



**GUJARAT UNIVERSITY**  
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**A VIRTUAL EXHIBITION ON INDIAN NAVY  
ON THE OCCASION OF**

**INDIAN NAVY DAY**





# Indian Navy



**The Indian Navy is a well balanced three-dimensional force, capable of operating above, on and under the surface of the oceans and safeguard our national interests. Its objective is also to improve its circumstances in the Indian Ocean Zone.**

**It is the marine branch of the Indian Armed Forces and the Commander-in-Chief of Indian Navy is President of India. Chhatrapati Shivaji Bhosle, the Maratha emperor of the 17th century is considered as the “Father of the Indian Navy” . On 4 December 2019, Prime Minister Narendra Modi greeted Indian Navy personnel by saying "We salute our Navy personnel. Their valuable service and sacrifice have made our nation stronger and safer".**



**The role of the Indian Navy is to secure the marine edges of the country and update the worldwide relations of India through seaport visits, joint exercises, altruistic missions, upheaval help, etc. Its objective is also to improve the circumstance in the Indian Ocean Zone.**





# Indian Navy Day



**Indian Navy Day is celebrated on December 4 in commemoration of Operation Trident, the attack launched by the Indian Navy on Karachi harbour during 1971's Indo-Pakistan war.**

**It was for the first time that an anti-ship missile was used in the operation. The operation was conducted on the night of December 4-5 and it inflicted heavy damage on Pakistani vessels. India did not suffer any loss during the operation.**

**As part of the operation, the Indian Navy sank four Pakistani vessels and ravaged Karachi harbour fuel fields in Pakistan.**

**The Indian Navy's three warships -- INS Nipat, INS Nirghat and INS Veer -- played an important role in the attack.**

**The Indian Navy fleet sailed from Gujarat's Okha Port towards Pakistani waters to attack the Karachi port. The fleet reached 70 miles south of Karachi at night and after missiles were fired Pakistani vessel**





# About Indian Navy

**The Indian Navy is a well-balanced and cohesive three-dimensional force, capable of operating above, on and under the surface of the oceans, efficiently safeguarding our national interests.**

**The Chief of the Naval Staff (CNS) exercises operational and administrative control of the Indian Navy from the Integrated Headquarters of Ministry of Defence (Navy). He is assisted by the Vice Chief of the Naval Staff (VCNS) and three other Principal Staff Officers, namely the Deputy Chief of the Naval Staff (DCNS), the Chief of Personnel (COP) and the Chief of Material (COM).**

**The Navy has the following three Commands, each under the control of a Flag Officer Commanding-in-Chief:-**

- **The Western Naval Command (Headquarters at Mumbai).**
- **The Eastern Naval Command (Headquarters at Visakhapatnam)**
- **The Southern Naval Command (Headquarters at Kochi)**





# About Indian Navy



**The Western and the Eastern Naval Commands are 'Operational Commands', and exercise control over operations in the Arabian Sea and the Bay of Bengal respectively. The Southern Command is the Training Command.**

**The cutting edge of the Indian Navy are its two Fleets, namely the Western Fleet, based at Mumbai and the Eastern Fleet, based at Visakhapatnam. Besides the Fleets, there is a Flotilla each, based at Mumbai, Visakhapatnam and Port Blair (A & N Islands), that provide Local Naval Defence in their respective regions. Naval ships are also based at other ports along the East and the West coasts of India and the island territories, thus ensuring continued naval presence in the areas of national interest. Further, there are various Naval Officer-in-Charges (NOICs), under each Command, responsible for the Local Naval Defence of ports under their respective jurisdictions.**

**The defence of the Andaman & Nicobar Islands is a joint responsibility of all the three services and is coordinated by the Headquarters, Andaman & Nicobar Command, located at Port Blair. This is the only Tri-Services Command in the Indian Armed Forces and is headed by a Commander-in-Chief, as appointed in rotation from the three Services. The Local Naval Defence of the Lakshadweep group of islands is the responsibility of the Naval Officer-in-Charge, Lakshadweep.**



# Early History of Indian Navy



**Harrappa Rig Veda Atharva Veda Varuna Devas Danavas Aditi Kashayapa  
Chandragupta Aryabhatta Vijaynagaram Kalinga Portuguese Vasco da Gama  
Moghuls Shivaji HMS Hindostan Cornwallis Bombay Dock.**

**India's maritime history predates the birth of western civilisation. The world's first tidal dock is believed to have been built at Lothal around 2300 BC during the Harappan Civilisation, near the present day Mangrol harbour on the Gujarat coast.**

**Malan ni pothi. 19th century Kutchi mariner's log book The Rig Veda, written around 2000 BC, credits Varuna with knowledge of the ocean routes commonly used by ships and describes naval expeditions which used hundred-oared ships to subdue other kingdoms. There is a reference to Plava, the side wings of a vessel which give stability under storm conditions: perhaps the precursor of modern stabilisers. Similarly, the Atharva Veda mentions boats which were spacious, well constructed and comfortable.**







# Early History of Indian Navy



**In Indian mythology, Varuna was the exalted deity to whom lesser mortals turned for forgiveness of their sins. It is only later that Indra became known as the King of the Gods, and Varuna was relegated to become the God of Seas and Rivers. The ocean, recognised as the repository of numerous treasures, was churned by the Devas and Danavas, the sons of Kashyapa by queens Aditi and Diti, in order to obtain Amrit, the nectar of immortality. Even today the invocation at the launching ceremony of a warship is addressed to Aditi.**

**The influence of the sea on Indian kingdoms continued to grow with the passage of time. North-west India came under the influence of Alexander the Great, who built a harbour at Patala where the Indus branches into two just before entering the Arabian Sea. His army returned to Mesopotamia in ships built in Sind. Records show that in the period after his conquest, Chandragupta Maurya established an Admiralty Division under a Superintendent of Ships as part of his war office, with a charter including responsibility for navigation on the seas, oceans, lakes and rivers. History records that Indian ships traded with countries as far as Java and Sumatra, and available evidence indicates that they were also trading with other countries in the Pacific and Indian Oceans. Even before Alexander there were references to India in Greek works, and India had a flourishing trade with Rome. The Roman writer Pliny speaks of Indian traders carrying away large quantities of gold from Rome, in payment for much-sought exports such as precious stones, skins, clothes, spices, sandalwood, perfumes, herbs and indigo.**



# Early History of Indian Navy



**Trade of this volume could not have been conducted over the centuries without appropriate navigational skills. Two Indian astronomers of repute, Aryabhata and Varahamihira, having accurately mapped the positions of celestial bodies, developed a method of computing a ship's position from the stars. A crude forerunner of the modern magnetic compass was being used around the fourth or fifth century AD. Called Matsya Yantra, it comprised an iron fish that floated in a vessel of oil and pointed North.**

**Between the fifth and tenth centuries AD, the Vijaynagaram and Kalinga kingdoms of southern and eastern India had established their rule over Malaya, Sumatra and Western Java. The Andaman and Nicobar Islands then served as an important midway point for trade between the Indian peninsula and these kingdoms, as also with China. The daily revenue from the eastern regions in the period 844-848 AD was estimated at 200 maunds (eight tons) of gold. In the period 984-1042 AD, the Chola kings despatched great naval expeditions which occupied parts of Burma, Malaya and Sumatra, while suppressing piracy by the Sumatran warlords. In 1292 AD, Marco Polo described Indian ships as " ...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."**





# Early History of Indian Navy



**A fourteenth century description of an Indian ship credits it with a carrying capacity of over 100 people, giving a fair idea of both the shipbuilding skills and the maritime ability of seamen who could successfully man such a large vessel. Another account of the early fifteenth century describes Indian ships as being built in compartments so that even if one part was damaged, the rest remained intact, enabling the ship to complete her voyage — a forerunner of the modern day subdivision of ships into watertight compartments; a concept then totally alien to the Europeans.**





# The crest of the second "Cornwallis"



The decline of Indian maritime power commenced in the thirteenth century, and Indian sea power had almost disappeared when the Portuguese arrived in India. The latter imposed a system of licence for trade, and set upon all Asian vessels not holding permits from them. A Naval engagement in Bombay Harbour in 1529 resulted in Thana, Bandora and Karanja agreeing to pay tribute to the Portuguese, and a grand naval review was held by them in 1531. They took complete control of the harbour in 1534 and finally ceded it to the British in 1662, under a treaty of marriage between Charles II and Infanta Catherine of Braganza.

The piracy by the Portuguese was challenged by the Zamorin of Calicut when Vasco da Gama, after obtaining permission to trade, refused to pay the customs levy. Two major engagements were fought during this period. The first, the Battle of Cochin in 1503, clearly revealed the weakness of the Indian navies and indicated to the Europeans an opportunity for building a naval empire. The second engagement off Diu in 1509 gave the Portuguese mastery over Indian seas, and laid the foundation of European control over Indian waters for the next 400 years.





# The crest of the second "Cornwallis"



Indian maritime interests witnessed a remarkable resurgence in the late seventeenth century, when the Sidis of Janjira allied with the Moghuls to become a major power on the West Coast. This led to the Maratha King Shivaji creating his own fleet, commanded by able Admirals like Sidhoji Gujar and later Kanhoji Angre. This Maratha fleet along with the legend of Kanhoji held sway over the entire Konkan Coast, keeping the English, Dutch and Portuguese at bay. The death of Angre in 1729, left a vacuum in leadership, and this resulted in the decline of the Maratha sea power.

Despite the eclipse of Indian kingdoms with the advent of western domination, Indian shipbuilders continued to hold their own well into the nineteenth century. Ships displacing 800 to 1000 tons were built of teak at Daman and were superior to their British counterparts both in design and durability. This so agitated British shipbuilders on the River Thames that they protested against the use of Indian-built ships to carry trade from England. Consequently active measures were adopted to cripple the Indian industry. Nevertheless, many Indian ships were inducted into the Royal Navy, such as HMS Hindostan in 1795, the frigate Cornwallis in 1800, HMS Camel in 1806 and HMS Ceylon in 1808. HMS Asia carried the flag of Admiral Codrington at the Battle of Navarino in 1827 — the last major sea battle to be fought entirely under sail.



# The crest of the second "Cornwallis"



**Treaty of Nanking being signed onboard 'Cornwallis' on 29 Aug 1842** Two Indian-built ships witnessed history in the making: the Treaty of Nanking, ceding Hong Kong to the British, was signed on board HMS Cornwallis in 1842, whilst the national anthem of the United States of America, "The Star Spangled Banner," was composed by Francis Key on board HMS Minden when the British ships were at war and attempting to reduce Fort McHenry in Baltimore, Maryland.

Numerous other ships were also constructed, the most famous being HMS Trincomalee, which was launched on 19 October 1817, carrying 46 guns and displacing 1065 tons. This ship was later renamed Foudroyant, and is reputed to be the oldest ship afloat built in India.

The Bombay Dock was completed in July 1735 and is in use even today. The period of 4000 years between Lothal and Bombay Dock, therefore, offers tangible evidence of the seafaring skills the nation possessed in the days of sail. Thus, in the early seventeenth century, when British naval ships came to India, they discovered the existence of considerable shipbuilding and repair skills, and a seafaring people—an ideal combination for supporting a fighting force.





# Genesis of Indian Navy



**The history of the Indian Navy can be traced back to 1612 when Captain Best encountered and defeated the Portuguese. This encounter, as also the trouble caused by the pirates, forced the British East India Company to maintain a small fleet at Swally, near Surat(Gujarat). The First Squadron of fighting ships arrived on 5 September 1612, forming what was then called the Honourable East India Company's Marine. It was responsible for the protection of the East India Company's trade in the Gulf of Cambay and the river mouths of the Tapti and Narmada. The officers and the men of this force went on to play an important role in surveying the Arabian, Persian and Indian coastlines.**



**Although Bombay had been ceded to the British in 1662, they physically took possession of the island on 8 February 1665, only to pass it on to the East India Company on 27 September 1668./ As a consequence, the Honourable East India Company's Marine also became responsible for the protection of trade off Bombay.**



# Genesis of Indian Navy



**By 1686, with British commerce having shifted predominantly to Bombay, the name of this force was changed to Bombay Marine. This force rendered unique service, fighting not only the Portuguese, Dutch and French, but also interlopers and pirates of various nationalities. The Bombay Marine was involved in combat against the Marathas and the Sidis and participated in the Burma War in 1824.**

**In 1830, the Bombay Marine was renamed Her Majesty's Indian Navy. With the capture of Aden by the British and the institution of the Indus Flotilla, the Navy's commitments grew manifold, and its deployment in the China War in 1840 bears adequate testimony to its proficiency.**

**Whilst the Navy's strength continued to grow, it underwent numerous changes of nomenclature over the next few decades. It was renamed the Bombay Marine from 1863 to 1877, after which it became Her Majesty's Indian Marine. At this time, the Marine had two divisions, the Eastern Division based at Calcutta under the Superintendent, Bay of Bengal, and the Western Division at Bombay under the Superintendent, Arabian Sea. In recognition of the services rendered during various campaigns, its title was changed to Royal Indian Marine in 1892, by which time it consisted of over 50 vessels. The Royal Indian Marine went into action with a fleet of minesweepers, patrol vessels and troop carriers during the First World War when mines were detected off Bombay and Aden, and was utilised mainly for patrolling, ferrying troops and carrying war stores to Iraq, Egypt and East Africa.**





# Genesis of Indian Navy



**The first Indian to be granted a commission was Sub Lieutenant D.N Mukherji who joined the Royal Indian Marine as an engineer officer in 1928. In 1934, the Royal Indian Marine was re-organised into the Royal Indian Navy, and was presented the King's Colour in 1935 in recognition of its services. At the outbreak of the Second World War, the Royal Indian Navy consisted of eight warships. By the end of the war, its strength had risen to 117 combat vessels and 30,000 personnel who had seen action in various theatres of operations.**

**On India attaining Independence, the Royal Indian Navy consisted of 32 ageing vessels suitable only for coastal patrol, along with 11,000 officers and men. The senior officers were drawn from the Royal Navy, with R Adm ITS Hall, CIE, being the first Post-independence Commander-in-Chief. The prefix 'Royal' was dropped on 26 January 1950 with India being constituted as a Republic. The first Commander-in-Chief of the Indian Navy was Adm Sir Edward Parry, KCB, who handed over to Adm Sir Mark Pizey, KBE, CB, DSO in 1951. Adm Pizey also became the first Chief of the Naval Staff in 1955, and was succeeded by V Adm SH Carlill, CB, DSO.**

**On 22 April 1958 V Adm RD Katari assumed office as the first Indian Chief of the Naval Staff.**

**Transition to Triumph - 1965-1975**

**Transition to Eminence - 1976-1990**



# Role of Navy



The full range of operations in which a nation's naval forces may be involved is vast, ranging from high intensity war fighting at one end to humanitarian assistance and disaster relief operations at the other. This broad continuum of operations can be broken down into distinct roles, each demanding a specific approach to the conduct of operations.

Accordingly, the four main roles envisaged for the Indian Navy are as follows:-

- THE MILITARY ROLE
- THE DIPLOMATIC ROLE
- CONSTABULARY ROLE
- BENIGN ROLE







# Role of Navy THE MILITARY ROLE



**The essence of all navies is their military character. In fact, the raison d'être of navies is to ensure that no hostile maritime power degrades own national security and interests. The navy's military role is characterised by threat or use of force at and / or from the sea. This includes application of maritime power in both - offensive operations against enemy forces, territory and trade, and defensive operations to protect own forces, territory and trade. The military role is performed through accomplishment of specific military objectives, missions and tasks.**





# Role of Navy

## THE MILITARY ROLE



### ❖ Objectives of Military Role in Indian Navy

- Deterrence against conflict and coercion
- Decisive military victory in case of war
- Defence of India's territorial integrity, citizens and off-shore assets from seaborne threat
- Influence affairs on land
- Safeguard India's mercantile marine and maritime trade
- Safeguard India's national interests and maritime security

### ❖ Missions of Indian Navy

- Nuclear second strike
- Maritime Domain Awareness (MDA)
- Sea Control
- Sea Denial
- Blockade
- Power Projection
- Force Protection
- Coastal and Offshore Defence
- Expeditionary Operations
- Maritime Domain Awareness
- Compellance
- Destruction
- Sea Lines of Communication (SLOC) Interdiction
- SLOC Protection
- Special Force Operations
- Seaward Defense
- Naval Co-operation and Guidance for Shipping (NCAGS) Operations





# Role of Navy

## THE MILITARY ROLE



### Tasks of Indian Navy

- Surveillance
- Maritime Strike
- Anti-Submarine Operations
  - Anti-Surface Operations
  - Anti-Air Operations
  - Amphibious Operations
    - Maritime Patrol
  - Information Operations
    - Information Exchange
    - Electronic Warfare
    - Mine Warfare
- Visit Board Search and Seizure (VBSS)
  - Harbour Defence
- NCAGS and Naval Coastal Security (NCS) Operations
  - Protection of Offshore Assets



# Role of Navy

## THE DIPLOMATIC ROLE



Naval diplomacy entails the use of naval forces in support of foreign policy objectives to build 'bridges of friendship' and strengthen international cooperation, on one hand, and to signal capability and intent to deter potential adversaries, on the other. The larger purpose of navy's diplomatic role is to favourably shape the maritime environment in furtherance of national interests, in consonance with the nation's foreign policy and national security objectives. Navies inherently lean towards performing a diplomatic role on account of two main characteristics. The first is their status as comprehensive instruments of a country's sovereign power, whereupon their very presence in or off a certain area signals the nation's political intent and commitment to pursue national interests in that region. Hence, their presence or absence can be calibrated to send a political message to potential friends and foes alike. The second characteristic facilitating the navy's diplomatic role lies in the attributes of maritime forces, including access, mobility, sustenance, reach, flexibility and versatility. These combine to offer a variety of tools for furthering national interests and pursuing foreign policy goals. Naval forces can be readily deployed; they can perform multiple roles and tasks that can be calibrated in visibility and intensity as per requirements; and they can just as easily and rapidly be withdrawn, to send a counter-signal.







# Role of Navy

## THE DIPLOMATIC ROLE



### ❖ Objectives of Diplomatic Role in Indian Navy

- Strengthen political relations and goodwill
- Strengthen defence relations with friendly Nations
- Portray credible defence posture and capability
- Influence affairs on land
- Strengthen maritime security in India Ocean Region (IOR)
- Promote regional and global stability

### ❖ Missions of Indian Navy

- Constructive Maritime Engagement
- Maritime Assistance and Support
- Presence
- Peace Support Operations

### ❖ Tasks of Diplomatic Role in Indian Navy

- Overseas Deployments
- Flag showing/ Port Visits
- Hosting Foreign Warships Visits
- Technical and Logistics Support
- Foreign Training
- Coordinated Patrols
- Bilateral/ Multilateral Exercises
- Non Combatant Evacuation Operations (NEO)
- Peace Enforcement, Peace Making, Peace Keeping and Peace Building
- Activities under the Indian Ocean Naval Symposium (IONS) Programme



# Role of Navy

## THE CONSTABULARY ROLE



The increasing incidences of maritime crime has brought into sharp focus, the constabulary role that navies have to perform. The significance of this role may be gauged from the fact that for a third of the world's navies, this is a major facet of their functioning. In the constabulary role, forces are employed to enforce law of the land or to implement a regime established by an international mandate. Force is only employed for self-defence or as a last resort in execution of this role. The protection and promotion of India's maritime security is one of the prime responsibilities of the Indian Navy. This includes a constabulary element, especially where it relates to threats that involve use of force at sea. The range of tasks that the India Navy has to undertake in the constabulary role range from Low Intensity Maritime Operations (LIMO) to maintaining good order at sea. This further includes aspect of coastal security, as part of India's overall maritime security. Constabulary tasks at sea are neither the primary nor the sole mandate of the Indian Navy. With establishment of the Indian Coast Guard (ICG) in February 1977, law enforcement aspects of the constabulary role within the Maritime Zones of India (MZI) have been transferred to the ICG. Security in major harbours and ports are the purview of the port authorities, aided by customs and immigration agencies. Constabulary tasks beyond the MZI are vested with the Indian Navy. Efficient and effective maritime constabulary requires proper and seamless coordination between the various maritime law enforcement and regulatory agencies. Constabulary tasks beyond the MZI are vested with the Indian Navy. Efficient and effective maritime constabulary requires proper and seamless coordination between the various maritime law enforcement and regulatory agencies. After the terrorist attacks on Mumbai in November 2008, the responsibility for overall maritime security has been mandated to the Indian Navy, in close coordination with the ICG, State Marine Police and other Central/ State government and port authorities.





# Role of Navy

## THE CONSTABULARY ROLE



### ❖ Objectives of Constabulary Role in Indian Navy

- Coastal and Offshore Security
- Security of Exclusive Economic Zone (EEZ)
- Good Order at Sea

### ❖ Missions of Indian Navy

- Counter Terrorism
- Counter Threats from Non-State Actors

### ❖ Tasks of Diplomatic Role in Indian Navy

- Counter Infiltration
- Maritime Patrol
- Anti-Piracy
- Anti-Poaching
- Anti-Trafficking





# Role of Navy

## THE BENIGN ROLE



The 'benign' role is so named because violence has no part to play in its execution, nor is the potential to apply force a necessary prerequisite for undertaking these operations. Examples of benign tasks include humanitarian aid, disaster relief, Search and Rescue (SAR), ordnance disposal, diving assistance, salvage operations, hydrographic surveys, etc. Maritime forces, because of their quick mobilisation, are especially useful in the early stages of a crisis for providing relief material, first aid and succour in coastal areas. Much of the capacity to perform these functions is derived from the mobility, reach and endurance inherent in naval task forces, coupled with their unique sealift capability. For example, in the immediate aftermath of a natural disaster, one of the biggest challenges is the disbursement of food, water and relief material. It is under such conditions that military mobility, coupled with reliable communications are most effective in ensuring distribution to even the most remote afflicted areas. While specialised civilian agencies may take over at a later stage, maritime forces can provide the first helping hand and may be deployed to complement their efforts. The Indian Coast Guard is the designated national agency for maritime SAR in the Indian Search and Rescue Region (ISRR). Naval units may also be called upon to undertake SAR operations, as required.







# Role of Navy

## THE BENIGN ROLE



### ❖ Objectives of Benign Role in Indian Navy

- Promote Civil Safety and Security
- Project National Soft Power

### ❖ Missions of Indian Navy

- Humanitarian Assistance and Disaster Relief (HADR)
- Aid to Civil Authorities
- Hydrography
- Search and Rescue (SAR)

### ❖ Tasks of Indian Navy

- Provision of Relief Material and Supplies Infiltration
- Medical Assistance
- Diving Assistance
- Hydrographic Assistance



# Role of Navy

## Indian Navy operations



### Annexation of Goa, 1961

The first involvement of the Navy in any conflict came during the 1961 Indian annexation of Goa with the success of Operation Vijay against the Portuguese Navy. Four Portuguese frigates – the NRP Afonso de Albuquerque, the NRP Bartolomeu Dias, the NRP João de Lisboa and the NRP Gonçalves Zarco – were deployed to patrol the waters off Goa, Daman and Diu, along with several patrol boats (Lancha de Fiscalização).

Eventually only the NRP Afonso de Albuquerque saw action against Indian Navy ships, the other ships having fled before commencement of hostilities. The NRP Afonso was destroyed by Indian frigates INS Betwa and INS Beas. Parts of the Afonso are on display at the Naval Museum in Mumbai, while the remainder was sold as scrap.





# Role of Navy

## Indian Navy operations



### Indo-Pakistani war of 1965

**There were no significant naval encounters during the Indo-Pakistani War of 1965.**

**On 7 September 1965 a flotilla of the Pakistani Navy carried out a small-scale bombardment of the Indian coastal town and radar station of Dwarka, 200 miles (300 km) south of the Pakistani port of Karachi. Codenamed Operation Dwarka, it did not fulfill its primary objective of disabling the radar station. There was no significant Indian retaliation, since 75% of the Indian naval vessels were undergoing maintenance or refitting in the harbour. Some of the Indian fleet sailed from Bombay to Dwarka to patrol the area and deter further bombardment. Operation Dwarka has been described as an "insignificant bombardment" of the town was a "limited engagement, with no strategic value."**



# Role of Navy

## Indian Navy operations



### Indo-Pakistani war of 1971

The Indian Navy played a significant role in the bombing of Karachi harbour in the 1971 war. On 4 December, it launched Operation Trident during which missile boats INS Nirghat and INS Nipat sunk the minesweeper PNS Muhafiz and destroyer PNS Khyber. The destroyer PNS Shahjahan was irreparably damaged. Owing to its success, 4 December has been celebrated as Navy Day ever since.

The operation was so successful that the Pakistani Navy raised a false alarm about sighting an Indian missile boat on 6 December. Pakistan Air Force (PAF) planes attacked the supposed Indian ship and damaged the vessel before it was identified as being another Pakistani Navy ship, PNS Zulfiqar which suffered numerous casualties and damage as a result of this friendly fire.

During Operation Python on 8 December, the frigate PNS Dacca was severely damaged by INS Veer and the oil storage depot of Karachi was set ablaze. On the western front in the Arabian Sea, operations ceased after the Karachi port became unusable due to the sinking of Panamian vessel Gulf Star. An Indian frigate, INS Khukri was sunk by submarine PNS Hangor.

On the eastern front, the submarine PNS Ghazi was sunk outside Vishakhapatnam harbour. Indian naval aircraft, Sea Hawks and Alizés, from the aircraft carrier INS Vikrant were instrumental in sinking many gunboats and merchant navy vessels in the Bay of Bengal. The successful blockade of East Pakistan by the Indian Navy proved to be a vital factor in the Pakistani surrender.





# Role of Navy

## Indian Navy operations



### Operations after 1971

The Indian Armed Forces initiated Operation Cactus to prevent a coup attempt by a group of Maldivians led by Abdullah Luthufi and assisted by about 200 Sri Lankan Tamil mercenaries from the People's Liberation Organisation of Tamil Eelam (PLOTE) in Maldives in 1988. After Indian paratroopers landed at Hulhule and secured the airfield and restored the democratically elected government at Malé, the Sri Lankan mercenaries hijacked the freighter MV Progress Light and took a number of hostages, including the Maldivian Transport minister and his wife. The Indian Navy frigates INS Godavari and INS Betwa captured the freighter, rescued the hostages and arrested the mercenaries near the Sri Lankan coast.

During the 2006 Lebanon War, the Indian Navy launched Operation Sukoon to successfully evacuate 2280 persons from Lebanon, including Indian, 436 Sri Lankan and 69 Nepali and 7 Lebanese citizens.

Since 2 November 2008 an Indian Navy frigate INS Tabar accompanied by the destroyer INS Mysore has been on an anti-piracy mission off the Gulf of Aden.



# INS Vikramaditya Aircraft Carrier



**INS Vikramaditya is the Indian Navy's largest short take-off, but assisted recovery (STOBAR) aircraft carrier and warship converted from the Russian Navy's decommissioned Admiral Gorshkov vertical take-off and landing (VTOL) missile cruiser carrier. INS Vikramaditya was commissioned into service in November 2013.**

**The warship has been extensively refurbished with new propulsion systems, hull sections, sensors and flight deck. It was operationally deployed with full complement of MiG-29 aircraft in May 2014.**

**The vessel can carry more than 30 long-range multi-role fighters with anti-ship missiles, air-to-air missiles, guided bombs and rockets.**

**The aircraft aboard the carrier include MiG 29K / Sea Harrier combat aircraft, Kamov 31 radar picket Airborne Early Warning (AEW) helicopter, Kamov 28 naval helicopter, Sea King helicopter, ALH-Dhruv, and Chetak helicopter.**







# INS Arihant Nuclear Submarine



**Prime Minister Narendra Modi has announced that India's first indigenous nuclear submarine INS Arihant has successfully completed its "first deterrence patrol". The development signifies that the underwater warship has completed its maiden long-range mission with live nuclear-tipped missiles.**

**The 6,000-tonne INS Arihant, which was under development for three decades under a highly classified programme, comes under the direct control of the Nuclear Command Authority headed by PM Modi. Following the successful completion of its "deterrence patrol", INS Arihant can now be considered a fully functional underwater ballistic missile delivery platform. The ballistic missile submarine is a strategic asset as it can fire city-destroying missiles from anywhere in the ocean and remain undetected for a long time. It can also sneak closer to the coast of an enemy nation and fire ballistic missiles deep into their territory, which otherwise cannot be reached by land-based short-range ballistic missiles.**







# Brahmos Missile

## Supersonic Cruise Missile



The BrahMos is a ramjet supersonic cruise missile of a short-range developed by Defence Research and Development Organisation (DRDO) and the Russian Federation's NPO Mashinostroyeniya.

BrahMos was named after two major rivers of India and Russia: Brahmaputra and Moskva.

The technology used in this joint venture is based on the Russian P-800 Oniks cruise missile and similar sea-skimming cruise missiles from Russia.



### ❖ Special Features of BrahMos

- Stealth Technology
- Advanced guidance system
- High Target Accuracy (irrespective of weather conditions)
- Constant supersonic speed
- Operates on 'Fire and Forget' Principle
- BrahMos can be launched from land, aircraft, ships, and even submarines.
- One of the heaviest missiles, weighing up to 2.5 tonnes



# Indian Navy Ships Classification



## ❖ Surface Ships

- Aircraft carriers
- Destroyers
- Frigates
- Corvettes
- Offshore Patrol Vessels
- Landing and Transport Ships
- Patrol Vessels
- Torpedo Recovery Vessels

## ❖ Submarines

- Conventionally-powered submarines (SSK)
- Nuclear-powered submarines (SSN and SSBN)

## ❖ Auxiliary Fleet

- Replenishment Ships
- Research and Survey Vessels
- Support Ships
- Training Vessels



# Indian Navy Airfarm Aircraft & Helicopters



## Hawk Mk 132



**Aircraft - Hawk MK 132**  
**Manufacturer - HAL Systems**  
**Operational Speed - 630 MPH**  
**Service Ceiling - 45,000 FT**  
**Range - 1,400 NM**

## Boeing P-8I



**Aircraft - Boeing P-8I**  
**Manufacturer - Boeing**  
**Operational Speed - 450 MPH**  
**Service Ceiling - 40,000 FT**  
**Range - 4,500 NM**





# Indian Navy Airfarm Aircraft & Helicopters



## SEAKING 42 (B/C)



**Aircraft - SEAKING 42 (B/C)**  
**Manufacturer - Westland Helicopters**  
**Operational Speed - 129 MPH**  
**Service Ceiling - 11500FT**  
**Range - 764 Miles**

## UH 3H



**Aircraft - UH-3H**  
**Manufacturer - Sikorsky Aircraft**  
**Operational Speed - 166 MPH**  
**Service Ceiling - 14,700 FT**  
**Range - 621 Miles**



# Indian Navy Airfarm Aircraft & Helicopters



## KAMOV-28



**Aircraft - KAMOV-28**  
**Manufacturer - KAMOV**  
**Operational Speed - 166 MPH**  
**Service Ceiling - 16,400 FT**  
**Range - 605 Miles**

## KAMOV-31



**Aircraft - KAMOV-31**  
**Manufacturer - KAMOV**  
**Operational Speed - 216 MPH**  
**Service Ceiling - 11,483 FT**  
**Range - 370 Miles**



# Indian Navy Airfarm Aircraft & Helicopters



## ALH



**Aircraft- Advanced Light Helicopter**  
**Manufacturer - Hindustan Aeronautics Limited**  
**Operational Speed - 180 MPH**  
**Service Ceiling - 27,500 FT**  
**Range - 516 Miles**

## Chetak



**Aircraft - SA 319 B Chetak (Alouette III)**  
**Manufacturer - Aerospatiale**  
**Operational Speed - 115 MPH**  
**Service Ceiling - 10500 FT**  
**Range - 335 Miles**





# Indian Navy Airfarm Aircraft & Helicopters



## UAV Heron



**Aircraft - UAV Heron**  
**Manufacturer - Israel Aerospace Industries**  
**Operational Speed - 130 MPH**  
**Service Ceiling - 32,800 FT**  
**Range - 217 s**

## UAV Searcher



**Aircraft - UAV Searcher**  
**Manufacturer - Israel Aerospace Industries**  
**Operational Speed - 125 MPH**  
**Service Ceiling - 20,000 FT**  
**Range - 18 Hours**



# Indian Navy Airfarm Aircraft & Helicopters



## Dornier 228



**Aircraft - Dornier 228**  
**Manufacturer - Dornier GMBH**  
**Operational Speed - 196 MPH**  
**Service Ceiling - 28,000 FT**  
**Range - 823 Miles**

## UAV Searcher



**Aircraft - IL 38**  
**Manufacturer - ILUSHYIN**  
**Operational Speed - 450MPH**  
**Service Ceiling - 36,089 FT**  
**Range - 5903 Miles**



# Indian Navy Airfarm Aircraft & Helicopters



## MIG 29-K (Fighter)



**Aircraft - MIG-29K**  
**Manufacturer - MIKOYAN**  
**Operational Speed - 1370 MPH**  
**Service Ceiling - 57,400FT**  
**Range - 1240 Miles**





# Some Glimpse of Indian Navy





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