



भारतीय नौसेना

The Indian Navy – 2009

FORCE LEVELS

1. Indian Navy (IN) started out at independence as the RIN with a small flotilla of 33 ships of which there were two frigates, four sloops, one Corvette and the others, small utility yards and crafts. Until 1965, our ships were largely of British origin. The years 1965 to 1971 saw Russian acquisitions being added. Today most ships are built in India with a few ships being imported. However, we are yet to attain self-sufficiency in many areas of weapons and sensors.

2. The Indian Navy comprises 130 surface combatants including 16 submarines. The total number of aircraft is 190. The details of various aircraft in the IN inventory are as follows: -

- (a) Fixed Wings - 71
- (b) Helicopters - 119

3. **Basing of Ships.** The details of command wise breakdown of ships and submarines are as follows:-

- (a) **WNC.** There are 20 Fleet ships, 09 submarines and 25 other ships based under WNC.
- (b) **ENC.** There are 24 Fleet ships, 07 submarines and 22 other ships based under ENC.

- (c) **SNC**. There are 09 ships based at Kochi.
- (d) **ANC**. There are 14 ships based at Port Blair.

4. **Induction Planned in 2010**. The ships likely to be inducted in 2010 are under:-

- (a) Two Shivalik Class.
- (b) Six WJFACs.
- (c) Two Survey Vessels.
- (d) One Fleet Tanker.

5. **Sagar Prahari Bal**. Post 26/11 terrorist attack at Mumbai, the entire issue of Coastal Security was addressed by the CCS. Naval assets including 80 Fast interceptor Craft, were approved for induction to augment coastal security. A dedicated specialized force, called Sagar Prahari Bal (SPB) for Force Protection functions at naval harbours is also being raised as per approval of the CCS. The force would comprise 1000 personnel (61 officers and 939 sailors) and 80 Fast Interceptor Crafts. The details of basing of these 80 FICs are as under:-

<u>Port</u>	<u>FIC (13-17 meters)</u>	<u>Command Wise Allocation</u>
Okha/ Porbandar	5	WNC-31
Mumbai	11	
Goa	5	
Karwar	10	
Kochi	10	
Kavarati/ Minicoy	2	SNC-12
Chennai	10	ENC-23
Visakhapatnam	11	
Kolkatta/ Paradip	2	
Port Blair	10	
Kochi(Trg School)	4	ANC-10
Total	80	

Perspective Plans

6. The Indian Navy's perspective-planning in terms of 'force-levels' is now driven by a conceptual shift from 'numbers' of platforms - that is, from the old 'bean-counting' philosophy - to one that concentrates upon 'capabilities'. In terms of force accretions in the immediate future, we are acquiring ships in accordance with the Navy's current Maritime Capability Perspective Plan. There are presently 40 ships and submarines on order. Our preferred choice of inducting ships has been through the indigenous route. There are presently 34 ships and submarines on order from Indian shipyards and the induction programme is continuing apace.
7. Cochin **Shipyards Limited (CSL)** is progressing the construction of our most ambitious ship yet – the **Indigenous Aircraft Carrier (IAC)**.
8. **Mazagon Docks Limited, Mumbai**, our premier warship-building yard, is engaged in the construction of **three Kolkata Class destroyers and three stealth frigates of the Shivalik Class**, apart from **six submarines of the Scorpene Class**.
9. The **GRSE** has already delivered all three of the large amphibious ships. As many as **ten water-jet Fast Attack Craft**, too, are being built here, of which the first four have been inducted into the Navy till date. The yard is also constructing **four advanced Anti-submarine Corvettes**.
10. **Goa Shipyards Limited**, which has built a number of Offshore Patrol Vessels for the Navy and the Coast Guard, has **four advanced** versions of this Type under construction. The yard is also building our **second Sail Training Ship**.
11. Over the years, we have taken a conscious decision to encourage other shipyards, including private yards, to enter the specialised field of warship-construction. The response has been encouraging. A private shipyard, **Alcock-Ashdown Gujarat Limited**, has been entrusted with the construction of **six catamaran-hulled survey ships** for hydrographic duties.
12. However, even with all this, our average rate of induction is only three to four ships a year. This is inadequate to maintain our present force levels

and some inductions from abroad have to be made to bridge the gap. These include the **carrier Vikramaditya** and three follow-on ships of the **Talwar Class from Russia**, and, two **Replenishment-Tankers from Italy**.

13. While we currently have Government approval to maintain force levels above 140. In the interim, Mid-Life Upgrades (MLUs) of 18 ships has been approved and the ships are being upgraded accordingly. After their MLU, ships of the Rajput Class as also those of the Godavari Class will emerge as potent 21st Century combatants.

14. **Arihant**. Arihant, which is the first submarine under the Advanced Technology Vessel Programme (ATVP), was launched on 26 July 2009 at Visakhapatnam. It demonstrates a quantum leap in the shipbuilding capabilities of the country. It is a nuclear powered submarine which is indigenously designed and constructed. The endurance of the submarine is only limited by the endurance of the crew, food and provisions that it can carry. The submarine is now undergoing wide ranging trials in harbour to prove that the various systems fitted onboard perform as per their design. This will be followed by extensive sea trials, before it is commissioned into the Indian Navy.

BUDGET

15. This Fiscal Year (FY 2009-10), the Navy received Rs 19576.34 Crores, amounting to 13.82 % of the Defence Budget (Rs 1,41,703 Crores). The percentage of the GDP that is approx 2.35% - in comparison with most other countries. Of this, 60.65% (Rs 11873.78 Crores) is the allocation for Capital Schemes, while 39.35% (Rs 7702.56 Crores) is the Revenue allocation. Of the Rs 11873.78 Crores allocated for capital expenditure, the bulk (Rs 11438.88 Crores) is earmarked for modernisation projects, and Rs 434.90 Crores for Land and Works.

MANPOWER

16. The Navy is facing a shortage of about 16% in the authorised strength of Officers and approximately 11% in sailors. With the current induction patterns, we intend to bring down the shortages to 5% by 2012. The Navy has a civilian workforce of around 47,000 employees. Currently, there is a shortage of about 16%, which has arisen due to restrictions

imposed by the Govt on recruitment for the period 2001 to Mar 2009. The restriction has now been lifted and efforts to speed up the process of recruitment have been taken, so as to bring down the shortage.

17. **Training Civilians.** Training of the civilian manpower of the Navy is being accorded due priority, with the Government providing up to 1.5% of salary budget per annum, which works out of Rs. 16.65 Crores for the FY 2009-10. The personnel are trained to update their knowledge and professional skills. The training is both in-house and outstation. Civilian personnel are deputed abroad to OEMs to keep abreast of latest technological developments. Details of civilian personnel deputed to various countries for training in the past few years are as follows:-

Year	No of Personnel	Countries
2006-07	75	Russia
2007-08	66	Russia, Italy, France, German & Australia
2008-09	34	Russia, Germany, Israel, Sweden & France

18. **Training for Friendly Foreign Countries**

(a) In the current strategic scenario, wherein the global security challenges are too numerous to be attended by a single nation, training co-operation is vital for fostering mutual trust and interoperability. Further, training exchanges refresh perspectives and inject new ideas into the system. Training co-operation, therefore, has been an area of focus and one of the corner stones of the **IN's** initiatives and it is our earnest desire to share and deliver the finest training, in order to build capacity and everlasting relationships.

(b) Recognising this necessity, the Ministry of External Affairs provides assistance for training of naval personnel from a large number of countries under the 'Indian Technical and Economic Cooperation (ITEC)' scheme. Under this scheme, the tuition, boarding and lodging are fully funded by us. We also provide financial aid for meeting living expenses for the entire duration of the course. In some cases, travel expenses of trainees to and from India are also fully funded

(c) The Indian Navy has been providing training to foreign personnel for more than 30 years and our reputation for providing high quality of training, drives us to constantly evaluate and evolve in order to remain relevant. Courses are structured for effective and efficient utilization of the training infrastructure, and the curriculum is planned and monitored so as to ensure the highest quality. The last few years have witnessed a steady increase in our commitment to build capacity through training cooperation. The number of training slots allocated to foreign trainees during the past five years is as tabulated below: -

<u>Year</u>	<u>No of Training Slots Allotted to Foreign Navies</u>
2005-06	439
2006-07	352
2007-08	557
2008-08	565
2009-10	706

19. **Indian Naval Academy (INA), Ezhimala.**

(a) The Indian Naval Academy (INA) is located at Ezhimala, approximately 280 kilometres North of Kochi, in Kerala. INA, Ezhimala was inaugurated on 08 Jan 2009 by the Honourable Prime Minister of India, Dr. Manmohan Singh.

(b) Spread over 2452 acres of coastal upland, INA has been planned to have world class facilities in terms of infrastructure, for both academic pursuit and outdoor activities; including state-of-the-art laboratories, workshops, swimming pools and play fields. The Academy has modern residential facilities, an excellent Mess and five well laid-out squadrons, each with its own comprehensive facilities. The academy when fully ready would accommodate and train, up to 750 cadets. Construction is expected to be completed by end 2010. As of now facilities are ready for first two years of training.

(c) The **first B.Tech course commenced at INA on 22 Jun 2009.** This is a significant step in the evolution of the Navy to meet the technical challenges of the 21st Century.

(d) The B-Tech curriculum has been drawn up by the Navy, in conjunction with Jawaharlal Nehru University (JNU) and the All India Council for Technical Education (AICTE). INA has been accredited by AICTE.

(e) In addition to Technical training, the Academy would provide its cadets with a healthy dose of humanities and naval history. This is in keeping with the Navy's goal of upgrading officer intake and providing them with high-end technical expertise with a broad-based liberal education. The curriculum would not only provide adequate academic grounding for award of a B Tech degree, but also cater to the overall transition of an officer cadet to a Service Officer.

20. **Adventure Activities.**

(a) Project Sagar Parikrama. The Indian Navy, as the instrument of a resurgent maritime India, proposed and launched a project 'Sagar Parikrama'. The aim of the project was to build a suitable boat to undertake a solo circumnavigation under sail. Commander Dilip Donde, has been appointed as the Skipper of the yacht to undertake the circumnavigation and Lt Cdr Abhilash Tomy as the Standby officer. Yacht 'Mhadei' for Project Sagar Parikrama was delivered to the Navy at the builder's yard (M/s Aquarius Fibreglass) at Goa on 12 Feb 09. Since launch the yacht has done almost 6500 nm in training sorties to Sri Lanka & Mauritius.

(b) Voyage. The main voyage (Solo Circumnavigation) was flagged off from Mumbai on 19 Aug 2009 by the CNS. The yacht 'Mhadei' will touch only the following four ports enroute - Fremantle, Christchurch, Port Stanley and Cape Town before entering Mumbai on completion of the voyage in March 2010. The yacht entered Fremantle on 21 Nov 09.

OPERATIONS/ EXERCISES

Surveillance, Operations and Missions

21. Surveillance forms one of the pillars upon which the peace-time Concept of Operations of our Navy rests. For the purposes of surveillance, it is divided into the following four segments (proceeding steadily inwards towards our coast): -

- (a) First are the Choke Points of the Indian Ocean.
- (b) Next is a 'Maritime Surveillance Zone', with its outer limit defined by mission requirements and its inner limit being defined by the current EEZ boundary, that is, 200 nm from the coast.
- (c) The third segment is an area called the 'MZI Interest Zone' (MZI being the "Maritime Zones of India), with its outer limit at 200 nm and its inner limit at 12 nm from the Indian coast.
- (d) Finally, there is a 'Territorial Interest Zone', which coincides with the country's Territorial Waters.

22. **Surveillance in Choke Points**. Dedicated surveillance missions are periodically mounted in the Choke Points. These missions are generically termed "SLOC Monitoring Missions".

23. **Surveillance in the 'Maritime Surveillance Zone'**.

- (a) Government sanction for OTR of IN Ships and aircraft for twenty specified countries (Bahrain, Bangladesh, Djibouti, Indonesia, Iran, Kenya, Mauritius, Maldives, Malaysia, Myanmar, Oman, Philippines, Qatar, Singapore, South Korea, Seychelles, Sri Lanka, Vietnam, Thailand and UAE) has been obtained for a period of three years commencing 2006-07. With the changing dynamics of the geo-political environment and the growing Indian influence in our immediate and extended region of interest, the GoI has recently approved IN's proposal for inclusion of four additional countries viz Yemen, Tanzania, Mozambique and South Africa to the existing list of OTR. This would facilitate enhancement of our ability to assist in

collective efforts towards maritime security in IOR, the piracy-infested coast of Somalia, the Mozambique Channel and the southern reaches of the Indian Ocean.

24. **Surveillance within the 'MZI Interest Zone'**. In general, there are not too many dedicated surveillance missions mounted within the 'MZI Interest Zone'. This is largely because surveillance in this zone is considered to be an automatic consequence of the normal deployments undertaken by the Fleets, Flotillas, and Air Squadrons.

25. **Surveillance within the 'Territorial Interest Zone'**. **Op SWAN** and **Op TASHA** are ongoing operations of dedicated surveillance missions mounted within the 'Territorial Interest Zone'.

26. **Operational Interaction with Foreign Navies**. The operational interaction with regional and extra-regional navies involves structured interaction in the form of wargames, exercises or operations. The fundamental purpose of this 'Constructive Engagement' in operational terms is to hone our own Navy's skills in a number of diverse areas of war-fighting, by operating with various navies, and to share current tactical and technological practices and techniques. A secondary spin-off is that it enables us to engage numerous navies in a positive manner reinforces their perception of the Indian Navy as a competent, confident and stabilising force in the region. The major engagements with foreign navies include US, UK, Russia, France, Sri Lanka Singapore, Indonesia, Oman, Thailand etc to name a few.

27. **Major Exercises/Events**. The following Major Exercises/Events are being scheduled in 2009 – 10: -

(a) **Defence of Gujarat Exercise 09 (DGX 09)**. Defence of Gujarat Exercise is planned to be conducted on the Western Seaboard from 14 – 23 Dec 2009. The exercise will be conducted by WNC and see participation from IAF and ICG units.

(b) **TROPEX 10**. TROPEX 2010 is scheduled off the Eastern seaboard from 27 Jan – 28 Feb 2010. Other than the naval assets of both the seaboard, IAF assets will also participate in the exercise.

(c) **MILAN 2010.** The MILAN series of joint naval exercises were initiated in 1995 as a biennial gathering of navies of the Indian Ocean region with the objective of promoting friendly naval relations. So, far five such gatherings have been held in 1995, 1997, 1999, 2003, 2006 and 2008. The event was not conducted in 2001 on account of International Fleet Review and MILAN 2205 was postponed to 2006 due to Tsunami. The next MILAN is scheduled at Port Blair from 03-08 Feb 2010 in which 13 countries have been invited to participate.

OPERATION RAKSHAK

28. Marine Commandos (MARCOS) are deployed in J&K, as part of the ongoing Army CI ops since 1996. Initially two Prahars of Marcos were deployed however the strength was increased to four Prahars (two Prahars each from WNC & ENC) in Nov 2009. The deployment in J&K has been useful for Marcos to gain exposure to real time Special Operations.

FLOOD RELIEF OPERATIONS IN ANDRA PRADESH

29. During the monsoons this year, Andhra and Karnataka experienced heavy rains and flooding in some districts. Teams from ENC and WNC were deployed for rescue and relief operations from 01 Oct 2009 to 07 Oct 2009.

30. **ENC.** The Eastern Naval Command has deployed eleven teams comprising of divers/good swimmers to undertake relief and rescue tasks in following districts: -

(a) **Vijayawada (Krishna Dist).** Five teams comprising fifteen personnel with five Geminis were deployed at Vijaywada, Krishna District. The teams have rescued approx 1540 flood victims in the district.

(b) **Kurnool.** Three teams comprising 10 personnel with three Geminis were deployed in Vemapetta area and Kottapalli village of Kurnool District. The teams have rescued approx 100 flood victims in the district.

(c) **Mehboobnagar**. Three teams comprising 09 personnel with three Geminis were deployed in Gadwal area of Mehboobnagar District. The teams was tasked for distribution of relief material such as water, food, clothes and medicines in the area.

31. **WNC**. The Western Naval Command had deployed a diving team ex Karwar from 03 to 05 Oct 2009 at Hirehal in Gadag District.

Anti Piracy Operations

32. Over the past few years, incidents of piracy in the Gulf of Aden have increased considerably. More than **100** incidents of hijacking/piracy involving ships of various nationalities have taken place in the last one year off the coast of Somalia. In keeping with the aim of preventing any further hijackings in the Gulf of Aden, the Indian Navy has deployed one warship continuously in the Gulf of Aden since 23 Oct 2008. Indian Navy ships have established firm presence in the area and have deterred the pirates from hijacking merchant ships on numerous occasions. The bold and affirmative actions by *IN* ships to deter piracy attempts have had a tremendous impact on the other participating navies. Further, the presence of the IN has provided tremendous assurance to the Indian flagged merchant ships which frequent these waters. As on date, around 700 merchant ships of varying nationalities have been escorted safely and about a hundred of these have been Indian –flagged vessels, and at least 13 piracy attempts have been averted by Indian Navy’s ships patrolling the Gulf of Aden. These operations have had a positive influence in the region and projected India as a regional power. Our coordination with other navies operating in the area has helped our international standing. We have received requests from Seychelles, Mauritius and Maldives for increased surveillance requirements in their EEZ. We have thus deployed our ships and aircraft periodically every month for few days. This has earned us enormous goodwill and appreciation from these countries.

Coastal Security Initiatives

33. Since Nov 2008 several initiatives have been taken by the Government to strengthen security of the coastal areas against the threat of non-state actors from sea.

34. One of the most significant achievements of the last year has been the integration of all maritime stakeholders, including the several State and Central agencies into the coastal security matrix. As a result, there is today good coordination, synergy and understanding between all agencies. The resources and security structures of all the stakeholders are being utilised more effectively. Intelligence and information sharing has undergone a transformational change. Real time information flow between all stakeholders has resulted in more immediate response by the sea going agencies to a developing situation.

35. The hub of all action is the Joint Operations Centre. The Indian Navy has established four such Joint Operation Centres in all Naval Commands and ANC. All coastal security operations are now coordinated from the Joint Operations Centre, which are manned round the clock by Naval and Coast Guard teams. In addition, the state Marine Police and other agencies such as Customs, Intelligence Bureau, Ports etc are also networked with these centers. Besides the four Joint Operation Centers at Mumbai, Visakhapatnam, Kochi and Port Blair, each coastal district also has its own Operations Center for coordinating activity in their districts.

36. **Awareness Campaigns.** The very large fishing community all along the coast are considered as very good 'eyes and ears' of the coastal security scheme. They could provide valuable information of any out of the ordinary happenings. In a focused drive to enlist the support of fishermen for their role, awareness campaigns targeting coastal and fishing communities were conducted. Joint motorcycle rallies by the Navy, Coast Guard and State Police have been conducted in each coastal state, covering all coastal districts. Villagers and fishermen in almost every coastal village have been sensitised to threats from the sea and the measures they could take to contribute to coastal security. This is an ongoing endeavour, all along the coast of India all coastal districts will be visited regularly by such teams.

37. **Surveillance Patrols.** There has been a quantum increase in the efforts for coastal surveillance patrols by Naval and Coast Guard ships and **aircraft.** Patrols by the Indian Navy and Coast Guard are closely coordinated so as to maximise efforts and keep the entire coast under surveillance. The Marine Police of each coastal state has been assisted by the Navy and Coast Guard for coastal patrols. CISF units deployed at all

major ports are also being similarly assisted. Territorial waters are therefore being kept under surveillance throughout the year. Because of increased surveillance, about 100 fishing vessels from Sri Lanka, operating in our EEZ were apprehended in the past 7-8 months. Also because of better surveillance and alertness, ships straying into our waters are being immediately noticed and interrogated. For example a North Korean vessel MV Mu San was detained when it came close to A&N islands on 05 Aug 2009. Another vessel MV Greta was interrogated and boarded when it strayed off its course and closed Kerala coast on 31 Oct 2009.

38. **Marine Training.** Recognizing that the Marine Police and CISF are not fully trained in maritime tasks, the Indian Navy has provided training assistance to all coastal states and CISF personnel. 263 CISF personnel have already undergone training at INS Chilka, the premier training establishment for sailors in the Indian Navy. This training is planned to continue. Local Naval and Coast Guard elements in Tamil Nadu, West Bengal, and Maharashtra have also taken up similar training for the Marine Police. Nearly 1600 marine police personnel have been trained. This effort continues during joint patrols, in which the Navy and Coast Guard participate along with the Marine Police, CISF and Customs.

39. **Operations.** The Navy and Coast Guard have launched three joint coastal security operations on the West coast, when information of increased threat perception was available. Such operations were launched specifically for 03 days in Jul 09 and 28 days in Sep-Oct 2009. During this period ships and aircraft of the Navy and Coast Guard kept the West coast of India under continuous surveillance and thorough investigations and checks of various ships, boats and fishing vessels were carried out. For example, during one such operation conducted on the West coast, about 165 merchant vessels and 260 fishing vessels were interrogated and investigated by IN and ICG units. Surveillance of the Offshore Defence Areas has also been enhanced. Nearly 100-200 boats are interrogated every month in the Western Offshore area once by naval units.

40. **Coastal Security Exercises.** In order to periodically review the readiness of the security agencies and the state administrations in thwarting threats from inimical elements, the Navy has **conducted** coastal security exercises in every coastal state in conjunction with the Coast Guard, marine police, customs, immigration and Port authorities. In all, eight exercises on West coast, four on east coast and two in A&N Islands

have been conducted. During these exercises several contingency scenarios are simulated, including hijacking of fishing craft, landing of terrorists on the coast, stowaways on ships etc. All agencies with a stake in coastal security, participate in these exercises with a view to improve coordination, achieve integration and finally improve the coastal security mechanism even further. More such exercises are planned.

41. The Coastal Security initiatives are heading in the right direction with necessary impetus by the various concerned central ministries and the state government. Indian Navy and Coast guard are ever vigilant to developing situations at sea and the increased surveillance and patrolling efforts of the Navy and Coast Guard is itself a deterrent to those who may threaten our security from the sea.

SHIPS ON ORDER IN INDIA (34)

➤	<u>Garden Reach Shipbuilders and Engineers (GRSE)</u>	<u>10</u>
	- P-28 (ASW Corvette)	– 04
	- Fast Attack Craft (FACs)	– 06
➤	<u>Cochin Shipyard Limited (CSL)</u>	<u>01</u>
	- Indigenous Aircraft Carrier (IAC)	– 01
➤	<u>Alcock Ashdown Gujarat Limited (AAGL).</u>	<u>06</u>
	- Survey Vessels	– 06
➤	<u>Mazagon Docks Limited (MDL)</u>	<u>12</u>
	- P-15A Destroyers	– 03
	- P-17 (Shivalik)	– 03
	- P-75 (Scorpene)	– 06
➤	<u>Goa Shipyard Limited (GSL)</u>	<u>05</u>
	- Offshore Patrol Vessels (OPV)	– 04
	- Sail Training Ship	– 01

SHIPS ON ORDER FROM ABROAD (06)

-	Talwar follow-on (Russia)	– 03
-	Vikramaditya / Gorshkov (Russia)	– 01
-	Fleet Tanker (Italy)	– 02

Our shipyards have been providing about 3 to 4 ships annually.

AIRCRAFT ACQUISITION / UPGRADATION PLANS

- LRMP : P-8 I Boeing
IL-38 retro-fitted with the 'Sea Dragon' suite
- MRMR : 11 Dorniers ex HAL Kanpur
06 being procured through global tendering
- Helos : 16 MRH to replace Seakings (A/B)
47 ALH to replace Chetaks
- Fighters : 16 MIG 29K
- Training : 17 AJTs ex HAL