threats and challenges. It argues that the implementation of these measures has led to the establishment of a well-defined coastal security architecture. However, the formulation of these measures without first preparing the ground for their effective implementation has revealed a number of inadequacies in the architecture. These have hampered its smooth and effective functioning.

Dr Pushpita Das is an Associate Fellow at the Institute for Defence Studies and Analyses (IDSA) and a member of the Internal Security Centre. Her areas of interest include Border Management, Coastal Security, and India's Northeast. She has also been co-opted as an expert on coastal security by the National Security Council Secretariat (NSCS). She has written extensively on her areas of research and has delivered lectures at a number of training institutes. She holds a Doctorate degree from the Jawahalal Nehru University.