# About Indian Navy



The Indian Navy (IN) (ISO: Bhāratīya Nāu Senā) is the maritime 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-star admiral, commands the navy. As a blue-water navy, it operates significantly in the Persian Gulf Region, the Horn of Africa, the Strait of Malacca, and routinely conducts anti-piracy operations with other navies in the region. It also conducts routine two to three month-long deployments in the South and East China seas as well as in the western Mediterranean sea simultaneously.

The primary objective of the navy is to safeguard the nation's maritime borders, and in conjunction with other <u>Armed Forces of the union</u>, 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, the Indian Navy promotes bilateral relations between nations. Since October 2008, the Indian Navy keeps at least one frontline warship on continuous deployment in the <u>Gulf of Aden</u>. [6]

As of June 2019, the Indian Navy has 67,252 active<sup>[7]</sup> and 75,000 reserve personnel in service and has a fleet of 150 ships and submarines, and 300 aircraft. [8][9] As of 2025, the operational fleet consists of 2 active <u>aircraft carriers</u> and 1 <u>amphibious transport dock</u>, 4 <u>landing ship tanks</u>, 8 <u>landing craft utility</u>, 13 <u>destroyers</u>, 15 <u>frigates</u>, 2 <u>ballistic missile submarines</u>, 17 conventionally-powered <u>attack submarines</u>, 18 <u>corvettes</u>, one <u>mine countermeasure vessel</u>, 4 <u>fleet tankers</u> and numerous other <u>auxiliary vessels</u>, <u>small patrol boats</u> and sophisticated ships. It is considered as a multi-regional power projection <u>blue-water navy</u>. [10][11]

## History

## [<u>edit</u>]

Main article: History of the Indian Navy



Ancient Indian ship on lead coin of Vasisthiputra Sri

<u>Pulamavi</u>, testimony to the naval, seafaring and trading capabilities of the <u>Sātavāhana Empire</u>, during the 1st–2nd century CE.

#### Early maritime history

#### [edit]

Main article: Indian maritime history

Further information: Maritime history of Odisha



Three-mast sailship, Ajanta Caves Cave No.2 c. 5th century.



Ancient Kalinga found near Brahmeswara Temple. 10th century.

The maritime history of India dates back 6,000 years to the pre-Indus Valley civilisation. [12] A Kutch mariner's log book from 19th century recorded that the first tidal dock in India was built at Lothal around 2300 BC during the Indus Valley Civilisation, near the present-day harbor of Mangrol on the Gujarat coast. The Rig Veda credits Varuna, the Hindu god of water and the <u>celestial ocean</u>, [13] 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 stabilise the vessel during storms. *Plava* are considered to be the precursors of modern-day stabilisers.[14]

Alexander the Great, during his campaigns in India, built a harbour at the ancient city of Patala, which has been hyphothzied to be the present day city of Thatta. [15] His army retreated to Mesopotamia using ships built at Sindh. In the period after his conquest, records show that the Emperor of Maurya Empire, Chandragupta Maurya, as a part of his war office, established an Admiralty Division. Many historians from ancient India recorded Indian trade relations. Indian trade reached 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 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. [14]

During 5–10 AD, Kalinga 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.[16]

# Middle Ages

[edit]

Main article: Chola Navy

Further information: South-East Asia campaign of Rajendra I



Chola territories during Rajendra Chola I, c. 1030

Medieval Empires in the Indian subcontinent further developed their naval forces. During 844–848 AD the daily revenue from these nations was expected to be around 200 <u>maunds</u> (8 tonnes (7.9 long tons; 8.8 short tons)) of gold. During 984–1042 AD, under the reign of <u>Raja Raja Chola I</u>, <u>Rajendra Chola I</u> and <u>Kulothunga Chola I</u>, a naval expedition by the <u>Chola dynasty</u> captured parts of <u>Burma</u>, Sumatra, <u>Sri Lanka</u>, and Malaya, and simultaneously repressed pirate activities by Sumatran <u>warlords</u>. [14][17]

## 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

#### [14]

During the 14th and 15th centuries, Indian shipbuilding and maritime abilities skill set exceeded European capabilities at the time. Their ships could carry over a hundred crew and were compartmentalized to limit the effect of damage keeping the ship afloat. [14]

#### **Decline**

#### [edit]

By the end of 15th 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 seize all Asian vessels not permitting their trade. Amidst this, in 1529, a naval war at <a href="Bombay Harbour">Bombay Harbour</a> resulted in the surrender of <a href="Thane">Thane</a>, <a href="Karanja">Karanja</a>, and <a href="Bandora">Bandora</a>. By 1534, the Portuguese took complete control over <a href="Bombay Harbour">Bombay Harbour</a>. The <a href="Zamorin of Calicut">Zamorin of Calicut</a> challenged the Portuguese trade when <a href="Vasco da Gama">Vasco da Gama</a> refused to pay the customs levy as per the trade agreement. This resulted in two major naval wars, the first one—<a href="Battle of Cochin">Battle of Cochin</a>, was fought in 1504, and the second engagement happened four years later off <a href="Diu">Diu</a>. Both these wars exposed the weakness of Indian maritime power and simultaneously helped the Portuguese to gain mastery over the Indian waters. <a href="India">India</a> However, in 1526 the Zamorin launched the <a href="siege of Calicut">siege of Calicut</a> on the Portuguese forts in <a href="Calicut">Calicut</a>, successfully eliminating Portuguese influence in the city. <a href="India">[18]</a>

#### Later revival

#### [<u>edit</u>]

Further information: <u>Mughal Navy</u> and <u>Maratha Navy</u>

By the later seventeenth century Indian naval power revived. The  $\underline{\text{Mughal Empire}}$  maintained a significant naval fleet although it was the weakest branch of the  $\underline{\text{military}}$ .



The Ganj-i-Sawai, one of the largest trade ships in the 17th

century.

Empress Mariam-uz-Zamani maintained large fleets of trade ships including the Rahīmī and Ganj-i-Sawai. [201[21]] The Rahimi was the largest of the Indian ships trading in the Red Sea. [22] After being sacked by pirates, this ship was replaced by the Ganj-i-Sawa. This ship was eventually sacked by English Pirate Henry Every. [23] The Navy mainly patrolled coastal areas. The navy was active in the Siege of Hooghly and the Anglo-Mughal War. [24][25] One of the best-documented naval campaign of the Mughal empire were provided during the conflict against kingdom of Arakan, where in December 1665, Aurangzeb dispatched Shaista Khan, his governor of Bengal to command 288 vessels and more than 20,000 men to pacify the pirate activities within Arakan territory and to capture Chittagong, [26]



A depiction of a Maratha naval attack in 1812 against

the East India Company's ship Aurora.

The Maratha Confederacy had a significant coastal navy. 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 Kingdom, Chhatrapati Shivaji Maharaj, started creating his own fleet. His fleet was commanded by notable admirals like Sidhoji Gujar and 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.

The origins of the current Indian Navy date to 1612, when an English vessel under the command of Captain <u>Thomas Best</u> defeated the <u>Portuguese</u> at the <u>Battle of Swally</u>. 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 <u>Surat</u>, Gujarat. <u>East India Company</u> (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 <u>Gulf of Cambay</u> and up the <u>Narmada</u> and <u>Tapti</u> rivers. As the HEIC continued to expand its rule and influence over different parts of India, the responsibility of Company's Marine increased too. [27]

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 <u>First Anglo-Burmese War</u> of 1824.

## **East India Company to independence**

## [edit]

Main article: Royal Indian Navy (1612–1950)

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. [27]

In 1892, the Marine was renamed 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 <u>Sub-lieutenant</u>. Also in 1928, the RIM was accorded combatant status, which entitled it to be considered a true fighting force and to fly the <u>White Ensign</u> of the Royal Navy. [28] In 1934, the Marine was upgraded to a full naval force, thus becoming the <u>Royal Indian Navy</u> (RIN), and was presented the King's colours in recognition of its services to the British Crown. [27]

During the early stages of <u>World War II</u>, 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. 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. The navy was actively involved in operations during the war around the world and was heavily involved in operations around the <u>Indian Ocean</u>, including convoy escorts, mine-sweeping and supply, as well as supporting amphibious assaults.



HMIS Bombay of Royal Indian Navy in Sydney Harbour

during World War II

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 <u>frigates</u>, four <u>corvettes</u>, fourteen <u>minesweepers</u>, sixteen <u>trawlers</u>, two <u>depot ships</u>, thirty auxiliary vessels, one hundred and fifty landing craft, two hundred harbour craft and several offensive and defensive motor launches. During <u>World War II</u> 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. 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. [33] 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. [34] On the eve of WWII, the RIN had no Indian senior line officers and only a single Indian senior engineer officer.[35] Even by the war's end, the Navy remained a predominantly Britishofficered service; in 1945, no Indian officer held a rank above engineer commander and only a few Indian officers in the executive branch held substantive senior line officer rank. [36] 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. [37] 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. [38] On 21 July 1947, H.M.S. Choudhry and Bhaskar Sadashiv Soman, both of whom would eventually command the Pakistani and Indian Navies, respectively, became the first Indian RIN officers to attain the acting rank of captain. [39]

#### 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 Dominion of India and Dominion of Pakistan. 21 per cent of the Navy's officer cadre and 47 per cent of its sailors opted to join the portion of the fleet which became the Royal Pakistan Navy. The Indian share of the Navy consisted of 32 vessels along with 11,000 personnel. 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. [40] However, a number of British flag and senior officers were invited to continue serving in the RIN, [41] as only nine of the Navy's Indian commissioned officers had more than 10 years' service, with the majority of them only having served from five to eight years. [42] Rear Admiral John Talbot Savignac Hall headed the Navy as its first Commander-in-Chief (C-in-C) post-Independence. [27] In January 1948, D.N. Mukherji, the first Indian officer in the RIN, became the first Indian to be promoted acting engineer captain. [43] In May 1948, Captain Ajitendu Chakraverti became the first Indian officer to be appointed to the rank of commodore. [44] 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).[27] 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. [45]

By 1955, the Navy had largely overcome its post-Independence personnel shortfalls. 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. The first C-in-C of the Navy was Admiral

Sir <u>Edward Parry</u> who took over from Hall in 1948 and handed over to Admiral Sir <u>Charles Thomas Mark Pizey</u> in 1951. Admiral Pizey also became the first Chief of the Naval Staff in 1955, and was succeeded by Vice Admiral Sir <u>Stephen Hope Carlill</u> the same year<sup>[27]</sup> The pace of "Indianising" continued steadily through the 1950s. By 1952, senior Naval appointments had begun to be filled by Indian officers, <sup>[46]</sup> and by 1955, basic training for naval cadets was entirely conducted in India. <sup>[47]</sup> In 1956, <u>Ram Dass Katari</u> became the first Indian flag officer, and was appointed the first Indian Commander of the Fleet on 2 October. <sup>[48]</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>[49]</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>[50]</sup>

The first engagement in action of the Indian Navy was against the <u>Portuguese Navy</u> during the <u>liberation of Goa</u> in 1961. *Operation Vijay* followed years of escalating tension due to Portuguese refusal to relinquish its <u>colonies</u> in India. On 21 November 1961, Portuguese troops fired on the passenger liner *Sabarmati* near <u>Anjadip Island</u>, killing one person and injuring another. During Operation Vijay, the Indian Navy supported troop landings and provided fire support. The <u>cruiser INS Delhi</u> sank one Portuguese <u>patrol boat</u>, while frigates <u>INS Betwa</u> and <u>INS Beas</u> destroyed the Portuguese frigate <u>NRP Afonso de</u> <u>Albuquerque</u>. The 1962 <u>Sino-Indian War</u> was largely fought over the <u>Himalayas</u> and the Navy had only a defensive role in the war.



INS Kursura, an Indian submarine which played a vital role

in the 1971 Indo-Pak war

At the outbreak of <u>Indo-Pakistani War of 1965</u>, 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 <u>attacked the Indian coastal city of Dwarka</u>, 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. Following these wars in the 1960s, India resolved to strengthen the profile and capabilities of its Armed Forces.



Aircraft carrier INS Vikrant during the Indo-Pakistani War

of 1971. The ship played a crucial role in enforcing the naval blockade on <u>East Pakistan</u> 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. [57] Pakistan's lone longrange <u>submarine PNS Ghazi</u> was sunk following an attack by the <u>destroyer INS Rajput</u> off the coast of Visakhapatnam in the midnight of 3–4 December 1971. [58][59] 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. [60] To commemorate this, 4 December is celebrated as the Navy Day. [61] This was followed by Operation Python on 8 December 1971, further deprecating the Pakistan Navy's capabilities. [60] Indian frigate INS Khukri, commanded by Captain M. N. Mulla was sunk by PNS Hangor, while INS Kirpan was damaged on the west coast. [62] In the Bay of Bengal, the aircraft carrier INS Vikrant was deployed to successfully enforce the <u>naval blockade</u> on East Pakistan. <u>Sea Hawk</u> and the <u>Alizé</u> aircraft from INS *Vikrant* sank numerous gunboats and Pakistani merchant marine ships. [63] 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. [64] 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. [65]

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 Dora to support the government of Mauritius against a feared coup. [66] In 1986, in Operation Flowers are Blooming, the Indian Navy averted an attempted coup in the Seychelles. [67] 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. [68] During the 1999 Kargil War, the Western and Eastern fleets were deployed in the Northern Arabian Sea, as a part of Operation Talwar. [69] They safeguarded India's maritime assets from a potential Pakistani naval attack, and also deterred Pakistan from attempting to block India's sea-trade routes. [70] The Indian Navy's aviators flew sorties and marine commandos fought alongside Indian Army personnel in the Himalayas. [71]

In October 1999, the Navy along with the <u>Indian Coast Guard</u> rescued <u>MV *Alondra Rainbow*</u>, a pirated Japanese cargo ship. [72]

# 21st century onwards

## [edit]



Indian Navy flotilla including aircraft

carrier INS Viraat escorting INS Vikramaditya on its way home in 2014

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. [73]

The Indian Navy was a part of the joint forces exercises, <u>Operation Parakram</u>, during the <u>2001–2002 India–Pakistan standoff</u>. More than a dozen warships were deployed to the northern <u>Arabian Sea</u>. [74] In October, the Indian Navy took over operations to secure the <u>Strait of Malacca</u>, to relieve <u>US Navy resources for Operation Enduring Freedom</u>. [75]



Indian Navy flood relief operations in the aftermath of

floods and landslides in Sri Lanka

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. 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. 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. 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.



From top to bottom: <u>INS Ranjit</u>, <u>INS Jyoti</u> and <u>INS Mysore</u>

During the <u>2006 Israel-Lebanon conflict</u>, the Indian Navy launched <u>Operation Sukoon</u> 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. [80][81] In 2006, Indian naval doctors served for 102 days on

board <u>USNS Mercy</u> to conduct medical camps in the <u>Philippines</u>, Bangladesh, Indonesia and <u>East Timor</u>. [82] In 2007, Indian Navy supported relief operations for the survivors of <u>Cyclone Sidr</u> in Bangladesh. [83] In 2008, Indian Naval vessels were the first to launch international relief operations for victims of <u>Cyclone Nargis</u> in Myanmar. [84][85] In 2008, the navy deployed <u>INS Tabar</u> and <u>INS Mysore</u> into the <u>Gulf of Aden</u> to combat <u>piracy in Somalia</u>. [86] Tabar prevented numerous piracy attempts, and escorted hundreds of ships safely through the pirate-infested waters. [87] The navy also undertook anti-piracy patrols near the <u>Seychelles</u>, upon that country's request. [88][89]

In February 2011, the Indian Navy launched Operation Safe Homecoming and rescued Indian nationals from war torn Libya. 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. During the 2015 crisis in Yemen, the Indian Navy was part of Operation Raahat and rescued 3074 individuals of which 1291 were foreign nationals. On 15 April 2016, a Poseidon-81 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.

India enacted its first domestic anti-piracy legislation as the Maritime Anti-Piracy Act 2022, on 20 December 2022 criminalizing maritime piracy and empowering the Indian Navy and other government agencies with the authority to respond to threats at sea. [96] In 2024, Chief Admiral R. Hari Kumar referred to the new law as a "great enabler" in the navy's anti-piracy success. [97] That year, *The Economic Times* referred to the Indian Navy's commitment in combating maritime piracy as "unwavering". [96]



Indian Navy mission deployed in the North/Central Arabian

sea and Gulf of Aden following attack on tanker Chem Pluto

In January 2024, the Indian Navy deployed over 10 warships under Operation Sankalp to protect commercial shipping in the Gulf of Aden and the Arabian Sea in the wake of Houthi-led attacks on merchant vessels. Some of the ships deployed included guided missile destroyers like the INS Kolkata, INS Kochi, INS Chennai and INS Mormugao, as well as frigates like the INS Talwar and INS Tarkash. On 5 January, the INS Chennai prevented the hijacking of the Liberian merchant vessel MV Lila Norfolk. Although India declined to join the multinational US-led Operation Prosperity Guardian, the Indian Navy continued to share information and coordinate operations with the United States, United Kingdom, and France. [98]

In May 2024, the Navy officially replaced the terms "Jack" and "Jackstaff" with "National Flag" and "National Flag Staff". The words Jack and Jackstaff originates from the Royal Navy's traditions which implies for national flag and the short pole on the bow of the ship to host the flag in 'naval parlance', respectively. [99]

#### **Current role**

## [edit]



Indian Navy Carrier Battle Group deployment

during Operation Sindoor

As of August 2015, the Indian Navy is classified as a Rank 3 navy (Power projection to regions adjacent to its own) on the <u>Todd-Lindberg navy classification system</u> of naval strength. The principal roles of the Indian Navy are: 1002|103|

- 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, <u>economic</u> and security objectives;
- In co-operation with the <u>Indian Coast Guard</u>, 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**

[edit]

# Organisation

[edit]

Main article: List of serving admirals of the Indian Navy



PM Narendra Modi inspects Guard of honour at the Naval

Dockyard, 2025.

While the <u>President of India</u> serves as the Supreme Commander of the Indian Armed Forces, the organisational structure of the Indian Navy is headed by the <u>Chief of Naval Staff</u> (CNS), who holds the rank of <u>Admiral</u>. While the provision for the rank of <u>Admiral of the Fleet</u> exists, no officer of the Indian Navy has yet been conferred this rank. The CNS is assisted by the Vice Chief of Naval Staff

(VCNS), a <u>Vice Admiral</u>; 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 (PSO), along with the <u>Chief of Personnel</u> (COP) and the <u>Chief of Materiel</u> (COM), both of whom are also vice-admirals. The Director General Medical Services (Navy) is a Surgeon Vice-Admiral, heads the medical services of the Indian Navy.

The Indian Navy operates two operational <u>commands</u> and one training command. Each command is headed by a <u>Flag Officer Commanding-in-Chief</u> (FOC-in-C) of the rank of <u>Vice Admiral</u>. The Eastern and Western commands each have a Fleet commanded by a <u>Rear Admiral</u>. The <u>Western Fleet</u> based at <u>Mumbai</u> is commanded by the <u>Flag Officer Commanding Western Fleet</u> (FOCWF) and the <u>Eastern Fleet</u>, based at <u>Visakhapatnam</u>, is commanded by the <u>Flag Officer Commanding Eastern Fleet</u> (FOCEF). Apart from the two fleets, there is a Flotilla each, based at Mumbai, Visakhapatnam and Port Blair, that provide Local Naval Defence in their respective regions. [108]

The Eastern and Western commands each also have a Commodore commanding submarines (COMCOS) - the Commodore Commanding Submarines (East) and the Commodore Commanding Submarines (West). The Flag Officer Submarines, the single-point class authority for submarines is based at the Eastern Naval Command. The Southern Naval Command is home to the Flag Officer Sea Training (FOST). [110]

Additionally, the <u>Andaman and Nicobar Command</u> is a unified Indian Navy, <u>Indian Army</u>, <u>Indian Air Force</u>, and <u>Indian Coast Guard theater command</u> based at the capital, <u>Port Blair</u>. <u>[1111] Commander-in-Chief</u>, <u>Andaman and Nicobar Command</u> (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 <u>Andaman and Nicobar Islands</u> in 2001. <u>[112]</u>

# At operational command level [104]

At Nausena Bhawan, Delhi Cantt. (Navy headquarters) level [104][113][114] Post	Location	Current Holder	
Chief of the Naval Staff		Admiral Dinesh K Tripathi, PVSM, AVSM, NM <sup>[115]</sup>	
Vice Chief of the Naval Staff		Vice Admiral <u>Krishna Swaminathan</u> , AVSM, VSM <sup>[116]</sup>	
Deputy Chief of the Naval Staff	New Delhi	Vice Admiral <u>Tarun Sobti</u> , AVSM, VSM <sup>[117]</sup>	
Chief of Personnel		Vice Admiral Sanjay Bhalla, AVSM, NM <sup>[118]</sup>	
Chief of Materiel		Vice Admiral <u>Kiran Deshmukh</u> , AVSM, VSM <sup>[119]</sup>	
Commands	<b>HQ</b> Location	Current FOC-in-C	
Western Naval Command	Mumbai	Vice Admiral Sanjay Jasjit Singh, AVSM, NM <sup>[120]</sup>	
Eastern Naval Command	Visakhapatnam	Vice Admiral Rajesh Pendharkar, AVSM, VSM <sup>[121]</sup>	

**Kochi** 

#### **Facilities**

## [edit]

Main article: List of Indian Navy bases



Nalanda Complex of Indian Naval Academy, the largest

Naval training facility in Asia.

Indian Navy has its operational and training bases

in <u>Gujarat</u>, <u>Karnataka</u>, <u>Goa</u>, <u>Maharashtra</u>, <u>Lakshadweep</u>, <u>Kerala</u>, <u>Odisha</u>, <u>Tamil Nadu</u>, <u>Andhra Pradesh</u>, <u>West Bengal</u>, and <u>Andaman and Nicobar Islands</u>. These bases are intended for various purposes such as logistics and maintenance support, ammunition support, air stations, hospitals, <u>MARCOS</u> bases, coastal defence, missile defence, submarine and missile boat bases, forward operating bases etc. [123][124][125] Of these, <u>INS Shivaji</u> 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. [126]

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

The navy operates INS Kattabomman, a VLF and ELF transmission facility at Vijayanarayanapuram near Tirunelveli in Tamil Nadu. [132] INS Abhimanyu and INS Karna are two bases dedicated for MARCOS. [133][134] 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. [135][136]

## **Training**

# [edit]

Main article: Military academies in India



Indian Navy personnel issued with NWU Type-1

camo replacing previous "No. 10" uniform

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). The training year of Indian Navy is defined from 1 July to 30 June of the following year.

Seaman training is held at INS Chilika, Orissa.

Officer training is conducted at <u>Indian Naval Academy</u> (INA) at <u>Ezhimala</u>, on the coast of <u>Kerala</u>. Established in 2009, it is the largest naval academy in Asia. Cadets from <u>National Defence</u>

<u>Academy</u> also move to INA for their later terms. <u>[139]</u> 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 <u>[140]</u> along the coastline of India. <u>[141]</u> Naval officers also attend the tri-service institutions <u>National Defence</u>

<u>College, College of Defence Management</u> and <u>Defence Services Staff College</u> for various staff courses to higher command and staff appointments. The Navy's <u>War college</u> is the <u>Naval War College</u>, <u>Goa</u>. <u>[137]</u> A dedicated wing for naval architecture under Directorate of Naval Architecture at <u>IIT Delhi</u> is operated by the Navy. <u>[142]</u> Indian Navy also trains officers and men from the navies of friendly foreign countries. <u>[138]</u>

#### Rank structure

#### [edit]

Main article: Naval ranks and insignia of India

Strength of the Indian Navy

- 1. Officers 10,012 (14.9%)
- 2. Sailors 57,240 (85.1%)

As of 1 June 2019, the Navy has 10,012 officers and 57,240 sailors against a sanctioned strength of 11,557 officers and 74,046 sailors. 

[143] This strength is inclusive of personnel from Naval Air Arm, Marine Commando Force and Sagar Prahari Bal and exclusive of personnel from Armed Forces Medical Services. 
[144]

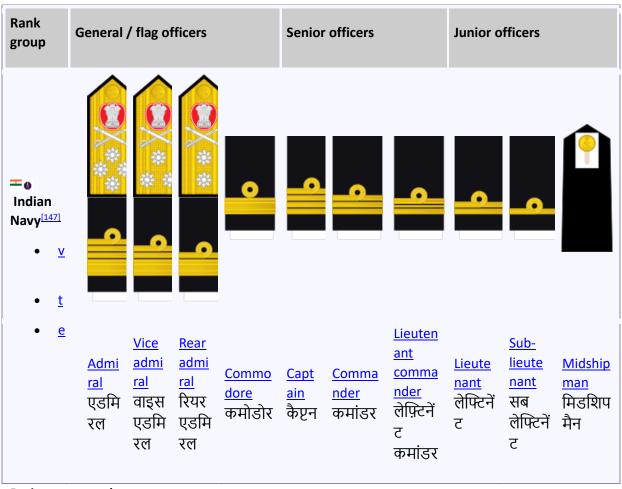
# Officers

[<u>edit</u>]

India uses the <u>Midshipman</u> rank in its navy, and all future officers carry the rank upon entering the <u>Indian Naval Academy</u>. They are commissioned <u>Sub-lieutenants</u> upon finishing their course of study. [145][146]

While the provision for the rank of <u>Admiral of the Fleet</u> 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 <u>Army</u> and <u>Air Force</u> have had officers who have been conferred with the equivalent rank – <u>Field Marshals Sam Manekshaw</u> and <u>Cariappa</u> of the Army and <u>Marshal of the Indian Air Force Arjan Singh. [105]</u>

The highest ranked naval officer in organisation structure is the <u>Chief of Naval Staff</u>, who holds the rank of admiral. [146]



## **Rating personnel**

## [<u>edit</u>]

Main article: Naval rating

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. [145]

Rank group Junior commissioned officers Non commissioned Enlisted
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## **Navy MCPO**

## [edit]

Main article: Navy Master Chief Petty Officer

Indian Navy has appointed Rajendra Kumar Behera MCPO I as the first Navy MCPO on 1 May 2022. [149]

# **Naval Air Arm**

## [edit]

Main article: <u>Indian Naval Air Arm</u>



Indian Navy <u>Dornier 228</u> flying over Island territory.

The naval air-arm of the Indian Navy currently operates twenty-one <u>air squadrons</u>. Of these, ten operate fixed-wing aircraft, eight are helicopter squadrons and the remaining three are equipped with <u>unmanned aerial vehicles</u> (UAV). Building on the legacy inherited from the Royal Navy prior to Indian independence, the concept of <u>naval aviation</u> 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 <u>pilot training</u>. In 1951, the Fleet Requirement Unit (FRU) was formed to meet the aviation requirements of the navy. [150]

On 1 January 1953, the charge of <u>Cochin</u> airfield was handed over to the navy from the <u>Directorate</u> <u>General of Civil Aviation</u>. On 11 March, the FRU was commissioned at Cochin with ten newly acquired <u>Sealand</u> aircraft. The navy's first air station, <u>INS *Garuda*</u>, was commissioned two months later. From February 1955 to December 1958, ten <u>Firefly</u> aircraft were acquired. To meet the training requirements of the pilots, the indigenously developed <u>HAL HT-2</u> trainer was inducted into the FRU. On 17 January 1959, the FRU was commissioned as <u>Indian Naval Air Squadron (INAS) 550</u>, to be the first Indian naval air squadron. [150]



HAL Dhruv during special operation

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 HAL-Dhruv and Chetak helicopters. The Kamov-31 choppers also provide the <u>airborne early warning</u> cover for the fleet. In the anti-submarine role, the <u>Sea King</u>, <u>Ka-28</u>, and the domestic built <u>HAL Dhruv</u> are used. The <u>MARCOS</u> also use Sea King and HAL Dhruv helicopters while conducting operations. Maritime patrol and reconnaissance operations are carried out by the <u>Boeing P-8</u> Poseidon and the <u>Ilyushin 38</u>. Iss Indian Navy is also procuring 24 Lockheed Martin MH-60R Multi Role Helicopters under the foreign military sales from the US.

The <u>UAV</u> arm consists of the <u>IAI Heron</u> and Searcher-IIs that are operated from both surface ships and shore establishments for surveillance missions. [162][163][164]

The Indian Navy also maintains an aerobatic display team, the <u>Sagar Pawan</u>. The Sagar Pawan team will be replacing their present Kiran <u>HJT-16</u> aircraft with the newly developed <u>HJT-36</u> aircraft. [165]

#### **MARCOS**

[<u>edit</u>]

Main article: MARCOS



A Marine Commando during urban combat training at

Malabar 2021.

The Marine Commando Force (MCF), also known as MARCOS, is a special operations unit that was raised by the Indian Navy in 1987 for Amphibious warfare, Close Quarter Combat Counterterrorism, 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. [133] 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. [166][167] They are also actively deployed on anti-piracy operations throughout the vear. [168][169]

## **Equipment**

[edit]

Ships

[edit]

Main article: <u>List of active Indian Navy ships</u>

See also: List of ships of the Indian Navy



Aircraft carriers INS Vikramaditya and INS Vikrant



INS Imphal (D68) firing BrahMos Extended Range



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*, whereas the sail boats are prefixed with

INSV (Indian Naval Sailing Vessel). The fleet of the Indian Navy is a mixture of domestic built and foreign vessels, as of May 2025, the surface fleet comprises 2 <u>aircraft carriers</u>, amphibious transport dock, and Indian Ship

 $\frac{\text{tanks},^{[175][176]}}{\text{vessels},^{[182]}} \ 13 \ \frac{\text{destroyers},^{[173]}}{\text{15}} \ 15 \ \frac{\text{frigates},^{[177][178]}}{\text{20}} \ 20 \ \frac{\text{corvettes},^{[177][179][180][181]}}{\text{20}} \ 10 \ \text{large offshore patrol} \ \frac{\text{vessels},^{[182]}}{\text{3}} \ 4 \ \frac{\text{fleet tankers},^{[183]}}{\text{7}} \ 7 \ \frac{\text{Survey ships},^{[184]}}{\text{1}} \ 1 \ \frac{\text{research vessel},^{[172]}}{\text{3}} \ 3 \ \frac{\text{training vessels},^{[172]}}{\text{3}} \ \text{and} \ \text{various} \ \frac{\text{auxiliary vessels},^{[183][185]}}{\text{10}} \ \text{and} \ \frac{\text{corvettes},^{[176]}}{\text{10}} \ \text{and} \ \text{small patrol boats},^{[183][185]}}$ 

The Navy has two aircraft carriers in active service, one of which is the INS Vikramaditya, which serves as the flagship of the fleet. Vikramaditya (formerly Admiral Gorshkov) is a modified Kievclass aircraft carrier procured at a total cost \$2.3 billion from Russia in December 2013. A second aircraft carrier, the indigenously built INS Vikrant was commissioned on 2 September 2022. The Navy has an amphibious transport dock of the Austin class, renamed as INS Jalashwa in Indian service. It also maintains a fleet of landing ship tanks.



INS Shakti, a Deepak-class fleet tanker

The navy currently operates three <u>Visakhapatnam</u>, three <u>Kolkata</u>, three <u>Delhi</u> and three <u>Rajput</u>-class <u>guided-missile destroyers</u>. The ships of the <u>Rajput</u> class are being replaced by the next-generation <u>Visakhapatnam-class destroyers</u> (Project 15B) which feature a number of improvements. [187]

In addition to destroyers, the navy operates several classes of frigates such as three <u>Shivalik</u> (Project 17 class) and six <u>Talwar</u>-class frigates. [177] Seven additional modified <u>Shivalik</u>-class frigates (<u>Project 17A class frigates</u>) are on order, all of which are under various stages of construction. Smaller <u>littoral zone combatants</u> in service are in the form of corvettes, of which the Indian Navy operates the <u>Kamorta</u>, <u>Kora</u>, <u>Khukri</u>, <u>Veer</u> and <u>Abhay-class</u> corvettes. [177][179][180] <u>Replenishment tankers</u> such as the <u>Jyoti-class tanker</u>, <u>INS Aditya</u> and the new <u>Deepak-class fleet tanker</u> help improve the navy's endurance at sea. [183]

#### **Submarines**

[edit]

Main article: <u>List of submarines of the Indian Navy</u>



INS *Kalvari*, conventional submarine of the Indian Navy

As of August 2024, the Navy's sub-surface fleet includes three <u>Arihant-class SSBN</u> 16 conventionally-powered attack <u>submarines</u>. The conventional attack submarines of the Indian Navy consist of five <u>Kalvari</u> (French <u>Scorpène-class</u> submarine design), seven <u>Sindhughosh</u> (Russian <u>Kilo-class</u> submarine design), and the four <u>Shishumar</u> (German <u>Type 209/1500</u> design) classes. [189][190][191]

India previously possessed a single <u>Akula</u>-class <u>nuclear-powered attack</u> <u>submarine</u> named <u>INS Chakra</u>. She was leased to India for a period of ten years, between 2012 and 2021. Three hundred Indian Navy personnel were trained in Russia for the operation of these submarines. Negotiations are on with Russia for the lease of the second Akula-class submarine. 1931[188]

INS Arihant was launched on 26 July 2009 in Visakhapatnam, and was secretly commissioned into active service in August 2016. The Navy plans to have six nuclear-powered ballistic missile submarines in service in the near future. 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.

India is planning to entirely modernise its submarine fleet. Initially, it was planned that 24 conventionally powered attack submarine would be acquired. First 12 submarines (6 <a href="Project 75">Project 75</a> and 6 <a href="Project 75">Project 75</a>) would be inducted by 2012 and the next 12 indigenous <a href="Project 76">Project 76</a> submarines would be inducted by 2030. However, this was revised in 2015. Now, the planned numbers stand at 4 SSBNs, 6 SSNs and 18 conventionally powered <a href="https://doi.org/10.1001/jan.2015/attack.numbers.num

- 5 Arihant-class submarines (2 operational, 2 launched, 1 planned)[188][198]
- 3 <u>S5-class submarine<sup>[199]</sup></u>
- 6 Project 75 Alpha-class nuclear attack submarines in 2 phases (also called Project 77 submarines)[188][198]
- 9 Project 75 (Kalvari) class submarines (6 operational, 3 more planned)[200][201]
- 6 Project 75I-class (Field Evaluation Phase)[202][203] and
- 12 indigenous <u>Project 76 submarines<sup>[204][205]</sup></u>

## **Aircraft**

## [edit]

Further information: Indian Naval Air Arm



MiG-29K operates from aircraft carriers



Boeing P-81 maritime patrol aircraft



Kamov Ka-31 naval helicopter



Sea King WS-61 of the Indian Navy

The <u>air arm</u> of the Indian Navy was established in 1948. The navy operates 26 air squadrons stationed across eight naval air stations that operate under the flag officers of the various naval commands. [206][207] The air arm maintains a fleet of <u>combat</u> and <u>maritime patrol aircraft</u>, various <u>helicopters</u>, and <u>unmanned aerial vehicles</u>. [208]

Δ	Aircraft	Origin	Туре	Variant	In service	Notes	
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Combat					
Dassault Rafale	France	<u>Multirole</u>	Rafale M	_	26 (22 single-seat and four twin-seat) on order <sup>[209]</sup>
Mikoyan MiG- 29K	Russia		MiG-29K / MiG-29KUB	40[210][211]	Includes six trainer aircraft <sup>[211][212]</sup>
Patrol / Utility		,			
Boeing P-8	United States	ASW / Patrol	<u>P-81</u>	12[213][214]	
Britten- Norman BN-2	United Kingdom	Patrol / Utility	BN-2B/2T <sup>[215]</sup>	4 <sup>[214]</sup>	
Dornier 228	Germany / India <sup>[a]</sup>	Patrol / Surveillance	<u>228-201</u>	29[214]	6 on order <sup>[216]</sup>
Helicopter	,	1	1		
Aérospatiale Alouette III	France / India <sup>[a]</sup>	<u>Utility</u>	<u>Chetak</u>	42 <sup>[214]</sup>	
HAL Dhruv	India		Dhruv Mk I/III	24 <sup>[214]</sup>	
Kamov Ka-27	Russia		<u>Ka-28</u>	14[214]	
Westland Sea King	United Kingdom	<u>ASW</u>	WS-61 Mk 42B <sup>[217]</sup>	25 <sup>[214]</sup>	
Kamov Ka-31	Russia	AEW	<u>Ka-31</u>	14 <sup>[214]</sup>	
Sikorsky SH-60	United States	Combat / Utility	MH-60R <sup>[218]</sup>	13 <sup>[219]</sup>	11 on order <sup>[220]</sup>
<u>Trainer</u>					
BAE Hawk	United Kingdom / India <sup>[a]</sup>	<u>Jet trainer</u>	Hawk 132	17 <sup>[214]</sup>	
HAL Kiran	India		<u>HJT-16</u>	20[214]	
Pipistrel Virus	Slovenia	Ab-initio trainer	Garud	12[221]	
<u>UAV</u>		1		!	

Aircraft	Origin	Туре	Variant	In service	Notes
<u>Combat</u>					
Elbit Hermes 900	Israel / India <sup>[b]</sup>	<u>Surveillance</u>	<u>Drishti-10</u>	2 <sup>[222][223]</sup>	
IAI Heron	Israel		Heron Mk I	10[217][224]	
General Atomics MQ-9 Reaper	United States	Combat / Surveillance	SeaGuardian	2 <sup>[225]</sup>	15 on order <sup>[226]</sup>

## Weapon systems

## [edit]

Main article: <u>Weapon systems of the Indian Navy</u>



VL-SRSAM fired from Naval ship will replace Barak-1 in



Shakti Thermal Torpedo

The Navy use a mix of indigenously developed and foreign made <u>missile</u> systems. These include submarine-launched ballistic missiles, ship-launched ballistic missiles, cruise and anti-ship missiles, air-to-air missiles, surface-to-air missiles, torpedoes, air-to-air guns, main guns and anti-submarine rocket launchers. Its inventory comprises 100 mm (3.9 in) <u>AK 190</u> gun with a range of 21.5 kilometres (13.4 mi), 130 kilometres (81 mi) <u>KH-35E</u> 4 Quad Uran, ASW <u>RBU-2000</u> etc. [227]

In recent years, <u>BrahMos</u> has been one of the most advanced missile system adapted by the Indian Navy. It has been jointly developed by India's <u>Defence Research and Development</u> <u>Organisation</u> (DRDO) and Russian <u>NPO Mashinostroyeniya</u>. BrahMos is the world's fastest anti-ship cruise missile in operation. 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 <u>INS Raiput</u> provides Indian Navy with precision land attack capability. [229]

India has also fitted its <u>Boeing P-8I</u> reconnaissance aircraft with all-weather, <u>active-radar-homing</u>, over-the-horizon <u>AGM-84L Harpoon Block II missiles</u> and <u>Mk 54</u> All-Up-Round Lightweight Torpedoes. [230] Indian warships' primary air-defence shield is provided by <u>Barak 1</u> surface-to-air missile while an advanced version <u>Barak 8</u> is in development in collaboration with Israel. [231] India's next-generation <u>Scorpène-class</u> submarines will be armed with <u>Exocet anti-ship missile</u> system. Among indigenous missiles, ship-launched version of <u>Prithvi-II</u> is called <u>Dhanush</u>, which has a range of 350 kilometres (220 mi) and can carry nuclear warheads. [232]

The K-15 <u>Sagarika</u> (Oceanic) <u>submarine-launched ballistic missile (SLBM)</u>, 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. [2331[234] A longer range submarine launched ballistic missile called <u>K-4</u> is under induction process, to be followed by <u>K-5 SLBM</u>. [235]

## Electronic warfare and systems management

#### [edit]

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. [236]

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 satellites. [237][238][239] 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. [240]

The Navy has a dedicated cadre for matters pertaining to information technology cadre named as Information Technology Cadre, [241] 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. [242]

#### **Naval satellite**

[edit]

India's first exclusive defence satellite <u>GSAT-7</u> was successfully launched by European space consortium Arianespace's rocket from <u>Kourou spaceport</u> in <u>French Guiana</u> in August 2013. GSAT-7 was fabricated by the <u>Indian Space Research Organisation</u> (ISRO) to serve for at least seven years in its orbital slot at 74°E, providing <u>UHF</u>, <u>S-band</u>, <u>C-band</u> and <u>Ku-band</u> 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. [243]

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. [243]

On 15 June 2019 the navy placed an order for <u>GSAT-7R</u> satellite as a replacement for GSAT-7. The satellite costs Rs 1589 crores (US\$225.5 million) and is expected to be launched by 2020. [244][245]

#### **Activities**

[edit]

See also: <u>List of Indian Naval Deployments</u>

Fleet reviews

[edit]

Main article: <u>President's fleet review</u>



President of India taking salute unveiling Indian Navy's

Standard and Color highlighting India's maritime heritage

The <u>President of India</u> is entitled to inspect his/her fleet, as he/she is the supreme commander of the <u>Indian Armed Forces</u>. The first president's fleet review by India was hosted by <u>Rajendra Prasad</u> on 10 October 1953. President's reviews usually take place once in the President's term. In all, twelve fleet reviews have taken place, including two International fleet reviews in 2011 and 2016. The latest fleet review was held in February 2022 at Visakhapatnam, by President <u>Ram Nath Kovind</u>. [246]

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. [247] The second international fleet review, the <u>International Fleet Review 2016</u>, was held off Visakhapatnam coast in February 2016 where Indian Navy's focus was on improving diplomatic relations and military compatibility with other nations. [246]

#### **Naval exercises**

[edit]



Milan exercise 2024 grows in size with 50 foreign countries

participating<sup>[248]</sup> from 4 in 1995<sup>[249]</sup>

India often conducts naval exercises (like <u>Maritime Partnership Exercise</u>) with other friendly countries designed to increase naval cooperation and also to strengthen cooperative security relationship. Some such exercises take place annually or biennially:

Exercise	Navy/Navies	First Edition	Last Edition	Total Editions	Notes/ References
Milan	Multilateral	1995	2024	12	[250]
<u>Varuna</u>	French Navy	1993	2023	21	[251]
Konkan	Royal Navy	2004	2023	16	[252][253]
INDRA	Russian Navy	2003	2021	12	[254][255]
MALABAR	US Navy, JMSDF, Royal Australian Navy (Flag exercise of the QUAD navies)	1992	2023	26	[256][257]
SIMBEX	Singapore Navy	1994	2021	28	[258]
IBSAMAR	Brazilian Navy, South African Navy	2008	2022	7	[259]
SITMEX	Singapore Navy, Thai Navy	2019	2021	3	[260]
SLINEX	<u>Sri Lanka Navy</u>	2012	2020	8	[261][262]
NASEEM-AL- BAHR	Oman Navy	1993	2022	13	[263][264]
AUSINDEX	Australian Navy	2015	2023	5	[265]
JIMEX	JMSDF	2012	2023	11	[266]
ZA'IR-AL-BAHR	Qatari Navy	2019	2021	2	[267][268]
SAMUDRA	Indonesian Navy	2018	2023	4	[269]

SHAKTI					
BONGOSAGAR	Bangladesh Navy	2019	2023	5	[270]
Zayed Talwar	UAE Navy	2021	2023	2	[271]
Al-Mohed Al- Hindi	Saudi Navy	2021	2023	2	[272]
AIKEYME	<u>Africa</u>	2025	2025	1	[273]



INS Kamorta in Japan for International fleet review

Coordinated patrols include: Indo-Thai CORPAT (28 editions), [274] Indonesia-India CORPAT (33 editions), [275] IMCOR with Myanmar (8 editions). [276] The Indian Navy conducted a naval exercise with the People's Liberation Army Navy in 2003, [277] and also sent ships to the South China Sea to participate in the fleet review. [278] In 2005, 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. [279] TROPEX has been conducted annually every year with an exception to 2016. [280] In 2007, Indian Navy conducted naval exercises with Japan Maritime Self-Defence Force and U.S. Navy in the Pacific, [281] and also signed an agreement with Japan in October 2008 for joint naval patrolling in the Asia-Pacific region. [282] In 2007, India conducted naval exercises with Vietnam, [283] Philippines, [284] and New Zealand. [285] In 2007, India and South Korea conducted an annual naval exercise, [286] alongside India's participation in the South Korean International Fleet Review in 2008. [287] 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. [288] Once in two years navies from the Indian Ocean region meet at the Andaman and Nicobar Islands for the Exercise MILAN. [289] In 2021 India assisted in US-led Exercise Cutlass Express as a trainer. [290][291]



Indian Navy's destroyers sailing in unison during Exercise

Tropex 2025

In 2007 India held the first <u>Indian Ocean Naval Symposium</u> (IONS) with an objective to provide a forum for all the <u>littoral nations</u> of the Indian Ocean to co-operate on mutually agreed areas for better security in the region. [292][293] Since the past decade, Indian naval ships have made goodwill port calls

to <u>Israel</u>, <u>[1294][295]</u> <u>Turkey</u>, <u>[296]</u> <u>Egypt</u>, <u>[297]</u> <u>Greece</u>, <u>[298]</u> <u>Thailand</u>, <u>[1299]</u> <u>Indonesia</u>, <u>[300]</u> Australia, <u>[301]</u> <u>New Zealand</u>, <u>[302]</u> <u>Tonga</u>, <u>[303]</u> South Africa, <u>[304]</u> <u>Kenya</u>, <u>[305]</u> <u>Qatar</u>, <u>[306]</u> Oman, <u>[307]</u> <u>United Arab</u> <u>Emirates</u>, <u>[308]</u> Bahrain, <u>[309]</u> Kuwait, <u>[310]</u> and various other countries.

## **Exploration**

## [edit]



Lt Cdr Dilna K & Lt Cdr Roopa crossed Point

Nemo in INSV Tarini, during their Navika Sagar Parikrama II expedition

The Indian Navy regularly conducts adventure expeditions. The <u>sailing ship</u> and training vessel <u>INS *Tarangini*</u> 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. [311]

Lt. Cdr. M. S. Kohli led the Indian Navy's first successful expedition to Mount Everest in 1965; [312] 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. [313] 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. [314] In 2017, to commemorate 50 years of the Navy's first expedition in 1965, a team set off to climb Mount Everest. [312]

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

The Indian Naval ensign first flew in Antarctica in 1981. [317] 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. [318] 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. [319] 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. [320] Cdr. Abhilash Tomy became the first Indian

to complete a solo, non-stop circumnavigation of the world on a sailboat not fitted with any technology or navigational aids. [321][322]

<u>Navika Sagar Parikrama</u> (lit. 'Sailors' Sea Circumambulation') was a circumnavigation of the globe by female officers of the Indian Navy. The six-member all-woman team circumnavigated and managed the whole operation in their first-ever global journey, with their ship <u>INSV *Tarini*</u> that lasted 254 days. [323] Navika Sagar Parikrama II is led by two women officers. [324]

## **Future of the Indian Navy**

#### [edit]

Main article: Future of the Indian Navy



HAL TEDBF will replace the MiG-29Ks in service.

By the end of the 14th Plan (2020), the Indian Navy was expected 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 was tasked with responding to emergencies far away from the Indian mainland. Marine assault capabilities were to be enhanced by setting up a new amphibious warfare facility at <a href="Kakinada">Kakinada</a>, Andhra Pradesh. <a href="#Sa55">[325]</a>

Since then, the Indian Navy has initiated Phase II expansion of <a href="INS Kadamba">INS Kadamba</a>, its third largest naval base, near <a href="Karwar">Karwar</a>. Phase II will involve expansion of the berthing facilities to accommodate 40–45 more front-line warships, including the aircraft carrier INS <a href="Vikramaditya">Vikramaditya</a>, 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. <a href="ISS6|[327][328][329]">[326][327][328][329]</a> The Indian Navy is also in the process of constructing a new naval base, <a href="INS Varsha">INS Varsha</a>, at <a href="Rambilli">Rambilli</a> for its <a href="Arihant class">Arihant class</a> submarines. <a href="ISS6">[330]</a>



Hypersonic LRAShM undergoing tests

India's planned second aircraft carrier, <u>INS Vishal</u> (formerly known as *Indigenous Aircraft Carrier-II*), will displace around 65,000 tonnes and is expected to be delivered to the Indian Navy in the mid-2030s. With the future delivery of *Vishal*, the Navy's goal to have three aircraft carriers in service, with two fully operational carriers and a third in refit, will be achieved. [331][332]

In November 2011, the *Defence Acquisition Council* launched the <u>Multi-Role Support Vessel</u>. The Indian Navy has subsequently sent out an international RFP for up to 2 large <u>landing helicopter</u> <u>docks</u>. The contenders are expected to tie up with local shipyards for construction of the ships. [333]

In addition to aircraft carriers and large amphibious assault ships, the Indian Navy is acquiring numerous surface combatants such as the <a href="Project 17A-class">Project 17A-class</a> [334] and <a href="Talwar-class">Talwar-class</a> [335] frigates, <a href="ASW">ASW</a> shallow water corvettes, <a href="[336]</a> ASuW corvettes, <a href="[337]">[337]</a> and <a href="MCM vessels">MCM vessels</a>. <a href="[338]</a> It plans to build <a href="Project 18-class destroyer">Project 17B-class frigate</a>. New submarine classes under various stages of planning include the <a href="Project 75 Alpha,">Project 75 Alpha,<a href="[339]</a> Project <a href="751">Project 751</a>, <a href="[340]</a> and the nuclear-powered <a href="Arihant class">Arihant class</a>. <a href="[341]</a> New auxiliary ships include; five replenishment oilers, a Missile Range Instrumentation Ship (MRIS) and an Ocean Surveillance Ship. <a href="3342">[342]</a>

#### Matangi ASV on autonomous transit

In 2024, Sagar Defence Engineering Pvt Ltd demonstrated 850 nautical mile autonomous transit of, Matangi Autonomous Surface Vessel to the Indian Navy. The autonomous transit began from Mumbai and ended at Toothukudi. This demonstration was part of Indian Navy's Swavalamban 2024 self reliance in technology contest to enable the development of autonomous vessels for various military applications. [343] These boats are equipped with 12.7mm SRCG gun and is capable of day and night patrolling with speed above 50 knots. 12 such autonomous boats are to be acquired by the Indian Navy and will also be used to patrol Pangong Tso lake. The Indian Navy is also acquiring 30 autonomous underwater vehicles. [344] The Indian Navy is planning to procure 22 General Atomics Sea Guardian drones at an estimated cost of \$2 billion. [345] This is the first instance of General Atomics drones being sold to a non-NATO military. [345]

#### **Indian Naval Ensign**

[edit]

Main article: Indian Naval Ensign



The rajmudra (seal) used by Shivaji I.

The Indian Navy from 1950 to 2001 used a modified version of the British White Ensign, with the Union flag replaced with the Indian Tricolour 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. [346] 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. [347]

The traditional <u>crest</u> of Indian Navy ships is topped by a <u>crown</u> featuring three <u>sailing</u> <u>ships</u> symbolising India's rich <u>maritime history</u>. The ribbon of the crown depicts the <u>Ashoka</u> <u>Chakra</u> surrounded by a <u>horse</u> and a <u>bull</u>. Each ship has a unique <u>motif</u> which is encircled by a ring of <u>lotus buds</u>. [348]

In August 2022, the <u>Prime Minister's Office</u> announced that the naval ensign featuring the <u>Saint George's Cross</u> would be irrevocably disposed of, in favour of a newer design derived from octagonal shaped imperial seal of <u>Chhatrapati Shivaji Maharaj</u> and his <u>Maratha Navy</u> that would "do away with the colonial past" and reflect the "rich Indian maritime heritage". [349] The new ensign is slated to be revealed by <u>prime minister Narendra Modi</u> on 2 September 2022, coinciding with the commissioning ceremony of <u>INS Vikrant</u>, the Indian Navy's first indigenously built <u>aircraft carrier</u>. [349] The new ensign retains much the design of the 2001-04 ensign with the national flag as the canton, but with the addition of an octagonal navy blue shield based on Shivaji's royal seal surrounding the heraldic arms in gold and the addition of the official motto of the Navy *May the Lord of Waters Be Auspicious Unto Us (Shaṁ No Varunaḥ*) in the Devanagari script.

#### **Documents**

## [edit]

Indian Ma		
2004, 200	9, 2014	
Author	Maritime Doctrines and Concepts Centre (MDCC)	
Publisher	Integrated Headquarters, Ministry of Defence (Navy)	
Website	https://www.indiannavy.nic.in/content/indian- maritime-doctrine-2015-version	

The Indian Maritime Doctrine is a foundational primer document of the Indian Navy. Three editions have been published in 2004, 2009 and 2014. It has to be considered along with other foundational documents such as the naval strategy *Freedom to Use the Seas* (2007) and the updated edition *Ensuring Secure Seas* (2015). [350]

The 2004 edition (INBR 8) was published amidst a larger strategic overhaul in the country. It contains a large number of key words along with their definitions and grouped into a number of sections. [351] Select themes pervade throughout the document. [351] Some themes are subtle such as

the ongoing and future transition to a blue-water navy and others are louder such as the text related to nuclear submarines and aircraft carriers. [351] There is justification and explanation for India's need for these transitions and acquisitions. [351] The 2009 edition was updated to include counter-terror, counter-piracy and coordination with other navies in these aspects. [351]