CHAPTER 5

Patrolling and Security Issues

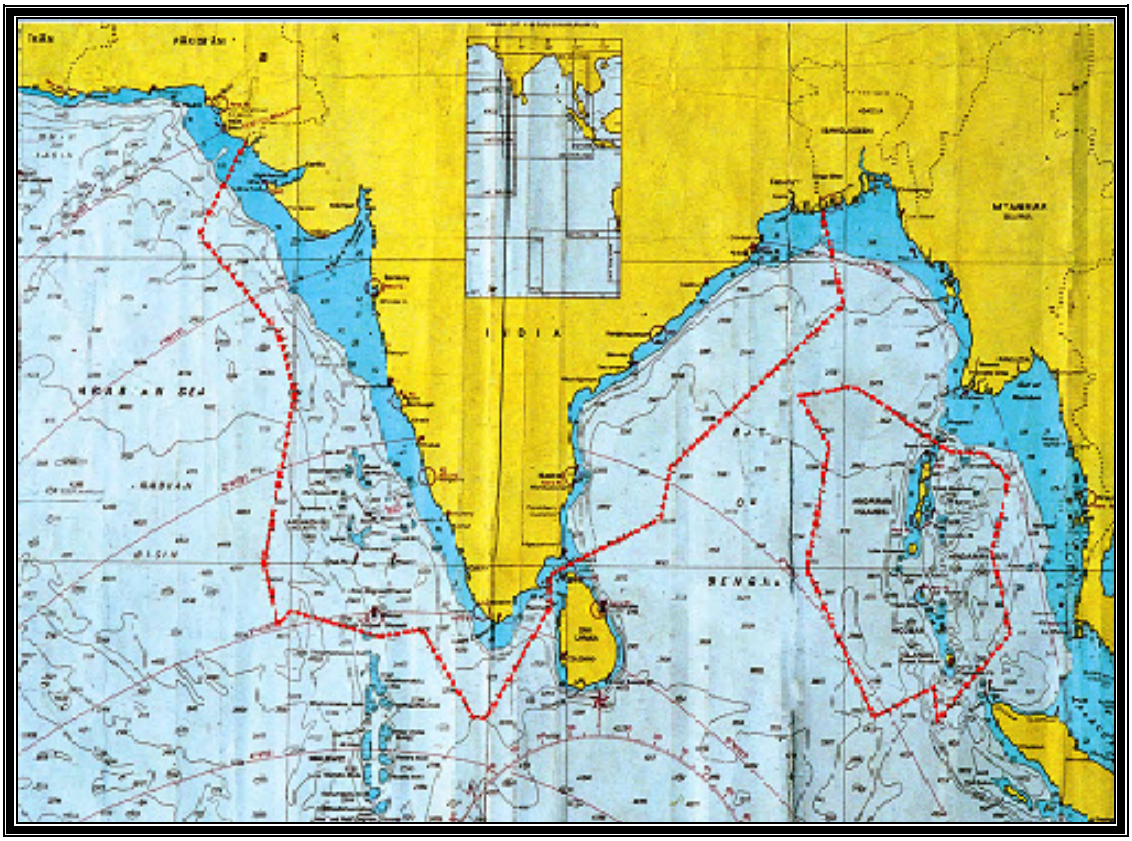
5.1 Introduction

The responsibilities of the Indian Coast Guard (ICG), when formed in 1978, were in line with the issues perceived to be relevant then. Its principal tasks were to protect the national interests of India in the maritime zones of India (MZI), i.e, up to 200 Nautical Miles (NM)[1]. Since then, in the last four decades, various concerns have mushroomed including maritime terrorism, illegal arms trafficking etc. Indian coasts are also vulnerable to illegal inflow of both migrants and refugees from Bangladesh and Sri Lanka. There are also numerous fishing boats which venture into the sea each day, particularly along Gujarat coast, posing a security threat as many such fishing boats could be apprehended by interests inimical to that of India and be used for smuggling in arms and infiltrators. Such fishing boats could easily mingle with local fishing boats.

The Coast Guard is limited in its capabilities to effectively discharge its duties in the entire EEZ waters (upto 200 NM). This Report has already discussed at length the deficiencies in ICG assets and infrastructure, shortages in manpower and restricted operational effectiveness on account of gaps in role equipment. Force levels which ought to have been in place by the year 2000 have not been achieved even by 2010, by which time the security threats have increased manifold.

[1] 1 NM = 1,852 metres

THE EXCLUSIVE ECONOMIC ZONE OF INDIA



Source: Indian Coast Guard

Total territorial waters : 1,55,889 Sq Km.	**Total EEZ km : 20,13,410 Sq Km.**
Total Coastline : 7,516.60 Km	**EEZ – Mainland and Lakshadweep Islands : 14,18,193 Sq Km**
Coastline – Mainland : 5,422.60 Km	**EEZ – Andaman & Nicobar Islands : 5,95,217 Sq Km**
Coastline – Lakshadweep Islands : 132 KM	
Coastline – Andaman & Nicobar Islands: 1,962 Km	

India's long coastline of about 7,600 kms and an exclusive economic zone (EEZ) of over 2 million sq kms involves overlapping activities and jurisdiction by a number of ministries and departments. At present, different agencies handle sea-based activities such as the Ministry of Shipping, Road Transport and Highways, the Department of Fisheries under the Ministry of Agriculture, Port authorities while defence and security are handled by the Navy and Coast Guard under Ministry of Defence. The ICG has been part of joint efforts for a co-ordinated response to various maritime law enforcement, policy formulation and implementation issues in which as many as 12 ministries and eight departments of the central government, 9 coastal states and 4 Union Territories (UTs) are involved.

Coastal Surveillance

In the succeeding paragraphs effectiveness of maritime patrolling is discussed. This includes review of patrolling off the coast of Gujarat and Maharashtra, boarding operations, night flying, issues in coordination between Indian Navy and ICG, installation of static sensors, legal constraints, identification and tracking of ships etc.

5.2 Patrolling off the coast of Maharashtra and Gujarat: Period leading up to 26/11

5.2.1 Operation Swan

Following the March 1993 bomb blasts in Mumbai, the sea route and the susceptible coastal security environment were identified as likely loopholes in the country's security umbrella since the explosives used were smuggled in through the Raigad coast of Maharashtra. In response to this government launched Operation Swan in April 1993, a joint operation of the IN and ICG aimed to prevent smuggling of arms/ammunition and other contraband and carry out intensive surveillance on high seas, maintain surveillance in the territorial waters and patrol the shallow waters near the shore along the Maharashtra and Gujarat coasts. The operation was to be conducted in three layers; an outer layer (50 NM and beyond) of surveillance using Dorniers and surface units of IN and ICG, intermediate layer using ships of IN and ICG and hired trawlers (between 25 – 50 NM) and the inner layer (up to 12 NM) through joint coastal patrolling by IN using hired trawlers with customs and police personnel. In the case of Gujarat, the ICG was also assigned the inner layer operation from February 2006.

The position obtaining with regard to two states viz. Gujarat and Maharashtra with reference to patrolling and security issues in the period preceding 26/11 is discussed in the succeeding paragraphs. Audit observed that:

- The Coast Guard has not been involved in the inner layer operations in Maharashtra till December 2010 due to manpower and resource constraints. Joint Coastal Patrolling (JCP) undertaken by Indian Navy in Maharashtra was discontinued by September 2005 based on the decision of the Ministry of Home Affairs to establish coastal police stations to provide the coastal security and check smuggling of arms and ammunition. The coastal patrolling was, thereafter, left to the State Police and Customs, who had meager operational assets to handle the operation. Further, all naval detachments were replaced by three quick reaction teams, which were kept standby in case of any contingency. This created a void in undertaking the close coastal patrolling.
- Audit noticed that by March 2008 only 47 (10 in Gujarat and 12 in Maharashtra) out of 73 coastal police stations had been set up in nine coastal states and four union territories. By March 2009, this figure had increased to only 55 coastal police stations. The induction of the dedicated fleet of 204 boats for these coastal police stations was to commence from April 2009. However, by October 2010, only 71 out of planned 73 coastal police stations had been made operational.
- Although 15 IBs were to be inducted by 2010 so that ICG could perform its enlarged role of coastal security, i.e. surveillance of shallow waters under Operation Swan, the Government sanction for the same was obtained in April 2005 and the contract was signed only in March 2009. Resultantly, these IBs are now expected to be inducted by March 2014 only.
- Additionally, three Coast Guard Stations were required to take over the extra responsibilities of Operation Swan. Ministry of Defence / ICG sought Ministry of Home Affairs (MHA) funds for the same in October 2002. Though the proposal was approved in January 2005 audit observed that none of the stations could be activated prior to 26/11. Of these, one station was activated in September 2010, the second station was commissioned in October 2010 and the third is yet to be activated (as of December 2010) as land identification and negotiation is still in progress.

Audit reviewed the wherewithal available with the Coast Guard for operations in Gujarat. Though ICG had taken over Operation Swan in Gujarat in February 2006, these operations were lacking in effectiveness as the

manpower, operational assets and basic infrastructure were grossly inadequate for effective conduct of operations.

These limitations were also highlighted by HQ Coast Guard (W) as early as March 2008 to Coast Guard Headquarters. The details are as follows:

(a) Insufficient / inadequate assets: Number of assets and ICG stations were not sufficient for covering the entire coastline of the Gujarat State. In fact, dedicated assets at ICG stations viz. office building, computers, telephone lines, ambulance, lay apart store etc. for Joint Coastal Patrolling staff were not available. Other examples are given below:

20 Problems in assets / infrastructure used in Operation Swan

Place	Asset / Infrastructure	Remarks
All places	In normal weather, the endurance of Interceptor Crafts is four to six hours and the boats were restricted to coastal operations up to 3 Nautical Miles only.	The boats were unsuitable for operating in rough weather and could not be utilised beyond sea state one[2]. This resulted in virtual suspension of JCP in monsoons/rough weather conditions.

[2] Sea sate one – When sea is calm (rippled) and the height of waves is between 0.0 to 0.1 metre

All places	Hired trawlers	Usage of hired trawlers also reduced considerably the element of surprise in conducting operations.
Dholai Port	The depth available during low water was less than one metre and only a pile jetty with inadequate fendering was available at the port.	The operations if planned from the site would be limited to high water timings and would defy the element of surprise and continuity of operations.
Umagram	A wooden dilapidated T shaped jetty 1.5 – 2.0 meters depth was available which is exposed to heavy sea wash	--
South Gujarat coast between Diu and Valsad	Non-availability of infrastructure between Diu and Valsad	Thus, area not being patrolled by any dedicated vessels
Gulf of Khambat	No infrastructure available for logistics support	--

(b) **Night patrol:** The night patrolling capabilities of the Interceptor Crafts (ICs) were limited in view of non-availability of dedicated and navigational equipments with them. Non-availability of night vision binoculars/goggles on-board also affected their efficacy for dark hour patrol.

(c) **Navigational and communication equipment:** ICG lacked vital equipments such as hand held Global Positioning System (GPS[3]), Night Vision binoculars, Search and Rescue Transponder (SART[4]), Emergency Position Indicating Radio Beacons (EPIRB[5]) etc.

(d) **Absence of Intelligence inputs:** Around 35,000 boats plied from Gujarat coast daily. In absence of credible intelligence it was difficult to trace the culprits. Besides, more than 5,000 Dhows[6] generally operate from Gujarat and new crafts are built / added every year. The crafts carry out traditional trade with Gulf and African countries. Although, the Port authorities had started to give the information on the movement of

[3] GPS – It is a satellite based navigation system which provides reliable location and time information in all weather conditions

[4] SART – It is self contained water proof radar transponder intended for emergency use at sea

[5] EPIRB - It is used for saving lives by transmitting a distress signal to international search and rescue satellites

[6] A lateen – rigged ship with one or two masts

dhows but it was needed on a regular basis so that these dhows could be monitored.

Securing the Coast

Also, lack of secrecy and element of surprise in conducting operations due to frequent changes in deployment of police and customs personnel coupled with unsuitable arms for police and customs personnel also imposed limitation on the operations.

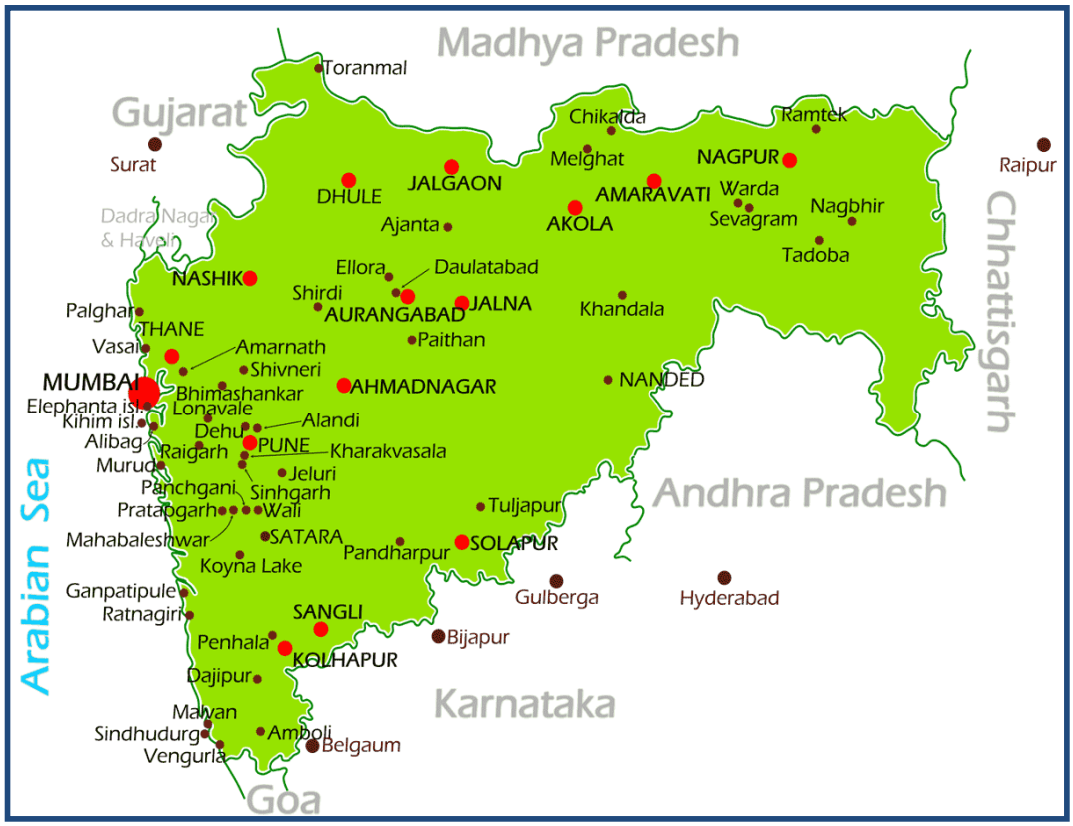
Insufficient/ inadequate assets coupled with limitations of interceptor crafts and lack of vital navigational and communication equipment with ICG adversely impacted the operations of Coast Guard in Gujarat.

5.2.2 IMBL/EEZ patrolling - Maharashtra and Gujarat

As per ICG analysis (2002 - 07 Plan), it requires 175 ships and 221 aircraft for effective patrolling of the EEZ, coastal and shallow waters. Against this, the ICG had only 68 ships/vessels and 45 aircraft as of January 2008. Out of 28 ships/vessels available with ICG for patrolling of the entire West Coast, 16[7] ships/vessels, of all types, were based in the Maharashtra and Gujarat area. Ten ships in 2007 and 14 ships/vessels in 2008 and 2009 deployed in the Maharashtra and Gujarat area were responsible for Exclusive Economic Zone (EEZ) / International Maritime Boundary Line (IMBL) patrolling.

[7] Includes 2 ACVs deployed in Okha for shallow water coastal patrolling. Their patrolling details have not been taken into account for IMBL/ EEZ patrolling.

Audit focused on patrolling operations for the years 2007, 2008 and 2009 and found that ICG undertook 11,108 hours, 19,185 hours and 23,005 hours of patrolling off the coast of Gujarat/ Maharashtra in 2007, 2008 and 2009 respectively.



The patrolling carried out in 2008 was about 73 *per cent* more than that carried out in 2007, whereas, the patrolling done in 2009 was about 107 *per cent* more than the patrolling done in 2007. On an average, the ships deployed for coastal patrolling off Gujarat and Maharashtra coast, carried out 309 hours, 358 hours and 411 hours patrolling per quarter per ship in 2007, 2008 and 2009 respectively.

Significant increase in patrolling, done in 2008 and 2009 as compared to in 2007, can lead to only either of the two conclusions:

(i) Though ICG was capable of undertaking more hours of patrolling, yet it planned and carried out fewer hours of patrolling; or

(ii) The significant increase in patrolling in later years was unsustainable leading to over stretching of personnel and vessels.

Audit also undertook a quarter-wise analysis of the patrolling done off the coast of Gujarat and Maharashtra for the years 2007, 2008 and 2009 for the quarter October-December. It was seen that in 2007 ten ships carried out 3,729 hours of patrolling. In the quarter ending December 2008, 14 ships carried out 6,437 hours of patrolling off the coast line of Gujarat and Maharashtra. However, it was seen that almost 40 *per cent* of the patrolling in October-December 2008 was done after 26/11. In 2009, though the total number of hours patrolled fell to 6,387 hours, the patrolling was more evenly spread out.

In terms of the operational doctrine for Operation Swan, one ICG ship is always to be on continuous patrol near IMBL. Assuming that the IMBL patrolling was done as per the doctrine, the remaining available patrolling hours would be insufficient to patrol the coast line of Maharashtra and Gujarat. The average patrolling done by each ship would then range between 43 minutes to 3 hours each day between 2007 and 2009. The table given below depicts the position.

21 Patrolling of the EEZ/IMBL

(In Hours)

Year	No. of ships	Total patrolling hours (Actually undertaken)	Hours required for 24 hours IMBL patrolling by at least one ship [8]	Patrolling hours available excluding IMBL patrolling	Average patrolling by other ships	
					Total Hours [9]	Daily Hours [10]
(1)	(2)	(3)	(4)	(5) = (3) – (4)	(6)	(7)
2007	10	11,108	8,760	2,348	261	43 minutes
2008	14	19,185	8,784	10,401	800	2 hours and 19 minutes
2009	14	23,005	8,760	14,245	1,096	3 hours

[8] Computed by multiplying the number of days in a particular year (365 for 2007, 366 for 2008 and 365 for 2009) by the number of hours in a day (24 hours) and by the number of ships (one number of ship)

[9] Computed by dividing the patrolling hours indicated in column 5 by the number of ships (Number of ships mentioned in column 2 minus one ship engaged for IMBL patrolling 24 x 7)

[10] Derived at by dividing the total hours worked out in column 6 by the number of days in a year (365 for 2007, 366 for 2008 and 365 for 2009) to get the daily average patrolling by one ship per day in minutes. Further, the minutes so arrived at for 2008 and 2009 are divided by 60 to arrive at the patrolling done in hours.

Audit also noticed that the patrolling was done in the absence of any clear-cut norms for working out the period of patrolling required to be carried out by each type of ship. Important instances are given below:

- ICGS Samar, being an AOPV ought to have been exploited for IMBL patrolling. Audit, however, noticed that it was not deployed for IMBL patrolling between February 2006 and December 2008 and was deployed for IMBL patrolling only after December 2008, i.e after the 26/11 Mumbai attacks. The Coast Guard stated in October 2009 that ICGS Samar was deployed for IMBL patrol regularly but this was not apparent from its records (LOPs)[11] as the area codes[12] were changed. The reply is not tenable as all other ships have clearly indicated IMBL/EEZ patrolling. In fact, even ICGS Samar started recording such patrolling clearly since January 2009.

- As seen from the LOP's made available to audit, not even a single ICG ship was present along IMBL for 25 days during the quarter ending December 2008, which was in deviation from the operation doctrine of Operation Swan, that at least one ICG ship will always be near the IMBL.

The above clearly points to the fact that patrolling undertaken prior to 26/11 off the coast of Gujarat and Maharashtra had limitations of coverage, particularly in the case of IMBL patrolling.

Audit, however, noticed that the deployment of ICG ships and aircrafts has been increased post 26/11 for coastal security in addition to normal EEZ patrolling. On an average, 15-16 ICG ships are out at sea patrolling the coast. Post 26/11, surveillance has been enhanced by the ICG, Marine police of states etc and a total number of 28 coastal security exercises and 26 coastal security operations have been conducted by the ICG till November 2010.

5.3 Boarding operations

Identification of vessels at sea to identify friend or foe is an important task. An ideal system of identification of vessels/ crew at sea would involve all vessels being fitted with standard communication system, able to communicate with Indian Coast Guard ships, a database of fishing boats and a uniform paint scheme for vessels. However, such a system has not yet fully evolved in India. As a result, the only way for the ICG to conclusively identify anyone on-board a vessel at sea is to board and investigate it. As per the Coast

[11] Letters of Proceeding (LOPs) are formal communications issued by the Commanding Officer of a ship or a shore establishment to higher formations including ICGHQ describing the activities undertaken by it during a quarter.

[12] Maritime/ coastal areas in sea are divided into portions and are assigned a code name. The codes are changed periodically.

Guard Book of Regulations (Ship Operating Standards), each Coast Guard vessel on patrol duty ought to undertake four boarding operations per quarter. In addition, real time boarding operations are also to be conducted whenever considered necessary for investigation of fishing boats/ships and also on the basis of specific intelligence.

Boarding Action

ICG undertook 170, 443 and 787 boarding operations off the coast of Gujarat/Maharashtra in 2007, 2008 and 2009 respectively. The boarding operations carried out in 2008 were 161 *per cent* more than carried out in 2007, while operations carried out in 2009 were 363 *per cent* more *vis-à-vis* those carried out in 2007. As can be seen from the table below, the average number of boarding operations, per quarter per ship, is in excess of the ICG standard of four.

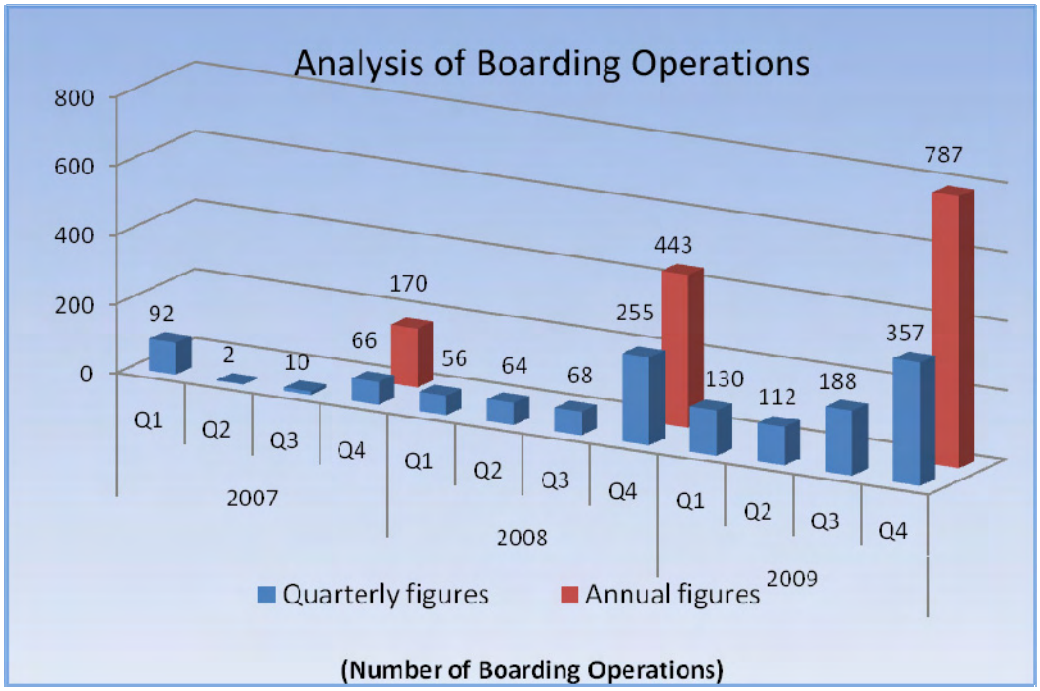
22 Boarding operations

YEAR	Average number of boarding operations per quarter per ship
2007	4.7
2008	8.3
2009	14.1

Audit undertook the scrutiny of 147 LOPs and it was noticed that not a single boarding operation was indicated in 96 cases, i.e 64 *per cent* LOPs. Nine

LOPs depicted only one boarding operation against the prescribed limit of four boarding operations per ship per quarter.

Audit also undertook an analysis of boarding operations carried out quarter wise during the years 2007, 2008 and 2009 in Maharashtra and Gujarat area. The results are depicted in the graph below:



Audit analysis showed that:

- For the year 2008 ICG conducted only 188 boarding operations in the first three quarters of 2008. This figure showed a quantum leap in the last quarter of 2008 when 255 boarding operations were carried out between October and December. Of these 255 boarding operations, 116 (45.49 *per cent*) boarding operations were carried out in the month of December 2008, i.e. after 26/11 terrorist attack.
- In the quarter ending December 2009, ICG undertook 357 boarding operations off Gujarat/Maharashtra coast representing an increase of 40 *per cent* over the boarding operations carried out in the quarter ending December 2008.
- The number of boarding operations carried out by ICG off Gujarat/ Maharashtra coast in 2009 suggests that ICG was capable of undertaking more boarding operations. Till such time the constraints in identification of vessels are resolved, intensity of boarding operations

was the only deterrence for coastal security. However, such intensity was witnessed only after the 26/11 incident.

Coast Guard Headquarters gave varied responses in this regard to audit. Initially in August 2009, ICGHQ stated that during the period January 2004 to June 2009 out of 58 ships/boats, 28 ships/boats did not undertake boarding operations as per norms. The shortfall ranged from nine to 100 *per cent*. However, test check of these figures with reference to LOPs for seven ships revealed that the actual number of boarding operations carried out by these ships was far less than the figures furnished by ICGHQ. Thus, the data provided by ICG on the boarding operations was neither reliable nor consistent. Also, ICG stated that LOPs examined by audit did not necessarily contain details of boarding operations carried out.

In November 2010, ICG stated that the norm of four boarding operations per ship per quarter was applicable only for practice / exercise which are in addition to undertaking boarding operations as required and that the boarding operations are to be carried out purely on basis of operational requirement.

The Coast Guard Book of Regulations (Ship Operating Standards), however, does not specify this distinction and CGHQ was unable to present documentary evidence for their claim. Besides, two of the seven ships confirmed the figures compiled by audit and one ship stated (September 2009) that efforts were being made to increase the number of boarding operations and that the same had increased after November 2008.

5.4 Night flying

Surveillance and patrolling at night[13] is a vital task in the prevailing security scenario. Accordingly, the Annual Flying Tasks (AFT[14]) for Dorniers and helicopters separately indicate the amount of time to be spent on night flying. On an average, for the period 2004 -10, the AFTs allotted 25 *per cent* of flying hours to night flying. Given the critical nature of this task, ICGHQ has emphasised that night flying hours were not to be diverted towards day flying although the day flying task could be undertaken at night.

[13] The duration corresponds to, roughly, between 5:00 p.m. and 5:00 a.m.

[14] AFTs are directives issued by ICGHQ to each squadron prescribing the number of hours of flying required to be undertaken each year.

A Chetak in operation

Audit, however, observed that though annual allotment norms were adhered to, the night flying task was never achieved by any[15] of the squadrons during the last six years (2005 -2010). The average shortfall was 32 *per cent* despite the fact that the night flying percentage was reduced to 20 *per cent* of the AFT in case of helicopters and 25 *per cent* in case of Dorniers in 2006-07.

ICG HQ in its reply, in May 2010, stated that shortage of aircrew and other operational requirements, unsuitable climatic condition at Port Blair, non-availability of night flying facility at Porbander, lack of equipment on Chetak for night flying, poor performance and non availability of sensors like ELTA etc were the main reasons for the non-achievement of night AFT. This is after the AFT had already been reduced in 2006-07 taking into account shortage of pilots. ICG failed to take proactive initiatives to remove the constraints in the achievements of AFTs.

5.5 Operation Tasha

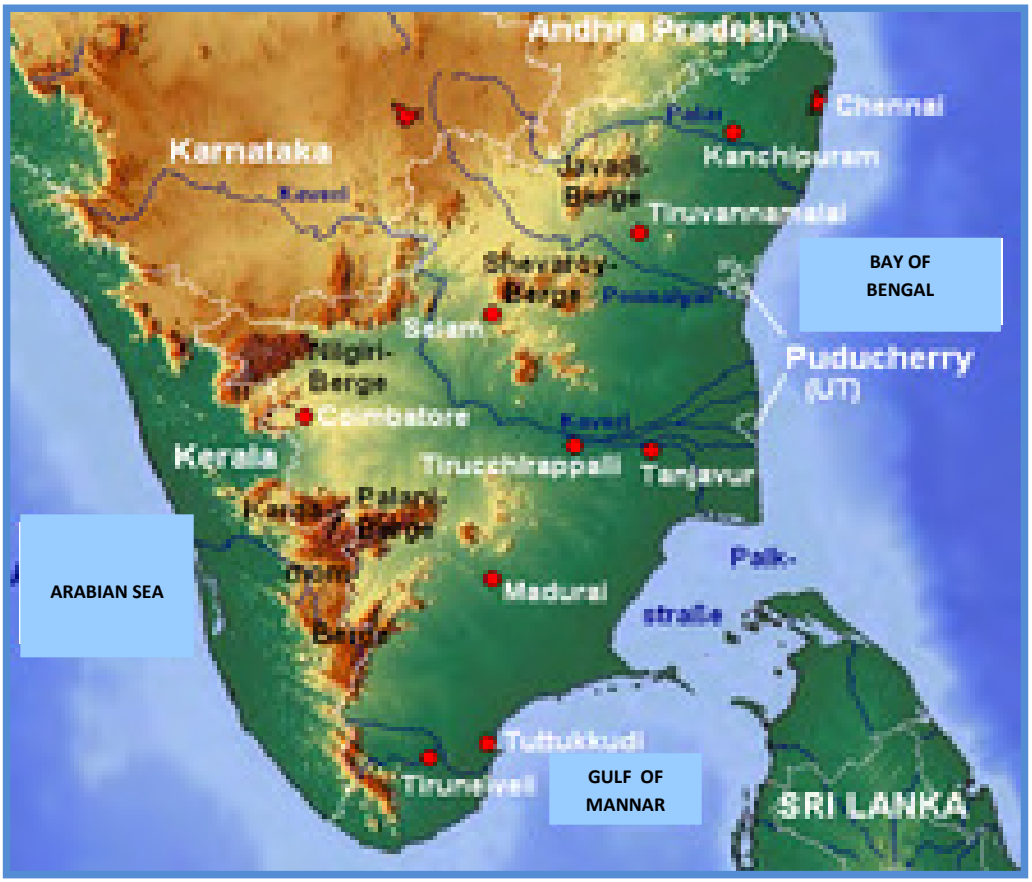
Besides the issues noted on the western coast, audit found that operations on the eastern coast also suffered from similar problems.

Operation TASHA, launched in May 1990 is a joint operation of the Indian Navy and Coast Guard to control smuggling of arms, ammunition and contraband items across International Boundary Line (IBL) between India and Sri Lanka and to check IBL crossings and illegal immigration. Although

[15] AFTs in respect of ALH have not yet been promulgated except for 2005-06.

Operation Tasha has had numerous successes, audit examination revealed the following:

- Deployment of helicopters by Coast Guard in Operation Tasha was absent during the period June 2008 to September 2009 due to non-positioning of helicopter borne ship along Palk Bay. CGHQ defended this position by stating that deployment of helicopters was under the purview of Indian Navy and CG shore-based helicopters could not carry out such surveillance as their air station was situated at Chennai. However, audit noticed that ship-borne helicopters had been utilised for this task prior to June 2008. In the absence of such deployment and the associated fact that there were days when Navy also did not deploy their helicopters, no helicopter sorties took place on such days despite orders which envisaged one/two sorties of armed Chetak helicopter daily in the designated area.



- Co-ordination issues were a matter of concern. Coast Guard units, many a time, were not aware of deployment of naval vessels to be used in the operation. Thus, there were occasions when ICG and Naval ships were deployed in close proximity at the same time resulting in duplication of efforts.

- Effective communication did not exist between Navy's hired trawlers and ICG ships assisting them due to absence of communication equipment having sufficient range.

It is evident from the above that there exist issues of deployment and coordination that need to be addressed both by the ICG and the Navy in relation to patrolling on India – Sri Lanka International Boundary Line.

5.6 Co-ordination between Indian Navy and ICG

In order to strengthen security in the coastal areas the need for co-ordination/ synergy and understanding between agencies is imperative. In this context the co-ordination between ICG and Indian Navy is essential. There were also instances of lack of consensus on certain issues between Navy and Coast Guard. These are discussed in the paragraphs below:

- The Indian Navy (IN) has developed the Maritime Domain Awareness (MDA) software to collate information from all available sources to present a comprehensive picture of the maritime situation. In order to make the MDA data more comprehensive, IN approached ICG in 2006 to share Indian (Maritime) Search and Rescue (INDSAR) data maintained by the ICG which captures information on the movement of foreign flagged merchant vessels in the Indian Search and Rescue Region (SRR). However, ICG refused online access to the INDSAR plot to Navy on the ground that the INDSAR data was a voluntary report by merchant ships and that online access to INDSAR might not be prudent considering the delicate security scenario.
- Navy in September 2006 felt that the operations of the two services could be co-ordinated so as to avoid duplication of effort and ensure greater efficiency and effectiveness in the functioning of the two maritime forces. Navy, therefore, proposed that the annual long cast[16] of the ICG and IN be coordinated at the ICGHQ and IHQ MOD (Navy) level to enable optimal utilisation of available resources. In turn, the monthly programs of the IN and ICG units could be coordinated at the command level. Indian Coast Guard, in September 2006, replied that ICG operations by their nature were patrol-based and mission specific. Hence, it was not feasible to draw an annual long cast for the ICG ships. ICG was also not amenable to sharing the monthly programs on the grounds that

[16] Annual planning for deployment of ships

these programs were frequently changed at short-notice due to various emerging contingencies of differing nature, i.e. security-related, humanitarian assistance or pollution control. Ironically, ICG stated that abundance of synergy exists between the two forces although it did not provide details in this regard to audit.

- Indian Coast Guard in September 2006 brought out that while all sailing orders issued to ICG ships and air tasks to ICG aircraft were always informed to the Navy, the movement of Naval ships and aircraft in the area where ICG units were deployed was not intimated to ICG. This resulted in duplication of efforts, as both Navy and Coast Guard patrolled the same area at the same time.

- There have been command and control issues in coastal patrolling in Andaman & Nicobar Islands, as Headquarters Andaman and Nicobar Command (HQ ANC), Unified Tri-Services Command, issued instructions to ICG not to undertake certain Search and Rescue (SAR) operations, a statutory function of ICG. Also, there was wastage of time in liaison with ANC for issuing sailing orders to ICG ships, non-provision of fuel to ICG aircrafts resulting in cancellation of air sorties, non-availability of ANC airfield for ICG operations, non-clearance of ICG aircraft sorties and convening of intelligence meetings by HQ ANC disregarding the lead role assigned to ICG by Government.

HQ ANC denied in April 2010 that there has been any occasion wherein ICG had been unable to perform ICG mandated tasks on account of infringement of command and control by HQANC. The denial of audit findings by HQANC is not agreed to, as there was enough evidence to show that the ICG and IN dispensation at Andaman & Nicobar regions had problems in coordination.

On being asked about MDA, Coast Guard stated (May 2010) that there was regular exchange of information regarding safety and security of territorial waters and Maritime Zones of India between IN and ICG at all levels. Regarding co-ordination of Annual long cast of the two services, ICG stated in April 2010 that the annual long cast of the Coast Guard and the Indian Navy was being coordinated at ICGHQ and IHQ MOD (Navy) level for synergized, optimal utilisation.

However, the increased synergy now experienced by the two services as claimed by ICG is the result of the measures put in place by the Government post 26/11 Mumbai attacks.

The need for greater co-ordination between ICG and Indian Navy has also been recommended by the Parliamentary Standing Committee on Defence (2008 -09), Fourteenth Lok Sabha, which in its 36th Report presented to the Parliament in February 2009 observed **"Events in the recent past have highlighted lack of coordination between Navy and Coast Guard resulting in national catastrophe. The Committee strongly believe that it is high time that the Government reviewed this issue in its entirety and initiated appropriate steps to put in place an effective mechanism for establishing better coordination and jointness between Navy and Coast Guard in the paramount interest of the national security".**

5.7 Non-installation of Static Sensors

The Group of Ministers (GoM) on the National Security System had recommended in February 2001 setting up a chain of static sensors in the form of shore radar stations in areas of high sensitivity and high traffic density to provide continuous, gap free, automatic detection and tracking of targets providing a reliable tactical situation display. The chain would be an effective

tool against illegal activities like smuggling of contrabands, arms and ammunitions, illegal fishing, etc.

It was noticed in Audit that although the Ministry of Defence constituted a Working Group in 2002 for the Scheme, yet Government of India took till 2004 to decide which agency would execute the project. In January 2005, the project was entrusted to Indian Coast Guard for implementation which immediately initiated a Statement of Case (SOC) for the Scheme. Nonetheless, there were further delays and it took four years (2004-2008) to sign a Memorandum of Understanding[17], in December 2008, with the Director General Light Houses and Light Ships (DGLL) Ministry of Shipping, Road Transport and Highways in view of the inter-ministerial issues and financial implications. Apart from this, audit scrutiny also revealed that numerous revisions (six till July 2007) in the SOC at the instance of Ministry of Defence contributed to the delay. Finally, in February 2009 the Cabinet Committee on Security approved the installation of static sensors and Automatic Identification System (AIS)[18] chain together with communication equipment along the coastline under Phase-I for 46 radars at an approximate cost of ₹ 350 crore. Audit noticed that the RFP for establishment of chain of static sensors at 46 sites was, in August 2009, issued to M/s BEL, Bangalore. The field evaluation trials of the equipment began in December 2009 but were suspended in February 2010 due to unsatisfactory performance of Thermal Imager, Low Light TV and Charge-Coupled Device (CCD) Camera.

Subsequently, the field trials of the Electro Optic (EO) sensors of four vendors were carried out in June and August 2010 at Chennai. The Thermal Imager of M/s Controp, Israel and the CCD Camera with Low Light TV of M/s Obzerv, Canada met the RFP criteria and qualified the trials. Post identification of EO sensors, the field evaluation was completed and the staff evaluation was undertaken by CGHQ. The staff evaluation report was approved by the Ministry of Defence in December 2010. The case is presently at Contract Negotiation Committee (CNC) stage.

Thus, even after a lapse of ten years, static sensors have yet to be installed, leading to gaps in detection and tracking of targets, with its consequential security implications.

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[17] According to the Draft Memorandum of Understanding (MoU), both the parties (MoD and DGLL) agreed to abide by the modalities for setting up static sensors/radars, its security, safe custody, stations, switching on/off, operations, command and control, training, financial implications including payment of compensatory overtime allowance for personnel, etc.

[18] Automatic Identification System Transponder (AIS) is a short range tracking system used on ships and by traffic services for identifying and locating vessels by electronically exchanging data with other nearby ships and Vessel Traffic Services (VTS) Stations.

5.8 Coastal security: Post November 2008 security mechanism

Given the large number of agencies which need to co-ordinate their efforts with respect to coastal security and the increasing maritime threat perception, coastal security concerns have been addressed by various committees. In 1999, a Group of Ministers (GoM-1999) was set up to suggest reforms in the National Security System, including coastal security. The GoM-1999 made various recommendations in February 2001 regarding structures, infrastructure, and co-ordination between agencies etc.

Command structure - The GoM-1999 had suggested creation of an Apex Body for management of maritime affairs for institutionalised linkages between the Navy, Coast Guard and the concerned ministries of the central and state governments. Despite many deliberations, no action was taken on this recommendation up till January 2007. The Committee of Secretaries, in January 2007, discussed the structure for the Apex Body and recommended the formation of a Maritime Security Advisor (MSA) and Maritime Security Advisory Board (MSAB). The equivocal situation continued till November 2008 when, in the wake of the terrorist attacks in Mumbai[19], it was decided in a meeting chaired by the Prime Minister (29th November 2008) that the task of guarding the coast-line would be entrusted with immediate effect to the Indian Coast Guard. The Indian Navy would provide the necessary back-up support to the Indian Coast Guard for this purpose. The Ministry of Shipping, Transport and Highways would provide all logistical assistance that may be required by the Indian Coast Guard and the Indian Navy. Meanwhile, in January 2009 Ministry of Home Affairs did not find favour with the proposal for setting up of either MSAB or for appointing MSA and decided not to pursue the proposal any further. Subsequently, Government issued a revised order, in February 2009, for establishment of a co-ordinated command structure and designated Indian Navy as the authority responsible for overall maritime security which includes coastal security and offshore security. The Indian Navy would be assisted by Coast Guard, State Marine Police and other Central and State agencies. Additionally, in February 2009, Indian Coast Guard was designated as the authority responsible for coastal security in territorial waters including areas to be patrolled by Coastal Police and the Director General, ICG was designated as Commander, Coastal Command and made responsible for overall coordination between Central and State agencies on all matters relating to security.

The new structure also envisaged setting up of Joint Operation Centres (JOC) at Mumbai, Visakhapatnam, Kochi and Port Blair under the charge of Naval Command. The JOCs would be managed and operated jointly by the IN and ICG with inputs from the concerned Central and State Government agencies.

[19] November 26 to 28, 2008

Besides, setting up of National Command, Control, Communication and Intelligent Network for real time maritime domain awareness linking operations rooms of the Navy and the Coast Guard, both at the field and the apex levels was envisaged to be established. The JOCs have since been established during 2009-2010.

Guidelines for coastal security - There were no clear directions and guidelines regarding coastal security operations *per se* for considerable part of time. The Border Management Group setup, in 2002 within in the Ministry of Home Affairs (MHA), on the recommendation of Group of Ministers (GOM) had requested Indian Coast Guard in August 2002 to prepare a comprehensive manual on coastal security for uniform and co-ordinated approach. Though the draft manual was submitted by Indian Coast Guard to MHA for approval in January 2003, there has been no further communication on the subject between ICG and MHA as of May 2010. Meanwhile, post 26 /11 directives, the Indian Coast Guard were directed to prepare a Standard Operating Procedure (SOP) in consultation with the Ministry of Home Affairs and State Governments and submit the same to the Ministry of Defence for approval. Final SOPs in respect of all the Coastal States have been promulgated between June 2010 and September 2010.

5.9 Legal constraints and lack of empowerment of ICG

5.9.1 Legal constraints

The Maritime Zones of India are governed under the Umbrella Act of Exclusive Economic Zone (EEZ), Other Maritime Zones Act 1976 (80 of 1976) and the Maritime Zones of India (Regulation of Fishing by Foreign Fishing Vessels) Act 1981. These Acts also stipulate the jurisdictional issues. While an amendment (issued in 1984) to MZI Act 1981 empowered ICG to enforce its provisions, the Ministry of External Affairs (MEA) remains the nodal ministry for the MZI Act, 1976. The Act contains provisions for taking action against vessels which are found engaged in unauthorised survey, data collection etc. Prosecution of offenders can be launched only after obtaining the approval of MEA. During XVII NAVGUARD[20] meeting in July 2005, it was decided that the ICG would take up the case with the government for enactment of suitable laws for empowering ICG and Indian Navy units to impound vessels involved in or capable of carrying out activities like unauthorised survey, data collection detrimental to national interest. ICG Headquarters forwarded a Statement of Case for amendment of Section 14 of MZI Act 1976 and promulgation of Gazette notification to the Ministry of Defence in September 2008. The ICG again forwarded the case to Ministry of

[20] NAVGUARD is the highest level of liaison between Indian Coast Guard and Indian Navy. NAVGUARD meetings are held once in a year jointly chaired by DG Coast Guard and Vice Chief of Naval Staff.

Defence (MOD) in January 2010 which was returned directing ICG to include an amendment to the Customs Act 1962 in the Statement of Case.

The above points to the legal limitations faced by the ICG in performing its mandate with regard to being able to take action to impound vessels, involved in carrying out activities like unauthorised survey, data collection detrimental to national interest

5.9.2 Lack of empowerment

Indian vessels fishing in territorial waters, i.e. up to 12 nautical miles (NM), are regulated by the coastal State Governments and the Union Territories. Foreign vessels operating within this limit come under the purview of the Maritime Zones of India Act 1981. However, deep sea fishing vessels operated by Indian individuals are taken beyond the 12 NM limit and are, thus, not regulated by either the State Government Acts[21] or the Maritime Zones of India Act 1981. The permissions are granted to deep sea fishing vessels in accordance with the Deep Sea Fisheries Policy Guidelines framed by the Government of India in 2004. Based on the Policy Guidelines, the Ministry of Agriculture (MOA) gives a Letter of Permission (LOP) for the lease of foreign vessels by Indian entrepreneurs with 75 *per cent* foreign crew and 25 *per cent* Indian crew for a period of five years. In the case of any default, MOA guidelines do not prescribe any penalty on these vessels.

A fishing trawler at sea

[21] State Marine Fisheries Regulatory Acts

ICG implements the salient provisions of the LOP guidelines and any violation of the guidelines are brought to the notice of the Department of Animal Husbandry, Dairying and Fisheries, MOA.

Law Enforcement

However, as of now there are no laws for regulating Indian deep sea fishing vessels in the Indian EEZ beyond territorial waters. In the absence of necessary Regulations, Indian Coast Guard is not in a position to monitor the activities of Deep Sea fishing vessels. A draft bill regulating fishing by all vessels under Maritime Fisheries (Regulation and Management) Act has also been proposed by the ICG in 2009.

The draft Marine Fisheries (Regulation & Management) Act 2009 was, in June 2009, forwarded by MOA to CGHQ. The draft Act, however, had certain deficiencies which CGHQ intimated, in July 2009, to the Ministry of Defence. The MOA, in February 2010, held a meeting with all concerned Chief Secretaries regarding the draft. The issue is pending with Department of Animal Husbandry, Dairying and Fisheries, MOA since then.

5.10 Identification and tracking of ships

5.10.1 Identification of ships

The International Ship and Port Security Code (ISPS)[22] code came into force internationally with effect from 1st July 2004. Internationally, for example, in the United States, UK and Japan, the control and compliance measures of ISPS are under their Coast Guards. However, in India, Ministry of Shipping nominated Director General of Shipping [DG (S)], to implement the new requirements as provided in the ISPS Code. Accordingly, DG (S) issued a circular in Nov 2005 advising all ships to provide 'Pre-Arrival Notification of Security' (PANS) to respective port authorities at least twenty four hours prior to arrival of ship.

Though maritime security is a vital concern for Coast Guard and it is the most suited to deal with the issue, till February 2009, it was kept out of the ambit of ISPS compliance, as DG Shipping rather belatedly in February 2009 (after 26/11 Mumbai attacks) instructed Ship masters, ship owners, managers and operators to submit PANS to Indian Coast Guard. Audit also noticed that as on March 2010, many ports are still not ISPS compliant. As regards submission of PANS to ICG by ships arriving in Indian waters, it was seen that even as on date (May 2010) all ships entering Indian ports are not providing reports to ICG. Further, ICG stated that any omission by ships can not be ascertained. Audit also noticed that there are no penal provisions for non compliance by ships. DG(S) informed in March 2010 that instructions for mandatory reporting of PANS to ICG were in the process of being notified in the Gazette of India. However, the penal provisions have not been notified in the gazette of May 2011.

5.10.2 Tracking of ships

AIS (Automatic Identification System) is a maritime navigation safety communications system standardised by the International Telecommunication Union (ITU) and adopted by the International Maritime Organisation (IMO) that provides vessel information, including the vessels' identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore station, other ships, and aircrafts. After the DG (S) issued circulars in 2009 that vessels between 100 and 300 Gross Tonnage operating within the coastal waters of India and all Indian fishing vessels operating in Indian EEZ and above 20 metres in length be fitted with on-board AIS of an approved type, ICG was entrusted with the enforcement of compliance of this requirement in case of deep sea fishing vessels operating under the LOP scheme. In the case of other fishing vessels, which are more than 20 meters in length, the regulatory roles were to

[22] The **International Ship and Port Facility Security** (**ISPS**) **Code** is an amendment to the **Safety of Life at Sea (SOLAS) Convention (1974/1988)** on minimum security arrangements for **ships, ports** and **government** agencies. Having come into force in **2004,** it prescribes responsibilities to governments, shipping companies, shipboard personnel, and port/facility personnel to "detect security threats and take preventative measures against security incidents affecting ships or port facilities used in international trade.

be enforced by the State Fisheries Department and other concerned authorities. This requirement was to be complied within a period of three months from the date of issue of the circular and, in case of non compliance the vessels were liable to be detained for investigation purpose.

It was observed in audit that 53 vessels having LOPs are operating in Indian EEZ and all these vessels are fitted with AIS equipment, whereas, only 86 *per cent* of Fishing Vessels of 20m or more in length have been fitted with the AIS till March 2011, despite repeated circulars being issued by DG (S). Further, DG(S) has not notified penal provisions (May 2011) in case of non compliance.

5.11 Registration of fishing vessels

The unorganised fishing sector deploys a total of around three lakh vessels. Registration of different types of boats, including small fishing boats and dhows, etc. is mandatory under Merchant Shipping Act 1958 as well as under various existing State/UT Marine Fisheries Acts and the ICG only advises State Governments regarding the mechanism for identifying fishing boats, landing centres, etc.

While, it is not feasible to check each and every fishing boat especially during dark hours, rough sea and, extreme weather due to vastness of the sea and the limited capabilities of the sensors fitted with the ship/aircraft ICG on patrol, Audit observed that there is no uniform system of registration and control as well. Further, these ships have no regulatory / tracking system for monitoring their movements. Coast Guard in its reply stated (November 2010) that it was in the process of developing software to create/develop a database of licensed fishermen, registered Indian fishing boats, colour code and license for fishing in any stipulated area.

5.12 Crossing of IMBL by Indian fishermen

Often, Indian fishermen transgress into foreign waters lured by a better fish catch and are escorted back by the ICG in order to avoid their apprehension by the authorities of neighbouring countries. In this connection, ICG ships, while on patrol, have on many occasions reported that Indian fishing boats are operating across the Indo-Pak International Maritime Boundary Line (IMBL) on Gujarat Sea board. These fishing boats were easy prey for hijacking by foreign elements for subversive and terrorist activities in Indian waters. Further, ICG ships had observed that such vessels many times did not display registration numbers, name and other details of their fishing boats prominently in the place as specified in the Fishing Act. However, the ICG is not empowered to take penal action against such vessels and the MOD, in April 2008, had written to the Ministry of Agriculture (MOA) to take up the matter

with the Government of Gujarat and other coastal state governments for taking suitable deterrent action to prevent Indian fishermen from crossing the IMBL.

Recommendations

- *There is an immediate need to remove constraints in terms of infrastructure, own vessels and equipments that are limiting ICG effectiveness in patrolling.*
- *Planned coastal security measures such as coastal security operations, as approved by the Government, should not be allowed to be diluted. An institutionalised system needs to be put in place within the Ministry of Defence to monitor periodically, the efficacy and continuity of, coastal security measures.*
- *There is an immediate need for ICG to evolve norms for patrolling in maritime/ coastal zones, based on available resources. The norms so evolved should be adhered to strictly. Annual/ periodic achievements against the norms should be reported to the Ministry of Defence. Such norms should be periodically reviewed.*
- *Government should address the concerns impacting coastal security viz. need to remove legal constraints faced by ICG, the required empowerment of ICG, penal provisions for non-compliance to Pre Arrival Notification of Security(PANS) and Automatic Identification System(AIS), crossing of IMBL by Indian fishermen, in a time bound manner.*