




# Indian Navy

Indian Navy	
Bhāratīya Nau Senā	
	
Indian Navy crest	
<b>Founded</b>	1612; 406 years ago
<b>Country</b>	India
<b>Type</b>	Navy
<b>Size</b>	67,228 personnel <sup>[1]</sup>
<b>Part of</b>	<a href="#">Indian Armed Forces</a>
<b>Garrison/HQ</b>	Integrated Headquarters, Ministry of Defence (Navy)
<b>Motto(s)</b>	<div>शं नो वरुणः (<a href="#">Sanskrit</a>)</div> <div>Sham No <a href="#">Varunah</a> (<a href="#">IAST</a>)</div> <div><i>May the Lord of the Water be auspicious unto us</i> (English)</div>

<b>Colours</b>	Navy blue, white 
<b>March</b>	<i>Jai Bharti</i> (Victory to India)
<b>Anniversaries</b>	<a href="#">Navy Day</a> : 4 December
<b>Operational fleet</b>	as of March 2018 <a href="#">[show]</a>
<b>Engagements</b>	Major wars and operations <a href="#">[show]</a>
<b>Website</b>	<a href="http://indiannavy.nic.in">indiannavy.nic.in</a>
<b>Commanders</b>	
<b><a href="#">Chief of the Naval Staff (CNS)</a></b>	<a href="#">Admiral Sunil Lanba</a> , <a href="#">PVSM</a> , <a href="#">AVSM</a> , <a href="#">ADC</a> <sup>[2]</sup>
<b><a href="#">Vice Chief of the Naval Staff (VCNS)</a></b>	<a href="#">Vice Admiral Ajit Kumar</a> , <a href="#">AVSM</a> <sup>[3]</sup>
<b><a href="#">Deputy Chief of the Naval Staff (DCNS)</a></b>	<a href="#">Vice Admiral G. Ashok Kumar</a> , <a href="#">AVSM</a> , <a href="#">VSM</a> <sup>[4]</sup>
<b>Insignia</b>	
<b><a href="#">Naval ensign</a></b>	
<b>Aircraft flown</b>	
<b><a href="#">Fighter</a></b>	<a href="#">MiG-29K</a>
<b><a href="#">Helicopter</a></b>	<a href="#">HAL Dhruv</a> , <a href="#">Kamov Ka-28</a> , <a href="#">Kamov Ka-31</a> , <a href="#">Sea King Mk.42C</a> , <a href="#">UH-3 Sea King</a>

<b><u>Patrol</u></b>	<u>Boeing P-8 Poseidon</u> , <u>Ilyushin Il-38</u> , <u>Dornier Do 228</u>
<b><u>Reconnaissance</u></b>	<u>IAI Heron</u> , <u>IAI Searcher Mk II</u>
<b><u>Trainer</u></b>	<u>BAE Hawk</u> , <u>HAL HJT-16</u>

The **Indian Navy** (**IN**; *IAST*: *Bhāratīya Nau Senā*) is the [naval branch](#) of the [Indian Armed Forces](#). The [President of India](#) is the Supreme Commander of the Indian Navy. The [Chief of Naval Staff](#), a [four-starAdmiral](#), commands the navy.

The Indian Navy traces its origins back to the [East India Company's Marine](#) which was founded in 1612 to protect British merchant shipping in the region. In 1793, the [East India Company](#) established its rule over eastern part of the [Indian subcontinent](#) i.e. Bengal, but it was not until 1830 that the colonial navy was titled as *His Majesty's Indian Navy*. When [India became a republic](#) in 1950, the *Royal Indian Navy* as it had been named since 1934 was renamed to *Indian Navy*.

The primary objective of the navy is to safeguard the nation's maritime borders, and in conjunction with other Armed Forces of the union, act to deter or defeat any threats or aggression against the territory, people or maritime interests of India, both in war and peace. Through joint exercises, goodwill visits and humanitarian missions, including disaster relief, Indian Navy promotes bilateral relations between nations.

As of 1 July 2017, 67,228 personnel are in service with the Navy.<sup>[5][6]</sup> As of March 2018, the operational fleet consists of one [aircraft carrier](#), one [amphibious transport dock](#), eight [landing ship tanks](#), 11 [destroyers](#), 13 [frigates](#), one [nuclear-powered attack submarine](#), one [ballistic missile submarine](#), 14 conventionally-powered attack [submarines](#), 22 [corvettes](#), one [mine countermeasure vessel](#), four [fleet tankers](#) and various other [auxiliary vessels](#).



## History[edit]

Main article: [History of the Indian Navy](#)

### Early maritime history[edit]

Main article: [Indian maritime history](#)

Further information: [South-East Asia campaign of Rajendra Chola I](#)

Further information: [Maratha Navy](#)

Further information: [Maritime history of Odisha](#)



Three-mast sailship, c. 5th century

The [maritime history](#) of [India](#) dates back to 6,000 years with the birth of art of the navigation and navigating during the [Indus Valley Civilisation](#).<sup>[7]</sup> A [Kutch](#) mariner's log book from 19th century recorded that the first tidal dock India has been built at [Lothal](#) around 2300 BC during the Indus Valley Civilisation, near the present day harbour of [Mangrol](#) on the Gujarat coast. The Rig Veda, credits [Varuna](#), the [Hindu](#) god of water and the [celestial ocean](#),<sup>[8]</sup> with knowledge of the ocean routes and describes the use of ships having hundred oars in the naval expeditions by Indians. There are also references to the side wings of a ship called *Plava*, which stabilizes the vessel during storms. *Plava* is considered to be the precursor of modern-day stabilizers.<sup>[9]</sup> The first use of mariner's compass, called as *Matsya Yantra*, was recorded in 4 and 5 AD.<sup>[10]</sup>



Chola territories during [Rajendra Chola I](#), c. 1030

[Alexander the Great](#) during his conquest over India, built a harbour at [Patala](#). His army retreated to [Mesopotamia](#) on the ships built at [Sindh](#). In the later of his conquest, records show that the Emperor of [Maurya Empire](#), [Chandragupta Maurya](#), as a part of war office, established an Admiralty Division under the Superintendent of Ships. Many historians from ancient India recorded the Indian trade relations with many countries, and even with countries as far as [Java](#) and [Sumatra](#). There were also references to the trade routes of countries in the [Pacific](#) and [Indian](#) Ocean. India also had trade relations with the [Greeks](#) and the [Romans](#). At one instance Roman historian [Gaius Plinius Secundus](#) mentioned of Indian traders carrying away large masses of gold and silver from Rome, in payment for skins, precious stones, clothes, indigo, sandalwood, herbs, perfumes, and spices.<sup>[9]</sup>

During 5–10 AD, the [Kalinga](#) and the [Vijayanagara](#) Empires conquered Western Java, Sumatra and [Malaya](#). The [Andaman and Nicobar Islands](#) served as an important halt point for trade ships en route to these nations and as well as China. During 844–848 AD the daily revenue from these nations was expected to be around 200 [maunds](#) (8 tonnes (7.9 long tons; 8.8 short tons)) of gold. During 984–1042 AD, under the reign of [Raja Raja Chola I](#), [Rajendra Chola I](#) and [Kulothunga Chola I](#), the naval expedition by [Chola dynasty](#) captured lands of [Burma](#), Sumatra, [Sri Lanka](#), and Malaya, and simultaneously repressing pirate activities by Sumatran [warlords](#).<sup>[9][11]</sup>

**[Marco Polo's](#) remark on Indian ships(1292 AD)**

... built of fir timber, having a sheath of boards laid over the planking in every part, caulked with oakum and fastened with iron nails. The bottoms were smeared with a preparation of quicklime and hemp, pounded together and mixed with oil from a certain tree which is a better material than pith

<sup>[9]</sup>

During 14th and 15th centuries, Indian shipbuilding skills and their maritime ability was sophisticated enough to produce ships with a capacity to carry over hundred men. Ships also had compartments included in their design, so that even if one compartment was damaged, the ship would remain afloat. These features of were developed by Indians even before Europeans were aware of the idea.<sup>[9]</sup>

However, by the end of thirteenth century Indian naval power had started to decline, and had reached its low by the time the Portuguese entered India. Soon after they set foot in India, the Portuguese started to hunt down all Asian vessels not permitting their trade. Amidst this, in 1529, a naval war at [Bombay Harbour](#) resulted in the surrender of [Thane](#), [Karanja](#), and [Bandora](#). By 1534, the Portuguese took complete control over the Bombay Harbour. The [Zamorin of Calicut](#) challenged the Portuguese trade when [Vasco da Gama](#) refused to pay the customs levy as per the trade agreement. This resulted in two major naval wars, the first one—[Battle of Cochin](#), was fought in 1504, and the second engagement happened four years later off [Diu](#). Both these wars, exposed the weakness of Indian maritime power and simultaneously helped the Portuguese to gain mastery over the Indian waters.<sup>[9]</sup>

In the later seventeenth century Indian naval power observed remarkable revival. The alliance of the [Moghuls](#) and the [Sidis of Janjira](#) was marked as a major power on the west coast. On the southern front, the 1st Sovereign of the [Maratha Empire](#), [Shivaji Bhosale](#), started creating his own fleet. His fleet was commanded by notable admirals like [Sidhoji Gujar](#) and [Koli Admiral<sup>\[12\]</sup> Kanhoji Angre](#). The Maratha Navy under the leadership of Angre kept the English, Dutch and Portuguese away from the Konkan coast. However, the Marathas witnessed remarkable decline in their naval capabilities following the death of Angre in 1729.<sup>[9]</sup>

## 1612 origins to independence<sup>[edit]</sup>

Main article: [Royal Indian Navy \(1612–1950\)](#)

Indian Navy
<div><div><div><div><div><span></span></div></div></div><div><div><div><span></span></div></div><div><div><span></span></div></div></div><div><div><div><span></span></div></div><div><div><span></span></div></div></div></div></div>
<div>शं नो वरुणः</div> <div>"May the Lord of the Water be auspicious unto us"</div>
Headquarters
<div><div><div><div></div></div></div><div>New Delhi</div></div>
History and traditions
<div><div><div><div></div></div></div><div><a href="#">History of the Indian Navy</a></div></div>
Ships
<div><div><div><div></div></div></div><div><a href="#">Current Indian Navy ships</a></div></div>

<a href="#">History of Indian Navy ships</a>
Installations
<a href="#">Indian Navy bases</a>
Deployments
<a href="#">Indian Naval Deployments</a>
Personnel
<a href="#">Chief of the Naval Staff</a>
<a href="#">Naval ranks and insignia</a>
<a href="#">MARCOS commandos</a>
<div><span>This box: </span><div> <div><span>view</span></div> <div><span>talk</span></div> <div><span>edit</span></div> </div></div>



*HMIS [Bombay](#)* of Royal Indian Navy in Sydney Harbour during [World War II](#)

The origins of the Indian Navy date to 1612, when an English vessel under the command of Captain Best encountered the Portuguese. Although the Portuguese were defeated, this incident along with the trouble caused by the pirates to the merchant vessels, forced the British to maintain fleet near [Surat](#), Gujarat. The British Honourable [East India Company](#) (HEIC) formed a naval arm, and the first squadron of fighting ships reached the Gujarat coast on 5 September 1612. Their objective was to protect British merchant shipping off the [Gulf of Cambay](#) and up the [Narmada](#) and [Tapti](#) rivers. As the HEIC continued to expand its rule and influence over different parts of India, the responsibility of Company's Marine increased too.<sup>[13]</sup>

Over time, the British predominantly operated from Bombay, and in 1686, the HEIC's naval arm was renamed the Bombay Marine. At times the Bombay Marine engaged Dutch, French, Maratha, and Sidi vessels. Much later, it was also involved in the [First Anglo-Burmese War](#) of 1824. In 1834, the Bombay Marine became Her Majesty's Indian Navy. The Navy saw action in the [First Opium War](#) of 1840 and in the [Second Anglo-Burmese War](#) in 1852. Due to some unrecorded reasons, the Navy's name reverted to the Bombay Marine from 1863 to 1877, after which it was named Her Majesty's Indian Marine. At that time, the Marine operated in two divisions—the Eastern Division at Calcutta under the Superintendent of Bay of Bengal, and the Western Division at Bombay Superintendent of Arabian Sea.<sup>[13]</sup>

In 1892 the Marine was rechristened the Royal Indian Marine, and by the end of the 19th century it operated over fifty ships. The Marine participated in World War I with a fleet of patrol vessels, troop carriers, and minesweepers. In 1928, D. N. Mukherji was the first Indian to be granted a commission,

in the rank of an Engineer [Sub-lieutenant](#). Also in 1928, the RIM was accorded combatant status, which entitled it to be considered a true fighting force and to fly the [White Ensign](#) of the Royal Navy.<sup>[14]</sup> In 1934, the Marine was upgraded to a full naval force, thus becoming the Royal Indian Navy (RIN), and was presented the King's colours in recognition of its services to the British Crown.<sup>[13]</sup>

During the early stages of [World War II](#), the tiny Royal Indian Navy consisted of five sloops, one survey vessel, one depot ship, one patrol vessel and numerous assorted small craft; personnel strength was at only 114 officers and 1,732 sailors.<sup>[15]</sup> The onset of war led to an expansion in numbers of vessels and personnel. By June 1940, the navy had doubled its number in terms of both personnel and material, and expanded nearly six times of its pre-war strength by 1942.<sup>[16]</sup> The navy was actively involved in operations during the war around the world and was heavily involved in operations around the Indian Ocean, including convoy escorts, mine-sweeping and supply, as well as supporting amphibious assaults.<sup>[13]</sup>

When hostilities ceased in August 1945, the Royal Indian Navy had expanded to a personnel strength of over 25,000 officers and sailors. Its fleet comprised seven sloops, four [frigates](#), four [corvettes](#), fourteen [minesweepers](#), sixteen [trawlers](#), two [depot ships](#), thirty auxiliary vessels, one hundred and fifty landing craft, two hundred harbour craft and several offensive and defensive motor launches.<sup>[17]</sup> During [World War II](#) the Navy suffered two hundred and seventy five casualties—twenty seven officers, two warrant officers and 123 ratings killed in action, two ratings missing in action and a further 14 officers, two warrant officers and 123 ratings wounded.<sup>[18]</sup> For their role in the war, the officers and ratings of the Navy received the following honours and decorations—a KBE (Mil.), a knighthood, a CB (Mil.), 10 CIEs, two DSOs, a CBE, 15 DSCs, an OBE, 28 DSMs, eight OBIs, two IOMs, 16 BEMs, 10 Indian Defence Service Medals, a Royal Humane Society Medal, 105 mentions in dispatches and 118 assorted commendations.<sup>[19]</sup> Immediately after the war, the navy underwent a rapid, large-scale demobilisation of vessels and personnel.

From the inception of India's naval force, some senior Indian politicians had voiced concerns about the degree of "Indianisation" of the Navy and its subordination to the [Royal Navy](#) in all important aspects.<sup>[20]</sup> On the eve of WWII, the RIN had no Indian senior line officers and only a single Indian senior engineer officer.<sup>[21]</sup> Even by the war's end, the Navy remained a predominantly British-officered service; in 1945, no Indian officer held a rank above engineer commander and no Indian officer in the executive branch held substantive senior line officer rank.<sup>[22]</sup> This situation, coupled with inadequate levels of training and discipline, poor communication between officers and ratings, instances of racial discrimination and the ongoing trials of ex-[Indian National Army](#) personnel ignited the [Royal Indian Navy mutiny](#) by Indian ratings in 1946.<sup>[23]</sup> A total of 78 ships, 20 shore establishments and 20,000 sailors were involved in the strike, which spread over much of India. After the strike began, the sailors received encouragement and support from the Communist Party in India; unrest spread from the naval ships, and led to student and worker *hartals* in Bombay. The strike ultimately failed as the sailors did not receive substantial support from either the Indian Army or from political leaders in Congress or the Muslim League.<sup>[24]</sup>

## **Independence to the end of the 20th century**[\[edit\]](#)

*Main articles:* [1961 Indian annexation of Goa](#) and [Indo-Pakistani wars and conflicts](#)

Following [independence](#) and the [partition of India](#) on 15 August 1947, the RIN's depleted fleet of ships and remaining personnel were divided between the newly independent [Union of India](#) and [Dominion of Pakistan](#). 21 percent of the Navy's officer cadre and 47 percent of its sailors opted to join the portion of the fleet which became the [Royal Pakistan Navy](#). Effective from the same date, all British officers were compulsorily retired from the Navy and its reserve components, with Indian officers being promoted to replace British senior officers.<sup>[25]</sup> However, a number of British flag and senior officers were invited to continue serving in the RIN.<sup>[26]</sup> After independence, the Indian share of the Navy consisted of 32 vessels along with 11,000 personnel. Rear Admiral [John Talbot Savignac Hall](#) headed the Navy as its first Commander-in-Chief (C-in-C) post-



Independence.<sup>[13]</sup> When India became a republic on 26 January 1950, the *Royal* prefix was dropped and the name *Indian Navy* was officially adopted. The prefix for naval vessels was changed from *His Majesty's Indian Ship* (HMIS) to *Indian Naval Ship* (INS).<sup>[13]</sup> At the same time, the imperial crown in insignia was replaced with the [Lion Capital of Ashoka](#) and the Union Jack in the canton of the White Ensign was replaced with the Indian Tricolour.<sup>[27]</sup>

By 1955, the Navy had largely overcome its post-Independence personnel shortfalls.<sup>[25]</sup> During the early years following independence, many British officers continued to serve in the Navy on secondment from the Royal Navy, due to the post-Independence retirement or transfer of many experienced officers to the Royal or the Pakistan navies.<sup>[25]</sup> The first C-in-C of the Navy was Admiral Sir [Edward Parry](#) who took over from Hall in 1948 and handed over to Admiral Sir [Charles Thomas Mark Pizey](#) in 1951. Admiral Pizey also became the first Chief of the Naval Staff in 1955, and was succeeded by Vice Admiral Sir [Stephen Hope Carlill](#) the same year.<sup>[13]</sup> The pace of "Indianising" continued steadily through the 1950s. By 1952, senior Naval appointments had begun to be filled by Indian officers,<sup>[28]</sup> and by 1955, basic training for naval cadets was entirely conducted in India.<sup>[29]</sup> In 1956, [Ram Dass Katari](#) became the first Indian flag officer, and was appointed the first Indian Commander of the Fleet on 2 October.<sup>[30]</sup> On 22 April 1958, Vice Admiral Katari assumed the command of the Indian Navy from Carlill as the first Indian Chief of Staff of the Indian Navy.<sup>[31]</sup> With the departure in 1962 of the last British officer on secondment to the Navy, Commodore David Kirke, the Chief of Naval Aviation, the Indian Navy finally became an entirely Indian service.<sup>[32]</sup>

The first engagement in action of the Indian Navy was against the [Portuguese Navy](#) during the [liberation of Goa](#) in 1961. *Operation Vijay* followed years of escalating tension due to Portuguese refusal to relinquish its [colonies](#) in India. On 21 November 1961, Portuguese troops fired on the passenger liner *Sabarmati* near [Anjadip Island](#), killing one person and injuring another. During Operation Vijay, the Indian Navy supported troop landings and provided fire support.

The [cruiser INS Delhi](#) sank one Portuguese [patrol boat](#),<sup>[33]</sup> while frigates [INS Betwa](#) and [INS Beas](#) destroyed the Portuguese frigate [NRP Afonso de Albuquerque](#).<sup>[34]</sup> The 1962 [Sino-Indian War](#) was largely fought over the [Himalayas](#) and the Navy had only a defensive role in the war.<sup>[35]</sup>



[INS Kursura](#), an Indian submarine which played a vital role in the [1971 Indo-Pak war](#)

At the outbreak of [Indo-Pakistani War of 1965](#), the Navy had one aircraft carrier, two cruisers, nineteen destroyers and frigates, and one tanker. Of these twenty-ships ten were under refit. The others were largely involved coastal patrols. During the war, the Pakistani Navy [attacked the Indian coastal city of Dwarka](#), although there were no military resources in the area. While this attack was insignificant, India deployed naval resources to patrol the coast and deter further bombardment.<sup>[36]</sup> Following these wars in the 1960s, India resolved to strengthen the profile and capabilities of its Armed Forces.<sup>[37]</sup>





Aircraft carrier [INS Vikrant](#) during the [Indo-Pakistani War of 1971](#). The ship played a crucial role in enforcing the naval blockade on [East Pakistan](#) and ensuring India's victory during the war.

The dramatic change in the Indian Navy's capabilities and stance was emphatically demonstrated during the [Indo-Pakistani War of 1971](#). Under the command of Admiral [Sardarilal Mathradas Nanda](#), the navy successfully enforced a [naval blockade](#) of [West](#) and [East Pakistan](#).<sup>[38]</sup> Pakistan's lone long-range [submarine PNS Ghazi](#) was sunk following an attack by the [destroyer INS Rajput](#) off the coast of [Visakhapatnam](#) in the midnight of 3–4 December 1971.<sup>[39][40]</sup> On 4 December, the Indian Navy successfully executed [Operation Trident](#), a devastating attack on the Pakistan Naval Headquarters of [Karachi](#) that sank a minesweeper, a destroyer and an ammunition supply ship. The attack also irreparably damaged another destroyer and oil storage tanks at the Karachi port.<sup>[41]</sup> To commemorate this, 4 December is celebrated as the Navy Day.<sup>[42]</sup> This was followed by [Operation Python](#) on 8 December 1971, further deprecating the Pakistan Navy's capabilities.<sup>[41]</sup> Indian frigate [INS Khukri](#), commanded by Captain M. N. Mulla was sunk by [PNS Hangor](#), while [INS Kirpan](#) was damaged on the west coast.<sup>[43]</sup> In the [Bay of Bengal](#), the [aircraft carrier INS Vikrant](#) was deployed to successfully enforce the [naval blockade](#) on East Pakistan. [Sea Hawk](#) and the [Alizé](#) aircraft from INS [Vikrant](#) sank numerous gunboats and Pakistani [merchant marine](#) ships.<sup>[44]</sup> To demonstrate its solidarity as an ally of Pakistan, the United States sent [Task Force 74](#) centred around the aircraft carrier [USS Enterprise](#) into the Bay of Bengal. In retaliation, [Soviet Navy](#) submarines trailed the American task force, which moved away from the Indian Ocean towards Southeast Asia to avert a confrontation.<sup>[45]</sup> In the end, the Indian naval blockade of Pakistan choked off the supply of reinforcements to the Pakistani forces, which proved to be decisive in the overwhelming defeat of Pakistan.<sup>[46]</sup>

Since playing a decisive role in the victory, the navy has been a deterrent force maintaining peace for India in a region of turmoil. In 1983, the Indian Navy planned for [Operation Lal Dor](#) to support the government of [Mauritius](#) against a feared coup.<sup>[47]</sup> In 1986, in [Operation Flowers are Blooming](#), the Indian Navy averted an attempted coup in the [Seychelles](#).<sup>[48]</sup> In 1988, India launched [Operation Cactus](#), to successfully thwart a coup d'état by [PLOTE](#) in the [Maldives](#). Naval maritime reconnaissance aircraft detected the ship hijacked by PLOTE rebels. [INS Godavari](#) and Indian marine commandos recaptured the ship and arrested the rebels.<sup>[49]</sup> During the 1999 [Kargil War](#), the Western and Eastern fleets were deployed in the Northern Arabian Sea, as a part of [Operation Talwar](#).<sup>[50]</sup> They safeguarded India's maritime assets from a potential Pakistani naval attack, as also deterred Pakistan from attempting to block India's sea-trade routes.<sup>[51]</sup> The Indian Navy's aviators flew sorties and marine commandos fought alongside Indian Army personnel in the Himalayas.<sup>[52]</sup>

In October 1999, the Navy along with the [Indian Coast Guard](#) rescued MV [Alondra Rainbow](#), a pirated Japanese cargo ship.<sup>[53]</sup>

## 21st century onwards<sup>[edit]</sup>

Indian Navy flotilla including aircraft carrier [INS Viraat](#) escorting [INS Vikramaditya](#) on its way home in 2014



[Guard of honour](#) at the [INA](#), 2012.

In the 21st century, the Indian Navy has played an important role in maintaining peace for India on the maritime front, in spite of the state of foment in its neighbourhood. It has been deployed for humanitarian relief in times of natural disasters and crises across the globe, as well as to keep India's maritime trade routes free and open.<sup>[54]</sup>

The Indian Navy was a part of the joint forces exercises, [Operation Parakram](#), during the [2001–2002 India–Pakistan standoff](#). More than a dozen warships were deployed to the northern Arabian Sea.<sup>[55]</sup> In October, the Indian Navy took over operations to secure the [Strait of Malacca](#), to relieve US Navy resources for [Operation Enduring Freedom](#).<sup>[56]</sup>

The navy plays an important role in providing humanitarian relief in times of natural disasters, including floods, cyclones and tsunamis. In the aftermath of the [2004 Indian Ocean earthquake and tsunami](#), the Indian Navy launched massive disaster relief operations to help affected Indian states as well as Maldives, Sri Lanka and Indonesia. Over 27 ships, dozens of helicopters, at least six fixed-wing aircraft and over 5000 personnel of the navy were deployed in relief operations.<sup>[57]</sup> These included [Operation Madad](#) in Andhra Pradesh and [Tamil Nadu](#), *Operation Sea Waves* in the [Andaman and Nicobar Islands](#), *Operation Castor* in Maldives, *Operation Rainbow* in Sri Lanka and *Operation Gambhir* in Indonesia.<sup>[58]</sup> Gambhir, carried out following the [2004 Indian Ocean tsunami](#), was one of the largest and fastest force mobilisations that the Indian Navy has undertaken. Indian naval rescue vessels and teams reached neighbouring countries less than 12 hours from the time that the tsunami hit.<sup>[59]</sup> Lessons from the response led to decision to enhance amphibious force capabilities, including the acquisition of [landing platform docks](#) such as [INS Jalashwa](#), as well as smaller amphibious vessels.<sup>[60]</sup>



From top to bottom: [INS Ranjit](#), [INS Jyoti](#) and [INS Mysore](#)

During the [2006 Israel-Lebanon conflict](#), the Indian Navy launched [Operation Sukoon](#) and evacuated 2,280 persons from 20 to 29 July 2006 including 436 Sri Lankans, 69 Nepalese and 7 Lebanese nationals from war-torn Lebanon.<sup>[61][62]</sup> In 2006, Indian naval doctors served for 102 days on board [USNS Mercy](#) to conduct medical camps in the [Philippines](#), Bangladesh, Indonesia and [East Timor](#).<sup>[63]</sup> In 2007, Indian Navy supported relief operations for the survivors of [Cyclone Sidr](#) in Bangladesh.<sup>[64]</sup> In 2008, Indian Naval vessels were the first to launch international relief operations for victims of [Cyclone Nargis](#) in Myanmar.<sup>[65][66]</sup> In 2008, the navy

deployed [INS Tabar](#) and [INS Mysore](#) into the [Gulf of Aden](#) to combat [piracy in Somalia](#).<sup>[67]</sup> [Tabar](#) prevented numerous piracy attempts, and escorted hundreds of ships safely through the pirate-infested waters.<sup>[68]</sup> The navy also undertook anti-piracy patrols near the Seychelles, upon that country's request.<sup>[69][70]</sup>



[Sea King](#) helicopters operating aboard [INS Viraat](#)

In February 2011, the Indian Navy launched [Operation Safe Homecoming](#) and rescued Indian nationals from war torn Libya.<sup>[71]</sup> Between January–March, the navy launched *Operation Island Watch* to deter piracy attempts by Somali pirates off the [Lakshadweep](#) archipelago. This operation has had numerous successes in preventing pirate attacks.<sup>[72][73][74]</sup> During the 2015 crisis in Yemen, the Indian Navy was part of [Operation Raahat](#) and rescued 3074 individuals of which 1291 were foreign nationals.<sup>[75]</sup> On 15 April 2016, a Poseidon-8I long-range patrol aircraft managed to thwart a piracy attack on the high seas by flying over *MV Sezai Selaha*, a merchant vessel, which was being targeted by a pirate mother ship and two skiffs around 800 [nautical miles](#) (1,500 km; 920 mi) from [Mumbai](#).<sup>[76]</sup>

## Current role<sup>[edit]</sup>

Currently, the principal roles of the Indian Navy are:<sup>[77][78]</sup>

- In conjunction with other Armed Forces of the union, act to deter or defeat any threats or aggression against the territory, people or maritime interests of India, both in war and peace;
- Project influence in India's maritime area of interest, to further the nation's political, economic and security objectives;
- In co-operation with the [Indian Coast Guard](#), ensure good order and stability in India's maritime zones of responsibility.
- Provide maritime assistance (including disaster relief) in India's maritime neighbourhood.

## Command and organisation<sup>[edit]</sup>

---

### Organization<sup>[edit]</sup>



Some of the uniforms of Indian Navy

While the [President of India](#) serves as the Supreme Commander of the Indian Armed Forces, the organizational structure of Indian Navy is headed by the [Chief of Naval Staff](#) (CNS), who holds the rank of [Admiral](#).<sup>[79]</sup> While the provision for the rank of [Admiral of the Fleet](#) exists, it is primarily intended for major wartime use and honour. No officer of the Indian Navy has yet been conferred this rank.<sup>[80]</sup> The CNS is assisted by the Vice Chief of Naval Staff (VCNS), a vice-admiral; the CNS also heads the Integrated Headquarters (IHQ) of the Ministry of Defence (Navy), based in New Delhi. The Deputy Chief of Naval Staff (DCNS), a vice-admiral, is a Principal Staff Officer, along with the Chief of Personnel (COP) and the Chief of Materiel (COM), both of whom are also vice-admirals.<sup>[79]</sup> The Director General Medical Services (Navy) is a Surgeon Vice-Admiral, heads the medical services of the Indian Navy.<sup>[81]</sup>

The Indian Navy operates three operational [Commands](#). Each Command is headed by a [Flag Officer Commanding-in-Chief](#) of the rank of vice-admiral.<sup>[82]</sup> The Eastern and Western Commands each have a Fleet commanded by a rear admiral, and each also have a Commodore commanding submarines.<sup>[83]</sup> The Southern Naval Command is home to the Flag Officer Sea Training.<sup>[84]</sup>

Additionally, the [Andaman and Nicobar Command](#) is a unified Indian Navy, [Indian Army](#), [Indian Air Force](#), and [Indian Coast Guard theater command](#) based at the capital, [Port Blair](#).<sup>[85]</sup> Commander in Chief Andaman and Nicobar (CINCAN) receives staff support from, and reports directly to the chairman Chiefs of Staff Committee (COSC) in New Delhi. The Command was set up in the [Andaman and Nicobar Islands](#) in 2001.<sup>[86]</sup>

show

#### Equivalent ranks of Indian military

At Integrated Headquarters-Ministry of Defence (Navy) level<sup>[79]</sup>

Post	Current Holder
<a href="#">Chief of the Naval Staff</a>	Admiral <a href="#">Sunil Lanba</a> , PVSM, AVSM, ADC <sup>[2]</sup>

<a href="#">Vice Chief of the Naval Staff</a>	Vice Admiral <a href="#">Ajit Kumar</a> , AVSM <sup>[3]</sup>
Deputy Chief of the Naval Staff	Vice Admiral <a href="#">G. Ashok Kumar</a> , AVSM, VSM <sup>[4]</sup>
Chief of Personnel	Vice Admiral R Hari Kumar, AVSM, VSM <sup>[87]</sup>
Chief of Materiel	Vice Admiral G. S. Pabby, AVSM, VSM <sup>[88]</sup>
Director General of Medical Services	Surgeon Vice Admiral A. A. Pawar, VSM <sup>[89]</sup>
Director General of Naval Operations	Vice Admiral S N Ghormade <sup>[90]</sup>
Director General of Naval Design	Rear Admiral Anil Kumar Saxena, NM <sup>[91]</sup>

#### At operational command level<sup>[79]</sup>

Commands	HQ Location	Current FOC-in-C
<a href="#">Western Naval Command</a>	<a href="#">Mumbai</a>	Vice Admiral <a href="#">Girish Luthra</a> , PVSM, AVSM, VSM, ADC <sup>[92]</sup>
<a href="#">Eastern Naval Command</a>	<a href="#">Visakhapatnam</a>	Vice Admiral <a href="#">Karambir Singh</a> , PVSM, AVSM <sup>[93]</sup>
<a href="#">Southern Naval Command</a>	<a href="#">Kochi</a>	Vice Admiral <a href="#">Anil Kumar Chawla</a> , AVSM, VSM, NM <sup>[94][95]</sup>

## Facilities<sup>[edit]</sup>

*Main article: [List of Indian Navy bases](#)*

Indian Navy has its operational and training bases in [Gujarat](#), Karnataka, [Goa](#), Maharashtra, [Lakshadweep](#), Kerala, [Odisha](#), Tamil Nadu, [Andhra Pradesh](#), West Bengal, and [Andaman and Nicobar Islands](#). These bases are intended for various purposes such as logistics and maintenance support, ammunition support, air stations, hospitals, [MARCOS](#) bases, coastal defence, missile defence, submarine and missile boat bases, forward operating bases etc.<sup>[96][97][98]</sup> Of these, [INS Shivaji](#) is one of the oldest naval bases in India. Commissioned in February 1945 as HMIS Shivaji, it now serves as the premier Technical Training Establishment (TTE) of the Indian Navy.<sup>[99]</sup>



In May 2005, the Indian Navy commissioned [INS Kadamba](#) at [Karwar](#), 100 kilometres (62 mi) from [Goa](#).<sup>[100]</sup> Built under the first phase of the [Project Seabird](#), it first exclusively controlled base by the Navy without sharing port facilities with commercial shipping.<sup>[101]</sup> The Indian Navy also has berthing rights in Oman and Vietnam.<sup>[102]</sup> The Navy operates a monitoring station, fitted with radars and surveillance gear to intercept maritime communication, in [Madagascar](#). It also plans to build a further 32 radar stations in Seychelles, Mauritius, Maldives and Sri Lanka.<sup>[103]</sup> According to *Intelligence Online*, published by a France-based global intelligence gathering organisation, Indigo Publications, the Navy is believed to be operating a listening post in Ras al-Hadd, Oman. The post is located directly across from Gwadar Port in Balochistan, Pakistan, separated by approximately 400 kilometres (250 mi) of the Arabian Sea.<sup>[104]</sup>

The navy operates [INS Kattabomman](#), a [VLF](#) and [ELF](#) transmission facility at Vijayanarayanapuram near [Tirunelveli](#) in Tamil Nadu.<sup>[105]</sup> [INS Abhimanyu](#) and [INS Karna](#) are two bases dedicated for MARCOS.<sup>[106][107]</sup> [Project Varsha](#) is a highly classified project undertaken by the Navy to construct a hi-tech base under the Eastern Naval Command. The base is said to house nuclear submarines and also a VLF facility.<sup>[108][109]</sup>

## Training<sup>[edit]</sup>

*Main article: [Military academies in India](#)*

Indian Navy has a specialized training command which is responsible for organisation, conduct and overseeing of all basic, professional and specialist training throughout the Navy. The Commander in Chief of Southern Command also serves as the Commander in Chief of Training Command. The Chief of Personnel (CoP) at HQ of Indian Navy is responsible for the framework of training, and exercises the responsibility through Directorate of Naval Training (DNT).<sup>[110]</sup> The training year of Indian Navy is defined from 1 July to 30 June of the following year.<sup>[111]</sup>

Officer training is conducted at [Indian Naval Academy](#) (INA) at [Ezhimala](#), on the coast of [Kerala](#). Established in 2009, it is the largest naval academy in Asia. Cadets from [National Defence Academy](#) also move to INA for their later terms.<sup>[112]</sup> The Navy also has specialized training establishments for gunnery, aviation, leadership, logistics, music, medicine, physical training, educational training, engineering, hydrography, submarines etc. at several naval bases<sup>[113]</sup> along the coastline of India.<sup>[114]</sup> Naval officers also attend [National Defence College](#) and [Defence Services Staff College](#) for various staff courses to higher staff appointments.<sup>[110]</sup> A dedicated wing for naval architecture under Directorate of Naval Architecture at [IIT Delhi](#) is operated by the Navy.<sup>[115]</sup> Indian Navy also trains officers and men from the navies of friendly foreign countries.<sup>[111]</sup>

## Rank structure<sup>[edit]</sup>

*Main article: [Naval ranks and insignia of India](#)*












As of 1 July 2017, the Navy has a sanctioned strength of 11,827 officers (10,393 serving with 1,434 under strength), and 71,656 sailors (56,835 serving with 14,821 under strength).<sup>[5][6]</sup> This is inclusive of naval aviation, marine commandos and [Sagar Prahari Bal](#) personnel.<sup>[116]</sup>

## Officers<sup>[edit]</sup>

India uses the [Midshipman](#) rank in its navy, and all future officers carry the rank upon entering the [Indian Naval Academy](#). They are commissioned [Sub-lieutenants](#) upon finishing their course of study.<sup>[117][118]</sup>

While the provision for the rank of [Admiral of the Fleet](#) exists, it is primarily intended for major wartime use and honour. No officer of the Indian Navy has yet been conferred this rank. Both the [Army](#) and [Air Force](#) have had officers who have been conferred with the equivalent rank – [Field Marshals Sam Manekshaw](#) and [Cariappa](#) of the Army and [Marshal of the Indian Air Force \(MIAF\) Arjan Singh](#).<sup>[80]</sup>

The highest ranked naval officer in organization structure is the [Chief of Naval Staff](#), who holds the rank of admiral.<sup>[118]</sup>

Equivalent NATO code	OF-10	OF-9	OF-8	OF-7	OF-6	OF-5	OF-4	OF-3	OF-2	OF-1	<u>OF(D)</u> and student officer
 <b>India</b> ( <a href="#">Edit</a> )											
	<a href="#">Admiral of the Fleet<sup>1</sup></a>	<a href="#">Admiral<sup>2</sup></a>	<a href="#">Vice Admiral</a>	<a href="#">Rear Admiral</a>	<a href="#">Commodore</a>	<a href="#">Captain</a>	<a href="#">Commander</a>	<a href="#">Lieutenant Commander</a>	<a href="#">Lieutenant</a>	<a href="#">Sublieutenant</a>	

### Enlisted personnel([edit](#))

In the Indian Navy, the sailors are initially listed as, Seaman 2nd class. As they grow through the ranks they attain the highest rank of enlisted personnel, Master chief petty officer 1st class. Sailors who possess leadership qualities and fulfill requisite conditions in terms of education, age etc. may be commissioned through Commission worthy and Special Duties (CW & SD) scheme.<sup>[17]</sup>

Equivalent NATO code	OR-9	OR-8	OR-7	OR-6	OR-5	OR-4	OR-3	OR-2	OR-1
 <b>India</b> ( <a href="#">Edit</a> )					<i>No equivalent</i>		<i>No equivalent</i>	<i>No equivalent</i>	<b>No insignia</b>
	<a href="#">Master Chief Petty</a>	<a href="#">Master Chief Petty</a>	<a href="#">Chief Petty Officer</a>	<a href="#">Petty Officer</a>		<a href="#">Leading Seaman</a>			<a href="#">Ordinary Seaman</a>



<a href="#">Officer</a> <a href="#">1st Class</a>	<a href="#">Officer</a> <a href="#">2nd Class</a>
--	--

## Naval Air Arm<sup>[edit]</sup>

Main article: [Indian Naval Air Arm](#)



Indian Navy [P-8I Neptune](#) aircraft deployed in Seychelles

[MiG-29K](#) operates from INS *Vikramaditya*

The naval air-arm of the Indian Navy currently operates twenty-one [air squadrons](#). Of these, ten operate fixed-wing aircraft, eight are helicopter squadrons and the remaining three are equipped with [unmanned aerial vehicles](#) (UAV). Building on the legacy inherited from the Royal Navy prior to Indian independence, the concept of [naval aviation](#) in India started with the establishment of Directorate of Naval Aviation at Naval Headquarters (NHQ) in early 1948. Later that year officers and sailors from the Indian Navy were sent to Britain for [pilot training](#). In 1951, the Fleet Requirement Unit (FRU) was formed to meet the aviation requirements of the navy.<sup>[119]</sup>

On 1 January 1953, the charge of [Cochin](#) airfield was handed over to the navy from the [Directorate General of Civil Aviation](#). On 11 March, the FRU was commissioned at Cochin with ten newly acquired [Sealand](#) aircraft. The navy's first air station, [INS Garuda](#), was commissioned two months later. From February 1955 to December 1958, ten [Firefly](#) aircraft were acquired. To meet the training requirements of the pilots, the indigenously developed [HAL HT-2](#) trainer was inducted into the FRU. On 17 January 1959, the FRU was commissioned as [Indian Naval Air Squadron \(INAS\) 550](#), to be the first Indian naval air squadron.<sup>[119]</sup>

Currently the air arm operates an aircraft carrier INS *Vikramaditya* with ability to carry over thirty aircraft including MiG 29K, Kamov 31, Kamov 28, Sea King and domestic-built ALH-Dhruv and Chetak helicopters.<sup>[120][121]</sup> The Kamov-31 choppers also provide the [airborne early warning](#) cover for the fleet.<sup>[122]</sup> In the anti-submarine role, the [Sea King](#), [Ka-28](#), and the domestic built [HAL Dhruv](#) are used.<sup>[123][124]</sup> The [MARCOS](#) also use Sea King and HAL Dhruv helicopters while conducting operations. Maritime patrol and reconnaissance operations are carried out by the [Boeing P-8 Poseidon](#)<sup>[125][126]</sup> and the [Ilyushin 38](#).<sup>[127][128][129]</sup> The [UAV](#) arm consists of the [IAI Heron](#) and Searcher-IIs that are operated from both surface ships and shore establishments for surveillance missions.<sup>[130][131][132]</sup>

The Indian Navy also maintains an aerobatic display team, the [Sagar Pawan](#). The Sagar Pawan team will be replacing their present Kiran [HJT-16](#) aircraft with the newly developed [HJT-36](#) aircraft.<sup>[133]</sup>

## MARCOS<sup>[edit]</sup>

Main article: [MARCOS](#)



[HAL Dhruv](#) helicopter of the Indian Navy extracting Marine Commandos [MARCOS](#) on [Navy day](#) 2013 at Kochi

The [Marine Commando Force](#) (MCF), also known as *MARCOS*, is a special forces unit that was raised by the Indian Navy in 1987 for [Amphibious warfare](#), [Close Quarter Combat](#) [Counter-terrorism](#), [Direct action](#), [Special reconnaissance](#), [Unconventional warfare](#), [Hostage rescue](#), [Personnel recovery](#), [Combat search and rescue](#), [Asymmetric warfare](#), [Foreign internal defence](#), [Counterproliferation](#), [Amphibious reconnaissance](#) including [Hydrographic reconnaissance](#).<sup>[106]</sup> Since their inception MARCOS proved themselves in various operations and wars, notable of them include [Operation Pawan](#), [Operation Cactus](#), [UNOSOM II](#), [Kargil War](#) and [Operation Black Tornado](#).<sup>[134][135]</sup> They are also actively deployed on anti-piracy operations throughout the year.<sup>[136][137]</sup>

## Equipment<sup>[edit]</sup>

*Main article:* [List of active Indian Navy ships](#)

*See also:* [List of ships of the Indian Navy](#) for a list of Historical Ships of the Indian Navy.

## Ships<sup>[edit]</sup>



[INS Vikramaditya](#)

The names of all in service ships and naval bases of the Indian Navy are prefixed with the letters **INS**, designating *Indian Naval Ship* or *Indian Navy Station*,<sup>[138]</sup> whereas the sail boats are prefixed with INSV (Indian Naval Sailing Vessel).<sup>[139]</sup> The fleet of the Indian Navy is a mixture of domestic built and foreign vessels, as of January 2018, the surface fleet comprises 1 [aircraft carrier](#),<sup>[140][141]</sup> 1 [amphibious transport dock](#),<sup>[142]</sup> 8 [Landing ship tanks](#),<sup>[142][143]</sup> 11 [destroyers](#),<sup>[140]</sup> 13 [frigates](#),<sup>[144][145]</sup> 22 [corvettes](#),<sup>[144][146][147][148]</sup> 1 [mine countermeasure vessels](#),<sup>[149][150]</sup> 10 large offshore [patrol vessels](#),<sup>[149]</sup> 4 [fleet tankers](#),<sup>[151]</sup> 7 Survey ships,<sup>[152]</sup> 1 research vessel,<sup>[139]</sup> 3 training vessels<sup>[139]</sup> and various [auxiliary vessels](#), [Landing Craft Utility](#)vessels,<sup>[143]</sup> and small patrol boats.<sup>[151][153]</sup>

After INS *Viraat* was decommissioned on 6 March 2017, the Navy is left with only one aircraft carrier in active service, [INS Vikramaditya](#), which serves as the flagship of the fleet.<sup>[141]</sup> *Vikramaditya* (formerly *Admiral Gorshkov*) is a modified [Kiev-class aircraft carrier](#) procured at a total cost \$2.3 billion from Russia in December 2013.<sup>[154]</sup> The Navy has an [amphibious transport](#)

[dock](#) of the [Austin class](#), re-christened as INS *Jalashwa* in Indian service. It also maintains a fleet of [landing ship tanks](#).<sup>[142]</sup>



[INS Shakti](#), a [Deepak-class fleet tanker](#)

The navy currently operates three [Kolkata](#), three [Delhi](#) and five [Rajput](#)-class [guided-missile destroyers](#).<sup>[140]</sup> The ships of the *Rajput* class will be replaced in the near future by the next-generation [Visakhapatnam-class destroyers](#) (Project 15B) which will feature a number of improvements.<sup>[155]</sup>

In addition to destroyers, the navy operates several classes of frigates such as three [Shivalik](#) (Project 17 class) and six [Talwar](#)-class frigates.<sup>[144]</sup> Seven additional *Shivalik*-class frigates ([Project 17A class frigates](#)) are on order. The older [Godavari-class](#) frigates will systematically be replaced one by one as the new classes of frigates are brought into service over the next decade.<sup>[156]</sup>

Smaller [littoral zone combatants](#) in service are in the form of corvettes, of which the Indian Navy operates the [Kamorta](#), [Kora](#), [Khukri](#), [Veer](#) and [Abhay-class](#) corvettes.<sup>[144][146][147]</sup> [Replenishment tankers](#) such as the [Jyoti-class tanker](#), [INS Aditya](#) and the new [Deepak-class fleet tanker](#)- help improve the navy's endurance at sea.<sup>[151]</sup>

## **Submarines**[\[edit\]](#)



[INS Chakra](#), the nuclear attack submarine of the Indian Navy

As of December 2017, the Navy's sub-surface fleet includes 1 [nuclear-powered attack submarine](#), 1 [Ballistic missile submarine](#),<sup>[157]</sup> 14 conventionally-powered attack [submarines](#).<sup>[158]</sup> The conventional attack submarines of the Indian Navy consist of the [Kalvari](#) (French [Scorpène-class submarine](#) design), the [Sindhughosh](#) (Russian [Kilo-class submarine](#) design) and the [Shishumar](#) (German [Type 209/1500](#) design) classes.<sup>[158][159][160]</sup>

India also possesses a single [Akula-class nuclear-powered attack submarine](#) named [INS Chakra](#). She is under lease to India for a period of ten years. Three hundred Indian Navy personnel were trained in Russia for the operation of these submarines.<sup>[161]</sup> Negotiations are on with Russia for the lease of the second Akula-class submarine.<sup>[162]</sup>

[INS Arihant](#) was launched on 26 July 2009 in [Visakhapatnam](#), and was secretly commissioned into active service in August 2016.<sup>[163]</sup> The Navy plans to have six nuclear-powered [ballistic missile](#)

[submarines](#) in service in the near future.<sup>[164]</sup> *Arihant* is both the first boat of the [Arihant-class](#) nuclear-powered ballistic missile submarines and the first nuclear-powered submarine to be built in India.<sup>[165]</sup>

## Weapon systems<sup>[edit]</sup>

Main article: [Weapon systems of the Indian Navy](#)



Gun firing trials of [INS Kochi](#)<sup>[166]</sup>



Barak 8 missile fired from *INS Kolkata*

The Navy use a mix of indigenously developed and foreign made [missile](#) systems. These include submarine-launched ballistic missiles, Ship Launched Ballistic Missile, cruise and anti-ship missiles, air to air missiles, surface to air missiles, torpedoes, air to air guns, main guns and anit-submarine rocket launchers. Its inventory comprises 100 mm (3.9 in) AK 190 gun with a range of 21.5 kilometres (13.4 mi), 130 kilometres (81 mi) KH-35E 4 Quad Uran, ASW RBU-2000 etc.<sup>[167]</sup>

In the recent years [BrahMos](#) has been one of the most advanced missile system adapted by the India Navy. It has been jointly developed by India's [Defence Research and Development Organisation](#) (DRDO) and Russian [NPO Mashinostroyeniya](#). BrahMos is the world's fastest anti-ship cruise missile in operation.<sup>[168]</sup> The BrahMos has been tailored to meet Indian needs and features a large proportion of India-designed components and technology, including its fire control systems, transporter erector launchers, and its onboard navigational attack systems. The successful test of Brahmos from [INS Rajput](#) provides Indian Navy with precision land attack capability.<sup>[169]</sup>

India has also fitted its [P-8I Neptune](#) reconnaissance aircraft with all-weather, [active-radar-homing](#), over-the-horizon [AGM-84L Harpoon Block II missiles](#) and [Mk 54](#) All-Up-Round Lightweight Torpedoes.<sup>[170]</sup> Indian warships' primary air-defence shield is provided by [Barak 1](#) surface-to-air missile while an advanced version [Barak 8](#) is in development in collaboration with Israel.<sup>[171]</sup> India's next-generation [Scorpène-class](#) submarines will be armed with [Exocet anti-ship missile](#) system. Among indigenous missiles, ship-launched version of [Prithvi-II](#) is called [Dhanush](#), which has a range of 350 kilometres (220 mi) and can carry nuclear warheads.<sup>[172]</sup>

The K-15 [Sagarika](#) (Oceanic) [submarine-launched ballistic missile \(SLBM\)](#), which has a range of at least 700 km (some sources claim 1000 km) forms part of India's nuclear triad and is extensively tested to be integrated with the *Arihant* class of nuclear submarines.<sup>[173][174]</sup> A longer range submarine launched ballistic missile called [K-4](#) is under testing, to be followed by [K-5](#) SLBM.<sup>[175]</sup>

## Electronic warfare and systems management<sup>[edit]</sup>

*Sangraha* is a joint [electronic warfare](#) programme between [Defence Research and Development Organisation](#) (DRDO) and the Indian Navy. The programme is intended to develop a family of electronic warfare suites, for use on different naval platforms capable of detecting, intercepting, and classifying pulsed, [carrier wave](#), [pulse repetition frequency](#) agile, frequency agile and [chirp radars](#). The systems are suitable for deployment on various platforms like helicopters, vehicles, and ships. Certain platforms, along with [ESM](#) (Electronic Support Measures) capabilities, have [ECM](#) (Electronic Countermeasure) capabilities such as multiple-beam phased array jammers.<sup>[176]</sup>

The Indian Navy also relies on information technology to face the challenges of the 21st century. The Indian Navy is implementing a new strategy to move from a platform centric force to a network centric force by linking all shore-based installations and ships via a high-speed data networks and satellite(s).<sup>[177][178][179]</sup> This will help in increased operational awareness. The network is referred to as the Navy Enterprise Wide Network (NEWN). The Indian Navy has also provided training to all its personnel in Information Technology (IT) at the Naval Institute of Computer Applications (NICA) located in Mumbai. Information technology is also used to provide better training, like the usage of simulators and for better management of the force.<sup>[180]</sup>

The Navy has a dedicated cadre for matters pertaining to information technology cadre named as Information Technology Cadre,<sup>[181]</sup> under the Directorate of Information Technology (DRI). The cadre is responsible for implementation for enterprise wide networking and software development projects, development activities with respect to cyber security products, administration of shore and on-board networks, and management of critical Naval Networks and software applications.<sup>[182]</sup>

## Naval satellite<sup>[edit]</sup>

India's first exclusive defence satellite [GSAT-7](#) was successfully launched by European space consortium Arianespace's rocket from Kourou spaceport in [French Guiana](#) in August 2013. GSAT-7 was fabricated by the [Indian Space Research Organisation](#) (ISRO) to serve for at least seven years in its orbital slot at 74°E, providing [UHF](#), [S-band](#), [C-band](#) and [Ku-band](#) relay capacity. Its Ku-band allows high-density data transmission, including both audio and video. This satellite also has a provision to reach smaller and mobile terminals.<sup>[183]</sup>

GSAT-7 approximately has a footprint of 3,500–4,000 kilometres (2,200–2,500 miles; 1,900–2,200 nautical miles) over the Indian Ocean region, including both the Arabian Sea and the Bay of Bengal region. This enables the Navy to operate in a network-centric atmosphere having real-time networking of all its operational assets at sea and on land.<sup>[183]</sup>

## Activities<sup>[edit]</sup>



INS *Mumbai* with Indian Navy flag during [International Fleet Review 2016](#)



See also: [List of Indian Naval Deployments](#)

## Fleet reviews<sup>[edit]</sup>

The [President of India](#) is entitled to inspect his/her fleet, as he/she is the supreme commander of the [Indian Armed Forces](#). The first president's fleet review by India was hosted by Dr. [Rajendra Prasad](#) on 10 October 1953. President's reviews usually take place once in the President's term. In all, ten fleet reviews have taken place, including in February 2006, when former president Dr. [APJ Abdul Kalam](#) took the review. The latest, on February 2016, by President [Pranab Mukherjee](#).<sup>[184]</sup>

The Indian Navy also conducted an International fleet review named *Bridges of Friendship* in February 2001 in Mumbai. Many ships of friendly Navies from all around the world participated, including two from the US Navy.<sup>[185]</sup> The second international fleet review, the [International Fleet Review 2016](#), was held off Visakhapatnam coast in February 2016 where Indian Navy's focus was on improving diplomatic relations and military compatibility with other nations.<sup>[184]</sup>

## Naval exercises<sup>[edit]</sup>

Naval ships from 17 nations Indian Ocean Naval Symposium participated in *Milan* exercise 2014

India often conducts naval exercises with other friendly countries designed to increase naval cooperation and also to strengthen cooperative security relationship. Some such exercises take place annually like the [Varuna](#) with the [French Navy](#),<sup>[186]</sup> *Konkan* with the [Royal Navy](#),<sup>[187]</sup> *Indra* with [Russian Navy](#),<sup>[188]</sup> *Malabar* with the [US Navy](#),<sup>[189]</sup> *Simbex* with the [Republic of Singapore Navy](#),<sup>[190]</sup> and *IBSAMAR* with the [Brazil](#) and [South African](#) navies.<sup>[191]</sup> The Indian Navy also conducted exercise with the [People's Liberation Army Navy](#) in 2003,<sup>[192]</sup> and also sent ships to the South China Sea to participate in the fleet review.<sup>[193]</sup> Apart from the Indian Ocean, India has steadily gained influence in the Pacific Ocean. In 2007, Indian Navy conducted naval exercise with [Japan Maritime Self-Defence Force](#) and U.S Navy in the Pacific,<sup>[194]</sup> and also signed an agreement with Japan in October 2008 for joint naval patrolling in the Asia-Pacific region.<sup>[195]</sup>

In 2007, India conducted naval exercises with [Vietnam](#),<sup>[196]</sup> Philippines,<sup>[197]</sup> and [New Zealand](#).<sup>[198]</sup> In 2007, India and South Korea conducted an annual naval exercise,<sup>[199]</sup> alongside India participation in the South Korean International Fleet Review in 2008.<sup>[200]</sup> In the same year, India held the first Indian Ocean Naval Symposium (IONS) with an objective to provide a forum for all the littoral nations of the Indian Ocean to co-operate on mutually agreed areas for better security in the region.<sup>[201][202]</sup> Since the past decade, the Indian naval ships have made goodwill port calls to [Israel](#),<sup>[203][204]</sup> [Turkey](#),<sup>[205]</sup> [Egypt](#),<sup>[206]</sup> [Greece](#),<sup>[207]</sup> [Thailand](#),<sup>[208]</sup> [Indonesia](#),<sup>[209]</sup> [Australia](#),<sup>[210]</sup> [New Zealand](#),<sup>[211]</sup> [Tonga](#),<sup>[212]</sup> [South Africa](#),<sup>[213]</sup> [Kenya](#),<sup>[214]</sup> [Qatar](#),<sup>[215]</sup> [Oman](#),<sup>[216]</sup> [United Arab Emirates](#),<sup>[217]</sup> [Bahrain](#),<sup>[218]</sup> [Kuwait](#),<sup>[219]</sup> and various other countries.

[INS Satpura](#) in the U.S for RIMPAC 2016

In 2006, [TROPEX](#) (Theatre-level Readiness Operational Exercises) was held during which Indian Navy experimented the doctrine of influencing a land and air battle to support the [Indian Army](#) and the [Indian Air Force](#).<sup>[220]</sup> *TROPEX* has been conducted annually every year with an exception to 2016.<sup>[221]</sup>

The first Atlantic Ocean deployment of the Indian Navy happened in 2009. During this deployment, the Indian Naval fleet conducted exercises with the French, German, Russian and British Navies.<sup>[222]</sup> Indian Navy also carried out a Joint Naval exercise with Sri Lanka Navy code-named SLINEX-II from 19 to 24 September 2011. The exercise was aimed at increasing the capabilities of the two nations in carrying out anti-piracy operations and exchanging professional knowledge.<sup>[223]</sup> Once in two years navies from the Indian Ocean region meet at the Andaman and Nicobar Islands and the event is named as *MILAN*.<sup>[224]</sup>

## Exploration<sup>[edit]</sup>



The Indian Navy's all Woman [INSV Tarini](#) crew at Lyttelton port (New Zealand), during their global circumnavigation expedition.

The Indian Navy regularly conducts adventure expeditions. The [sailing ship](#) and training vessel [INS Tarangini](#) began circumnavigating the world on 23 January 2003, intending to foster good relations with various other nations; she returned to India in May 2004 after visiting 36 ports in 18 nations.<sup>[225]</sup>

Lt. Cdr. [M. S. Kohli](#) led the Indian Navy's first successful expedition to [Mount Everest](#) in 1965,<sup>[226]</sup> the Navy's ensign was again flown atop Everest on 19 May 2004 by a similar expedition. Another Navy team also successfully scaled Everest from the north face, a technically more challenging route.<sup>[227]</sup> The expedition was led by Cdr Satyabrata Dam of the submarine arm. Cdr. Dam is a mountaineer of international repute and has climbed many mountains including the [Patagonias](#), the [Alps](#) among others.<sup>[228]</sup> In 2017, to commemorate 50 years of the Navy's first expedition in 1965, a team set off to climb Mount Everest.<sup>[226]</sup>

An Indian Navy team comprising 11 members successfully completed an expedition to the Arctic pole. To prepare, they first traveled to [Iceland](#), where they attempted to summit a peak.<sup>[229]</sup> The team next flew to eastern [Greenland](#); in the [Kulusuk](#) and [Angmassalik](#) areas, they used [Inuit](#) boats to navigate the region's ice-choked [fjords](#). They crossed northward across the [Arctic Circle](#), reaching seventy degrees North on skis. The team scaled an unnamed peak of height 11,000 feet (3,400 m) and named it "Indian Peak".<sup>[230]</sup>

The Indian Naval ensign first flew in [Antarctica](#) in 1981.<sup>[231]</sup> The Indian Navy succeeded in Mission Dakshin Dhruv 2006 by traversing to the [South Pole](#) on skis. With this historic expedition, they have set the record for being the first military team to have successfully completed a ski traverse to the Geographic South Pole.<sup>[232]</sup> Also, three of the ten member team—the expedition leader—Cdr. Satyabrata Dam, leading medical assistants Rakesh Kumar and Vikas Kumar are now among the few people in the world to have visited the two poles and summited Mt. Everest.<sup>[233]</sup> Indian Navy became the first organisation to reach the poles and Mt. Everest. Cdr. Dilip Donde completed the first solo circumnavigation by an Indian citizen on 22 May 2010.<sup>[234]</sup>

## Future of the Indian Navy<sup>[[edit](#)]</sup>

*Main article:* [Future of the Indian Navy](#)



[INS Vikrant](#) under construction





The [HAL Tejas](#) Naval Prototype-1 takes-off from the Shore Based Test Facility at [Goa](#)

By the end of the 14th Plan (2019), the Indian Navy expects to have over 150 ships and close to 500 aircraft. In addition to the existing mission of securing both sea flanks in the Bay of Bengal and the Arabian sea, the navy would be able to respond to emergency situations far away from the main land. Marine assault capabilities will be enhanced by setting up a new amphibious warfare facility at [Kakinada](#), Andhra Pradesh.<sup>[235]</sup>

The Indian Navy has initiated Phase II expansion of [INS Kadamba](#), the third largest naval base, near [Karwar](#). Phase II will involve expansion of the berthing facilities to accommodate 40–45 more front-line warships, including the aircraft carrier *INS Vikramaditya*, raise manpower to 300 officers and around 2,500 sailors, and build a naval air station with a 6,000-foot runway. This is to be followed by Phase IIA and IIB, at the end of which *INS Kadamba* will be able to base 50 front-line warships.<sup>[236][237][238][239]</sup> The Indian Navy is also in the process of constructing a new naval base, [INS Varsha](#), at [Rambilli](#) for its [Arihant Class](#) submarines.<sup>[240]</sup>

India plans to construct a pair of aircraft carriers. The first, [INS Vikrant](#), was launched in 2013 by [Cochin Shipyard](#) and undocked in June 2015. It is expected to be completed by 2017 and undergo extensive sea trials thereafter with commissioning planned for 2018.<sup>[241]</sup> *Vikrant* displaces 40,000 tonnes and will be capable of operating up to 40 aircraft, including 30 [HAL Tejas](#) and [MiG-29K](#) fighters.<sup>[242]</sup> The second ship, [INS Vishal](#) (formerly known as *Indigenous Aircraft Carrier-II*), will displace around 65,000 tonnes and is expected to be delivered to the Indian Navy by late 2030s. With the future delivery of *Vishal*, the Navy's goal to have three aircraft carriers in service, with two fully operational carriers and the third in refit, will be achieved.<sup>[243]</sup>

As of November 2011, the *Defence Acquisition Council* launched the [Indian Navy Multi-Role Support Vessel programme](#). The Indian Navy has subsequently sent out an international RFP for up to 4 large [landing helicopter docks](#). The contenders are expected to tie up with local shipyards for construction of the ships.<sup>[244]</sup>

In addition to aircraft carriers and large amphibious assault ships, the Indian Navy is acquiring numerous surface combatants such as; the [Visakhapatnam-class](#) destroyers, the [Project 17A-class frigates](#),<sup>[245]</sup> [ASW shallow water corvettes](#),<sup>[246]</sup> [ASuW corvettes](#),<sup>[247]</sup> and [MCM vessels](#).<sup>[248]</sup> New submarine types include; the conventional [Kalvari-class](#),<sup>[249]</sup> [Project 75I](#),<sup>[250]</sup> and the nuclear [Arihant-class](#).<sup>[251]</sup> New auxiliary ships include; five Replenishment Oilers, a Missile Range Instrumentation Ship and an Ocean Surveillance Ship.<sup>[252]</sup>

The Indian Navy is planning to procure 22 General Atomics [Sea Guardian](#) drones at an estimated cost of \$2 billion.<sup>[253]</sup> This is the first instance of General Atomics drones being sold to a non-NATO military.<sup>[253]</sup>

## Accidents<sup>[edit]</sup>

*Main article:* [List of Indian Naval accidents](#)

Accidents in the Indian navy have been attributed to ageing ships in need of maintenance, delayed acquisitions by the [Ministry of Defence](#), and human error.<sup>[254]</sup> However naval commentators also argue that as India's large navy of 160 ships clocks around 12,000 ship-days at sea every year, in varied waters and weather, some incidents are inevitable.<sup>[255]</sup> Captains of erring ships are dismissed from their command following an enquiry.<sup>[256]</sup> The accident on board [INS Sindhuratna \(S59\)](#) led to the

resignation of the then [Chief of Naval Staff \(CNS\) Admiral D K Joshi](#) on 26 February 2014, who owned moral responsibility.<sup>[257]</sup> The navy is envisaging a new 'Safety Organisation' to improve safety of its warships, nuclear submarines and aircraft in view of its planned increase in fleet strength over the next decade.<sup>[258]</sup>

## Indian Naval Ensign<sup>[edit]</sup>

---

*Main article:* [Indian Naval Ensign](#)

The Indian Navy from 1950 to 2001 used a modified version of the British White Ensign, with the Union flag replaced with the Indian Tricolor in the canton. In 2001, this flag was replaced with a white ensign bearing the Indian Navy crest, as the previous ensign was thought to reflect India's colonial past.<sup>[259]</sup> However complaints arose that the new ensign was indistinguishable as the blue of the naval crest easily merged with the sky and the ocean. Hence in 2004, the ensign was changed back to the [St. George's cross](#) design, with the addition of the emblem of India in the intersection of the cross. In 2014, the ensign as well as the naval crest was further modified to include the [Devanagari](#) script: सत्यमेव जयते ([Satyameva Jayate](#)) which means 'Truth Alone Triumphs' in [Sanskrit](#).<sup>[260]</sup>