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The Missions of the Indian Navy

by

Gary L. Sojka

Introduction

Since the advent of the first oil crisis, the United States and its allies have recognized the strategic importance of the Persian Gulf-Indian Ocean area. The second oil crisis, followed by the seizure of American diplomats in Iran, and then by the Iranian-Iraqi War, reinforced the importance of this area in Western minds. Along with increased Western interest, American and allied defense analysts began to focus their attention on military developments within the important oil-producing countries of Iran, Iraq, Saudi Arabia, and Kuwait. Placed equally high on their agenda were the activities of such Soviet client states as South Yemen and Ethiopia. This focus remains today and is in many ways justified. Nevertheless, it all too often overlooks the premier littoral state in the area—India. This is unfortunate, for India not only has the most capable armed forces, including navy, of all the littoral states, it also has strong ties with the Soviet Union, having signed in 1971 a Treaty of Peace, Friendship, and Cooperation.¹

In order to understand the role the Indian Navy plays in the Indian Ocean, it is necessary to look at India's national mission, its maritime interests, and the missions and capabilities of its navy. For India's mission as a nation defines its maritime interests and, in a similar manner, India's maritime interests help to define the missions and capabilities of its navy. But it is not simply India's national goals with regard to its maritime interests which have an impact on its navy. Another factor is India's industrial base. Also important are perceived threats to maritime interests; and, indeed, naval training, force deployment and capabilities, and even the orientation of naval missions reflect both the nation's and the navy's visions of future conflict.

National Mission

India is physically a large country, encompassing about 1.26 million square miles, with a coastline of roughly 3,500 miles.² Within its borders live some 700 million people, characterized by their substantial and well-known diversity. This diversity manifests itself in the economic, religious, social, and linguistic realms. For example, most Indians engage in subsistence agriculture, but there is an ever-growing manufacturing and trading sector. Hinduism, practiced by nearly 80 percent of the population, is the predominant religion; but a sizable Muslim population (11 percent) exists, and there are pockets of Christians, Jews, Sikhs, Buddhists, Jains, and Zoroastrians. The Hindu caste system stratifies a large portion of the country along

social lines, with about 20 percent of the Hindus, as untouchables, remaining outside the system. Hundreds of languages and dialects divide India linguistically, although the government only recognizes 15 languages for the purposes of official business, of which English and Hindi have all-India status.

Such diversity might suggest to the casual observer that a consensus on a set of national goals is not possible within the Indian population. To arrive at such a conclusion would be incorrect. A careful analysis of both India's past and present reveals a set of core values among the general population; or, if not always among the general population, then among its most influential segments: businessmen, politicians, bureaucrats, and students. India's national mission is the protection and advancement of these core values.

Perhaps the most important consensus among the Indian population today is the desire to remain independent. The independence movement in India began much earlier than in many other formerly colonized countries. Historically, India, much like China, absorbed invaders into its population, making them "Indian" in the process. This did not take place during India's colonization by the British. Not only did the British not become "Indian," but British nationalism, culture, and civilization hinted at superiority—and this created deep and long-lasting resentments among India's indigenous population. The result was an overwhelming support for independence which coalesced under the leadership of Mahatma Gandhi, bringing about independence in 1947. Since then, Indians have expected their government to maintain India's territorial integrity and to develop the capacity to act internally and externally in accordance with India's interests, unconstrained by outside powers.

Preservation of India as a viable, functioning society is another core value; so is democracy. Even before independence, many Indians realized that, if India were to remain a united nation, it would have to develop a political structure compatible with its immense diversity, a structure which would not force uniformity where uniformity was not wanted but which would promote it where population-wide commonalities made doing so practical. Democracy, with its politicians closely in touch with the people, seemed best suited for this purpose. The result is impressive, for India has not wasted its energy on divisive struggles over "ways of life"; rather it has emphasized those things—nutrition, education, and economic growth—that have wide popular support.

As early as 1929, Mahatma Gandhi's Congress party established economic growth as a key goal for Indian national policy.³ While Indians have held very different views on how to promote economic growth and on what direction it should take and, indeed, harbor many antigrowth attitudes, support for national policies fostering growth is long-standing. Closely related to economic development is another value, self-reliance, so strongly held by the economic and political elites of India that it deserves description as a core value. As described by numerous Indian writers and spokesmen, self-reliance means developing the capacity within India's borders to feed its population, manufacture its own military equipment, and develop certain heavy and technologically oriented industries crucial to its economic growth and security.⁴

Insofar as any Indians are concerned with their place in the world, it is a concern held mainly by the elites. These people, educated, knowledgeable, and with a strong sense of their national heritage as well as a knowledge of their common colonial

experience with other Third World countries, see a role for India both regionally and beyond. Worldwide, India supports anticolonial movements and efforts to bring about a new international economic order more favorable to the Third World. Yet it is in the Indian Ocean that the Indian elites truly focus their attention. What they envisage is an India preeminent in the area, as it once was before British colonization. And the accomplishment of this will certainly be a catharsis, freeing India from residual feelings of inferiority or inadequacy, the result of its recent colonial past and sometimes believed neocolonial present.

Maritime Interests

Given India's mission as a nation, four maritime interests are readily discernible. The first is protection from threats via the sea to India's independence. The image of India, colonized by the British coming from the sea and then remaining under British tutelage for some three centuries while the Indian Ocean became a British lake, still hurns brightly in the minds of many Indians. India's continuous call for the Indian Ocean to become a "zone of peace," free from intrusion by outside powers, reflects its concern over threats coming from the sea.⁵

A second maritime interest is exploitation of the sea for its mineral and fish resources. Until quite recently fishing in India was uniformly backward, with India's 12 to 15 million fishermen using primitive techniques and depleting certain well-known fisheries.⁶ But recent increased government and private interest in turning fishing into a more profitable industry has brought the introduction of new, more advanced techniques and the exploitation of waters beyond the immediate coastal belt. Indiau fishermen now harvest sardines, mackerel, tuna, and other fish for domestic and foreign markets, with India currently bringing in about 40 percent of the entire Indian Ocean fish catch.⁷

India's vast continental shelf is rich in minerals. The Bombay High Basin, a large area located 70 to 120 miles northwest of Bombay, currently produces enough oil to meet 20 to 25 percent of India's petroleum needs.⁸ Recent geological studies indicate that the northwestern coast of India between Bombay and the Gulf of Cambay holds the promise of containing additional reserves of commercially recoverable oil.⁹ Surveys have also discovered manganese nodules, with attendant nickel, copper, and cobalt, in many parts of the Indian continental shelf.¹⁰ Located off the west coast of India are deposits of phosphate, calcium, and barium; areas off the Andaman and Nicobar Islands contain calcium deposits as well.¹¹

India looks at its ocean resources as crucial to its economic development. The Indians see fishing as a key source of food as well as an export to bring in foreign exchange. They look at seabed mining to provide huge, indigenous sources of raw materials for industrialization and to eliminate the drain on foreign exchange caused by the import of these minerals. Thus in 1977 India, following the lead of many other countries, declared a 200-mile exclusive economic zone contiguous to its coastline.¹² In this area, India claims exclusive rights to all the ocean's natural resources. In addition, India would like to see the remainder of the Indian Ocean exploited by the surrounding littoral states rather than by outside powers. This is unlikely, however, and India recognizes this fact. Therefore, it supports at the United Nations Law of the Sea Conference the creation of an international authority capable of constraining the industrial world while supporting Third World exploitation of ocean resources.

While awaiting a new legal regime of the sea, India unexpectedly entered into the area of seabed mining in 1981, with its research vessel *Graveshani* mining manganese nodules from the Indian Ocean floor.¹³ Though India is far from being in a position to begin commercial mining of the seabed, it is moving in that direction. Recently, India's Ocean Science and Technology Agency ordered three new research ships for nodule exploitation, one each from France, West Germany, and Denmark.¹⁴

Sea trade is a third maritime interest. As a developing country, with an ever-increasing industrial sector, India relies on seaborne trade. India imports large amounts of petroleum, minerals, chemicals, high technology items, and food.¹⁵ In return, it is increasing its exports of numerous industrial and agricultural products, including jute, tea, cotton fabric, oil cake, leather products, cashews, fish, and low technology items.¹⁶

The size of India's merchant fleet reflects its dependence on seaborne trade. The fleet is currently the largest of all merchant fleets of the Indian Ocean states. It has approximately 381 ships, totaling some 9.8 million dead weight tons.¹⁷ Many of these ships are capable of extended sea travel. The vast majority of them, over 200, are dry cargo carriers; but there are also 9 passenger-cargo carriers, 96 bulk carriers, 38 tankers, and 17 combination tanker-cargo carriers.¹⁸

A final maritime interest is the use of the Indian Ocean to promote India's influence among the other littoral states. Through the peaceful use of naval, merchant, and research ships, India hopes to foster a cooperative spirit between itself and its neighbors. If Indian interests at some point should become irreconcilable with those of a neighbor, then the ocean becomes an avenue by which India can exercise its power, forcing an outcome favorable to its interests. Thus, during the 1971 Indo-Pakistani War, the Indian Navy effectively interdicted Pakistani sea lines of communication, launched offensive operations against Pakistani naval forces and harbors, and supported amphibious operations. Meanwhile, the Indian merchant fleet continued to sustain India with overseas supplies.

The Indian Navy: Missions, Traditions, Capabilities, and Visions of Future Conflict

In order of probable importance, the missions of the Indian Navy are deterrence, coastal defense, sea control, presence, power projection, monitoring the big power navies (i.e., France, the Soviet Union, and the United States), and coast guard duties. These missions directly reflect India's maritime interests and indirectly its mission as a nation; they also reflect India's economic and political power; and their orientation reflects national and corporate visions of future conflict. A detailed analysis of each of the navy's missions will yield an understanding of the missions themselves, their relation to visions of future conflict, and the navy's ability to perform these missions.

Deterrence. Deterrence is largely a doctrine associated in the United States with the role of nuclear weapons, but the leaders of many other countries, including India, have seized upon the concept as a mission for their conventional forces. This has occurred because deterrence is often a practical policy to follow even for a weak state. For deterrence does not rely on the ability to defeat an enemy in any absolute sense, but rather on the ability to make the anticipated costs of victory seem to

outweigh the anticipated benefits. In India, both official pronouncements and written publications stress the need for a strong navy to deter threats from the sea. "Looking generally at the navy's peace-time functions, we find that its primary one is deterrence," writes S.N. Kohli, the former Indian Chief of Naval Staff.¹⁹

Since the early 1970s, the Indian Navy has embarked upon a steady program of naval force expansion. In 1969, the navy ranked third among the services in total capital construction.²⁰ By 1974, the situation had reversed itself, with the navy ranking first, and it has remained this way ever since.²¹ The reason for this dramatic turn-about has much to do with the reduced overland military threat from Pakistan which, as a result of the 1971 Indo-Pakistani War, lost a large portion of its territory, population, and resources to the newly formed state of Bangladesh. The result for the Indian Navy has been its growth to the point where it is far larger than the navies of the other littoral states in the area. A second result is that the navy has partially overcome the age problem of its ships. The navy's aircraft carrier, the *Vikrant*, has recently undergone a major overhaul and refit, making it capable of handling Sea Harrier aircraft and Sea King helicopters.²² Many of the navy's destroyers, frigates, and fast attack craft are under ten years of age, and many of them carry surface-to-air and surface-to-surface missiles.²³ The cumulative effect of these developments is to provide India with a reasonable deterrent against most threats to its maritime interests. One notable exception to this is that India has failed to induce the navies of the Soviet Union, France, and the United States to vacate the Indian Ocean, leaving it a "zone of peace" in which India would be predominant.

Major Combatants of Selected Indian Ocean Navies²⁴

| | India | Australia | Indonesia | Iran | Pakistan | South Africa |
|-------------|-------|-----------|-----------|------|----------|--------------|
| Carriers | 1 | 1 | | | | |
| Cruisers | 1 | | | | 2 | |
| Destroyers | 2 | 3 | | 3 | 10 | |
| Frigates | 24 | 8 | 10 | 4 | | 2 |
| Corvettes | 3 | | | 4 | | |
| Fast Attack | | | | | | |
| Craft | 19 | | 6 | 12 | 16 | 7 |
| Submarines | 8 | 6 | 4 | | 12 | 3 |
| Totals | 55 | 18 | 20 | 23 | 40 | 12 |

Coastal Defense. Until 1971, the Indian Navy primarily oriented its coastal defense towards the Pakistani threat. With the dismemberment of Pakistan during the 1971 War and its consequent decline in power vis-à-vis India, the emphasis has changed. In a recent public statement, Prime Minister Indira Gandhi provided an indication of this shift: "We know from where the threats have come in the past, but the dangers can emerge from other directions also. We must be prepared for any eventuality."²⁵ And in a 1975 speech, S.N. Kohli cited South Africa, Iran, Pakistan, Malaysia, Indonesia, and Australia as countries with whom India at the time maintained friendly relations but which had to be considered potential threats.²⁶ Official and Published by U.S. Naval War College Digital Commons, 1983

unofficial publications also list the United States and China as potential maritime threats.²⁷ Yet the vision of future conflict which most worries the Indians is a combined Pakistani-Chinese land, air, and sea assault, with the US Navy neutralizing any assistance the Soviet Navy might provide.²⁸

How might India defend its territory and contiguous waters against these perceived threats? An examination of some of the types and numbers of ships in the Indian Navy gives an indication of Indian defensive concepts. The eight Soviet-built *Foxtrots* submarines could participate in the frontline of India's defensive perimeter.²⁹ There are four *Foxtrots* stationed in the Bay of Bengal and four stationed in the Arabian Sea. These long-range submarines could theoretically begin a forward defense well beyond India's Andaman and Nicobar Islands, which lie some 650 to 1,100 miles to the east of the Indian mainland. But continuing operational problems and the small number of *Foxtrots* mean that India cannot rely solely on submarines for effective forward defense, and may have to limit their radii of operation, time on station, or both, to well below their theoretical maximum.

India's larger surface vessels could also play a role in forward defense. The navy's blue-water ships include the *Vikrant*, two *Kashin II* destroyers (one more is forthcoming), two *Whitby* class frigates, six *Leander* class frigates and, in the near future, *Godavari* class frigates.³⁰ All these ships have the requisite armament for forward defense. The *Vikrant* carries Sea King helicopters and will soon carry Sea Harrier aircraft while the destroyers and frigates carry either surface-to-surface or surface-to-air missiles or both.³¹ An aircraft carrier task group or, simply, some destroyers or frigates working perhaps in tandem with submarines, could provide a significant combined underwater, surface, and air capability. Such a naval force would probably be superior to that of any other littoral state or of the People's Republic of China. It would also be of serious concern to the naval forces of a major power.

Indeed, in a war with China or any other Asian power to the east, the Indian Navy will soon be able to interdict enemy naval forces coming through the Strait of Malacca, or other eastern approaches to the Indian Ocean. The key factor here is India's effort to upgrade its naval base at Port Blair, just west of Malacca in the Andaman Islands, to service frigates and other surface combatants.³² Clearly, the eastern approaches to the Indian Ocean remain high on the Indian Navy's list of interdiction points, remembering as it does the American decision to send the 7th Fleet through the Strait of Malacca and into the Indian Ocean to support Pakistan during the 1971 War. This US tilt towards Pakistan and the continuing tensions in Indo-American relations also prompt India to cast a wary eye on the US naval facility at Diego Garcia. Prudence thus suggests that India also orient its forward defense towards the south; and, accordingly, India has decided to improve its naval facility at Lakshadweep, located in the Laccadive Islands, some 250 miles southeast of the Indian mainland, in a manner similar to improvements taking place at Port Blair.³³

Close-in coastal defense would bring into the fray additional frigates, many of which belong to the Soviet *Petya II* class.³⁴ India could also utilize its three *Nanuchka II* class corvettes and 16 *Osa* fast attack boats, all armed with Styx surface-to-surface missiles.³⁵ Operating in groups or alone, but well within the range of shore-based air cover, these ships would prove a formidable second line of defense to approaching ships. The frigates, along with shore-based antisubmarine warfare aircraft, would

also prove a serious nuisance to submarines operating along the Indian coast.

Not to be ignored in any discussion of coastal defense are the improvements in the Indian Navy's minesweeping capability. These improvements stem from the difficulty the navy experienced during the 1971 War in its attempt to sweep mines laid by the Pakistanis. Since the war, the Navy has increased its number of minesweepers from 4 to 14.³⁶

With the increasing sophistication of its equipment, the advantage of operating in familiar waters, and land-based air support nearby, the Indian Navy is quite capable of defending its coastal waters and territory, unless faced with a major effort by one of the big powers. As the navy continues to modernize and expand, with plans for additional submarines, frigates, maritime reconnaissance aircraft, and fighter-attack aircraft, coastal defense will be conducted at a higher and higher cost to any adversary.

Sea Control. The Indian Navy has the mission of sea control, with the attendant tasks of interdicting enemy shipping along with protecting its own. Sea control against the major powers is out of the question. Indeed, complete sea control is only possible against the weakest states in the Indian Ocean or against India's closest neighbors. This places the focus squarely on Pakistan. In this respect, the conduct of naval operations in the 1971 War may yield some insights into how the Indian Navy might gain control of the sea in a future Indo-Pakistani War.³⁷

At the beginning of the 1971 War, India divided its navy into the Eastern and Western fleets. The Eastern Fleet contained the *Vikrant*, one destroyer, and three frigates while the Western Fleet contained one cruiser, seven frigates, and eight *Osa I* fast attack craft.³⁸ India began its naval operations by declaring a blockade of both East and West Pakistan. In the east, Admiral Krishnan moved his carrier task group away from the naval base at Vishakhapatnam towards the Andaman Islands in order to evade Pakistani submarines. From north of the Andamans, Seahawk aircraft operating from the *Vikrant* successfully attacked airfields at Cox's Bazar and Chittagong, destroying Pakistani aircraft capable of retaliating against the carrier. With Pakistani airpower neutralized, Seahawk aircraft vigorously attacked Pakistani ports, destroying merchant ships and warships alike. Meanwhile, in the west, the Indian Air Force incessantly raided the port of Karachi, distracting the Pakistanis, as portions of the Western Fleet moved into position to attack. Approaching Karachi by night, the Indian attack force of two *Petya* frigates and three *Osa I* fast attack craft picked up four Pakistani ships on radar. The commander focused on two targets and then sent his fast attack craft after them. This attack resulted in Pakistan losing one minesweeper and one destroyer.³⁹

The result of these initial successes was the bottling up of the Pakistani Navy in port, where shore-based fire support could offer it protection. Thus Indian submarines and surface ships were free to interdict Pakistani shipping while protecting their own. By the end of the 1971 War, Pakistan had lost six combatants, and 43 of its merchant ships were either sunk or taken as prizes. India lost one combatant and no merchant ships.⁴⁰

With the 1971 War in mind, it can be expected that a new war with Pakistan would see the Indian Navy exhibit the same aggressive strategy, aimed at blockading Pakistani ports, destroying its ships, and interdicting its communications.



A possible complicating factor for India in any war with Pakistan would be Chinese intervention. Such intervention, however, would be more important to the calculations of the Indian Army than the Navy. For, although the Chinese have a large number of submarines, they are not suited for long-distance, interocean campaigns. Chinese surface ships could operate in the Indian Ocean, but they are inferior to those of India and could not deploy in sufficient numbers or for sufficient lengths of time to affect the conduct of the war.

Aside from Pakistan, India's sea control capability is credible only against its nearest neighbors to the east, Bangladesh, Sri Lanka, and Burma, or against the weaker states of the Indian Ocean. Conceivably, India could extend its control of the sea as far north as the Strait of Hormuz (perhaps to protect shipping to India) or could in the near future block the Strait of Malacca to the east. However, both instances would require the acquiescence of the major powers, a particularly unlikely prospect. The other important states in the Indian Ocean—Australia, Indonesia, and South Africa—are simply too far away and their navies are sufficiently capable to deny India any control of the sea in their areas. Naval conflict between India and any one of these states would quickly deteriorate into surface raid warfare.

Presence. By showing the flag in times of stability, Indian leaders hope to increase India's prestige among the states of the Indian Ocean. Writes Indian defense expert Ravi Kaul, ". . . the Navy is the only effective instrument to project India's image overseas and to influence the neighbors in the Indian Ocean area. Naval visits to the neighboring countries are necessary to counter the adverse effects of the presence of superpowers and to strengthen existing friendly relations."⁴¹ Before 1970, the Indian Navy made only occasional visits to the ports of other nations in the Indian Ocean. Since 1970, these visits have substantially increased.⁴² Indian ships have called on virtually every country in the Persian Gulf and the Indian Ocean.⁴³ In addition to such efforts, the Indian Navy has participated in joint naval exercises with such countries as Indonesia, Singapore, Malaysia, and Australia.⁴⁴

Power Projection. What are the Indian Navy's capabilities to project power ashore in the Indian Ocean region? The navy would have difficulty making amphibious landings in areas far from its shores. India has no independent naval infantry, relying instead upon army units with some training in amphibious landings. Its navy has only seven small landing ships and four landing craft.⁴⁵ The cruiser *Mysore*, with its nine 6" guns and its eight 4" guns, the six *Leander* class and three *Leopard* class frigates, with their two 4.5" guns, and even perhaps the *Kashin II* destroyers and *Petya* class frigates, with their 76mm guns, give the navy an ability to offer an amphibious landing party some fire support.⁴⁶ Moreover, the *Kashin II* destroyers and *Whitby* frigates could use their surface-to-surface missiles against selected targets.⁴⁷ But only the *Vikrant* can offer air support, so crucial to the success of amphibious operations. It is therefore unlikely that the navy sees amphibious landings as feasible in anything except low threat environments.

Closer to home, amphibious operations would prove more practical due to the availability of land-based air support and shorter logistic lines. Even here, India has historically limited the scope of the missions of its amphibious forces, landing, for example, only a small force of 1½ battalions in East Pakistan during the 1971 War in

order to prevent fleeing and disorganized Pakistani units from escaping into Burma.⁴⁸

Other forms of power projection are a bit more practical. The Indian Navy has two replenishment ships, four support tankers, and one repair ship.⁴⁹ In addition, government-controlled business firms own a majority of India's dry cargo ships, passenger-cargo vessels, and petroleum tankers, many of which are capable of supporting the navy if the need should arise.⁵⁰ Thus India could sustain a naval task force in the more distant waters of the Indian Ocean. Against weaker states, these ships could conceivably be effective in interdicting the shipping or projecting airpower or naval gunfire ashore.

To be sure, the Indian Navy is cognizant of the limits of its ability to project power. Faced with opposition by one of the big power navies or one of the stronger regional navies, India would likely be unable to influence events in a manner conforming to its interests. India has therefore qualified this mission with the proviso "to seek help elsewhere" if its navy should be unable to project power satisfactorily. This qualification makes its naval mission much more realistic.

Monitoring the Big Power Navies. India realizes that it does not have the capability to keep the major powers out of the Indian Ocean as it would like. Yet, as with the mission of presence, regional prestige (as well as India's own security) mandates that the Indian Navy monitor these naval forces. For this mission the navy relies on its ships and on its five Super Constellation and five Ilyushin (Il-38) May maritime reconnaissance aircraft.⁵¹ These planes give the Indian Navy a capacity to reconnoiter as far south as Diego Garcia, as far west as the Strait of Hormuz, and as far east as the Strait of Malacca.

To the extent that Indian defense analysts have discussed new missions for the navy, they have concerned themselves with extending the mission of "monitoring the big power navies" to include "altering the naval balance" in a major power confrontation in the Indian Ocean.⁵² India fears that such a confrontation would disrupt its shipping routes to and from the Persian Gulf. Since India imports a substantial percentage of its total oil consumption from Persian Gulf countries and sells significant percentages of its iron, steel, electronic, metal, and transport exports to those countries, it rightly feels concern about possible disruptions of shipping.⁵³ The idea of "altering the balance" would be to try to prevent a conflict among major powers by making it clear to one side that it would lose, or if this fails, by attempting to influence the outcome in a manner favorable to India.

The consequences of big power retaliation in times of hostility no doubt inhibit Indian leaders from adopting such a mission for their navy. Moreover, India's current and projected near term capabilities (an estimated additional two to four submarines, three frigates, four corvettes, and seven patrol craft) make its navy a threat which any of the major powers could overcome.⁵⁴ The adoption of such a mission would, however, raise big power force requirements and complicate their naval planning.

Coast Guard Duties. With a need to protect a 200-mile exclusive economic zone, rich in fish, minerals, and petroleum, the government of India established in 1978 a coast guard. The missions of the Indian Coast Guard include ensuring the safety of offshore installations, protecting life and property at sea, helping to enforce marine pollution controls, and assisting customs authorities. Though the Coast Guard will expand

substantially in the next five years, buying more patrol boats, surveillance aircraft, and search and rescue helicopters, it has currently only 21 patrol craft, of which 14 are for inshore patrol.⁵⁵ These boats are armed with a variety of light antiship weapons.⁵⁶ Given India's 3,500 mile coastline and the extent of its offshore economic zone, the Coast Guard cannot possibly perform all the missions assigned to it. The Navy still must partially perform such tasks as safeguarding offshore oil installations, maintaining the security of island territories, and policing foreign fishing vessels.⁵⁷ Nevertheless, the creation and future expansion of the Coast Guard is an important indication of India's intention to have its navy fulfill missions more ambitious than simply domestic duties.

Ancillary Capabilities

India has a number of naval bases and logistic installations. The three major bases are Bombay (Western Command), Vishakhapatnam (Eastern Command) and Cochin (Southern Command). In addition, there are the already mentioned naval facilities at Port Blair in the Andaman Islands and at Lakshadweep. Just to the south of the Andaman Islands lie the Nicobar Islands, the location of another naval logistic installation. These three island facilities help to extend the reach of the Indian Navy and will be so used in the future.

Another important factor which affects the missions and capabilities of the Indian Navy, as well as the other services, is the degree to which India relies on domestic production for its defense and defense-related goods. In theory, India has long resolved this problem, opting for a policy of self-reliance in the production of defense equipment.⁵⁸ In many instances, India has been successful at implementing this policy. In 1947, for instance, India's industrial sector was virtually nonexistent, and it had only 15 ordnance factories, limited to the assembly and repair of small arms and ammunition.⁵⁹ Today, the industrial sector has grown by 300 percent, and defense production is the second largest segment in this sector.⁶⁰ Ordnance factories now produce such products as semiautomatic rifles, ammunition, 105mm tank guns, antiaircraft guns, trucks, missile fuels, and fire control equipment.⁶¹ In defense-related areas, India has made significant strides in developing its own iron, steel, railway, and power industries.⁶²

India has four shipyards engaged in the major repair and production of naval vessels: Mazagon Dockyard, Bombay; Garden Research Shipbuilders and Engineers, Calcutta; Goa Shipyard, Goa; and Hindustan Shipyard, Vishakhapatnam.⁶³ These shipyards produce warships, patrol craft, passenger ships, cargo vessels, tankers, trawlers, tugs, and barges.⁶⁴ The Hindustan shipyard is the largest, but the Mazagon shipyard is the site of the construction of *Leander* class frigates (built in India under British license) and is also the construction site of what will soon be the first indigenously designed frigate, the *Godavari* class.⁶⁵ This class of frigates will be considerably more capable than the *Leander* class.

Despite India's progress in the production of defense and defense-related industries, it is by no means self-reliant. Even if the end product is produced indigenously, India must often rely on imported parts and raw materials or both. For instance, only 60 percent of the components which went into the *Leander* class frigates were produced in India.⁶⁶ For many other weapon systems, the range is 60 to 80 percent.⁶⁷

The problem is that immediate defense requirements heavily complicate the goal of self-reliance in defense production. In order to preserve or advance India's short-run strategic position, its military leaders request ever more sophisticated equipment—French Mirage 2000 aircraft, German HDW-1 (type 209) patrol submarines, Russian T-72 tanks, Mig-23 aircraft, *Nanuchka II* corvettes, and *Kashin II* destroyers.⁶⁸ In short wars, in which extensive repairs to sophisticated equipment are not a problem, the acquisition of such equipment clearly enhances the capability of the military services to perform their missions. However, in a protracted war or an extended period of tension, the failure of just one or two of India's suppliers to render repair services or to sell additional parts could seriously impede the performance of one or more of India's services.

Self-reliance in defense production is often important for another reason. By delivering or failing to deliver defense equipment, or by simply promising to deliver or threatening not to deliver such equipment, the supplier country can limit the recipient country's freedom of action in foreign policy.

As important as the application of such pressure may be, its impact on India is currently limited: witness India's relationship with the Soviet Union, its largest weapons supplier. Given Soviet interest in the Indian Ocean and its desire to encircle China, some observers believe that India's recipient status *vis-à-vis* the Soviets has meant that India has granted the Soviet Navy special privileges in the use of its ports or that India will join the Soviet Union in a collective regional security arrangement. There is no evidence to support the view that either has taken place or will take place in the near future. No one can say for certain that a Soviet offer of a new, major weapon system would not induce Indian leaders to participate with the Soviets in a regional security pact or to grant them special hasing privileges. But India's fear of becoming too dependent on one country, its concern over the Soviet invasion of Afghanistan, and its long-standing preference for a policy of nonalignment are major deterrents to closer relations. As long as the *status quo* is maintained in Asia, with neither Pakistan nor China becoming a significantly greater military threat to India, it is unlikely that New Delhi will soon change its mind.

Conclusion

The missions of the Indian Navy are compatible with India's maritime interests and thus ultimately with India's mission as a nation. This compatibility, together with its recognition by naval and political elites, means that India is not likely to reduce the number of missions that its navy performs. If anything, India may, sometime in the future, add to them. But if the tasks of the Indian Navy are well set out, the struggle to achieve the capability to perform fully these missions is not. First, India's industrial base is not yet adequate to support the navy independent of outside help. Second, while the Indian Navy receives the largest share of defense funds for capital construction, it is still the weak sister of the three services in terms of overall operating funds; and neither the Army nor the Air Force desires to see more funds allocated to the navy at their expense. This, coupled with the fact that India is still a developing country, limits the available funds for naval expansion. Yet, despite these problems, the Indian Navy is the strongest navy indigenous to the Indian Ocean, and it is growing. It is becoming increasingly capable of fulfilling its missions against

most other states in the area, and even the major powers can no longer afford to ignore the Indian Navy as a factor in their naval calculations.

Notes

1. For a discussion of this treaty, see Dr. N.M. Ghatate, ed., *Indo-Soviet Treaty: Reactions and Reflections* (New Delhi: Deendayal Research Institute, 1972).

2. For a short reference on basic geographic, economic, social, and linguistic information about India, see Richard F. Nyrop, supervisor, *Area Handbook for India* (Washington, DC: US Govt. Print. Off., 1975).

3. Lawrence A. Veit, *India's Second Revolution: The Dimension of Development* (New York: McGraw-Hill, 1976), pp. 39-40.

4. See, for example, P.R. Chari, "Defence Production in India," *Strategic Analysis*, vol. I, no. 10 and no. 11, 1978, pp. 1-6 & 1-5. India's Ministry of Defence *Report 1980-1981* states: "Defence production is oriented towards self-reliance and elimination of dependence on imported technology within the next 10 to 15 years." See Ministry of Defence, *Report 1980-1981* (New Delhi: Ministry of Defence, 1980-1981), p. 33. The Ministry of Defence *Report 1981-1982* states: "As regards defence production, the primary emphasis in the [Defence] Plan is on self-reliance and import substitution." See Ministry of Defence, *Report 1981-1982* (New Delhi: Ministry of Defence, 1981-1982), p. 6.

5. See P.K.S. Namboodiri, "Essence of the 'Peace Zone' Concept," *Strategic Analysis*, vol. III, no. 12, 1980, pp. 467-470. Maharaj K. Chopra, "Demilitarising The Indian Ocean," *U.S.I. Journal*, vol. CVII, no. 450, 1978, pp. 1-19. P.K.S. Namboodiri, "Some Nuclear Issues in the Indian Ocean Region," *Strategic Analysis*, vol. V, no. 11, 1982, pp. 637-640.

6. S.N. Kohli, *Sea Power and the Indian Ocean* (New Delhi: Tata McGraw-Hill, 1978), pp. 63-64.

7. *Ibid.*, pp. 62-63. Also see B. Dasaiadharam Reddy, "Fishing Industry in India," *Eastern Economist*, 23 January 1981, pp. 231-233.

8. "Meeting Oil Needs of 1981," *Eastern Economist*, 14 November 1981, pp. 1085-1086. Also see "Petroleum Crunch," *Eastern Economist*, 23 January 1981, pp. 231-233.

9. R.K. Pachauri, *Energy and Economic Development in India* (New York: Praeger, 1977), pp. 74-75.

10. Kohli, p. 62.

11. *Ibid.*

12. For a discussion of this subject, see J.P. Anand, "India and the Law of the Sea Conference," *Strategic Analysis*, vol. I, no. 3, 1977, pp. 1-5.

13. "India's Operation Nodule Astonishes West," *Asian Defence Journal*, June 1981, p. 70.

14. *Ibid.*

15. Nyrop, pp. 520-523. Also see "Oil Imports: A New Development," *Eastern Economist*, 28 May 1982, p. 1235.

16. Nyrop, pp. 520-523. Also see "Capital Goods Exports, Imports Up," *Eastern Economist*, 16 April 1982, pp. 945-946.

17. Information taken from *Register of Ships 1981-1982* (London: Lloyds Register of Shipping, 1981).

18. *Ibid.*

19. Kohli, p. 32. In a recent speech, Indira Gandhi stated: "The best way to win a war is to prevent it." See "Gandhi Speaks in Debate on Defence Funding," *The Times of India*, 20 July 1980, p. 9.

20. Ministry of Defence, *Report 1969-1970* (New Delhi: Ministry of Defence, 1969-1970), pp. 12-13.

21. For annual information on this subject, see the "Capital Outlay" sections of the yearly *Appropriations Accounts on Defence Services*, Government of India, New Delhi.

22. John Moore, ed., *Jane's Fighting Ships* (New York: Jane's Publishing Company, 1982), p. 207.

23. *Ibid.*, pp. 208-211.

24. *Ibid.*, pp. 19-25, 207-211, 216-219, 224-226, 341-343, 387-388.

25. "Gandhi Speaks in Debate on Defence Funding," p. 1.

26. S.N. Kohli, "Maritime Strategies and Force Levels," in *The Chanakya Defence Annual*, ed. Ravi Kaul (Allahabad: Chanakya Publishing House, 1976), p. 131.

27. See, for example, the annual Reports by the Ministry of Defence.

28. This subject is rarely discussed fully but often hinted at or mentioned. It is a worst case scenario, which has the characteristic of being unlikely, but not impossible. It truly worries the Indians. See O.N. Mehrotra, "India's Defence Strategy," *Strategic Analysis*, vol. IV, no. 9, 1980, pp. 309-403.

29. Moore, p. 207. Also see "The Indian Navy's 'Foxtrot' Class Submarine," *Asian Defence Journal*, June 1982, p. 53.

30. Moore, pp. 208-210. Also see "The Indian Navy's 'Talwar' [Whitby] Class Frigate," *Asian Defence Journal*, June 1982, pp. 76-77.

31. Moore, pp. 207-210. Also see "Sea Harrier Order Curtailed," *Asian Defence Journal*, January 1981, p. 125.

32. "Indian Island Bases," *Strategy Week*, vol. VII, no. 49, 1981, p. 1.
33. *Ibid.*
34. Moore, p. 210.
35. *Ibid.*, p. 211.
36. *Ibid.* See also "The Indian Navy's 'Nanuchka II' Class Corvette," *Asian Defence Journal*, August 1982, pp. 86-88.
37. For a good, short discussion of the conduct of naval operations during the 1971 War, see Jurgen Rohwer, "The Indo-Pakistan Conflict 1971: Land and Naval Operations," *Defence Journal*, vol. III, no. 12, 1977, pp. 9-22.
38. *Ibid.*, p. 14.
39. *Ibid.*, pp. 16-18.
40. *Ibid.*, pp. 20-22.
41. Ravi Kaul, "Indian Navy," in *The Chanakya Defence Annual*, ed. Ravi Kaul (Allahabad: Chanakya Publishing Houses, 1978), p. 99.
42. See the annual Reports by the Ministry of Defence for a listing of port calls during each year.
43. Ministry of Defence, *Report 1970-1971* (New Delhi: Ministry of Defence, 1970-1971), p. 23.
44. See the annual Reports by the Ministry of Defence.
45. Moore, pp. 212.
46. *Ibid.*, pp. 208-210.
47. *Ibid.*
48. D.K. Palit, *The Lightning Campaign: Indo-Pakistan War 1971* (New Delhi: Thomson Press (India) Limited, 1972), p. 149.
49. Moore, pp. 213-214.
50. Information taken from *Register of Ships 1981-1982* (London: Lloyds Register of Shipping, 1982).
51. Moore, p. 206.
52. See Ravi Rikhyi, "Is a Blue-Water Navy Needed?" *Vikrant*, June 1977, pp. 7-8.
53. T.C.A. Srinivasa-Raghavan, "Exports During the Seventies: A Survey-II," *Eastern Economist*, 17 April 1981, pp. 1002-1005.
54. Moore, p. 206.
55. *Ibid.*, pp. 214-215.
56. *Ibid.*
57. "Gandhi Opens Naval Commanders' Conference," *New Delhi Patriot*, 28 October 1980, p. 5.
58. Ministry of Defence, *Report 1980-1981*, pp. 15, 20, 33-35.
59. Gautam Sharma, "Defense Production in India," *INDSA Journal*, vol. X, no. 4, 1978, p. 323.
60. *Ibid.*, pp. 323, 331.
61. *Ibid.*, p. 331.
62. *Ibid.*, p. 323.
63. N.P. Datta, "Growth of Shipbuilding Industry in India," *Vikram*, March 1978, pp. 6-9.
64. Sharma, pp. 337-339.
65. *Ibid.*
66. Ministry of Defence, *Report 1980-1981*, p. 49.
67. See annual Reports of the Ministry of Defence.
68. For a discussion on the impact of imported weapon systems on the Indian military, see K. Subrahmanyam, "Problems of Defence Industrialization in India," *INDSA Journal*, vol. XIII, no. 3, 1981, pp. 363-377. *The Times of India* reported that Mr. Venkataraman, the defense minister, stated to a parliamentary group that a certain amount of imports was necessary because India had to constantly update its weaponry and keep abreast of the weapons technology in the rest of the world to meet any threat to its security. "Defence Minister Reports to Parliamentary Group," *The Times of India*, 27 June 1982, p. 1.

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