THE INDIAN NAVY IN 1990s

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Mukesh Kataria

Dedicated
to the unknown Indian Sailors

Preface

India's geographical location provides both opportunities and challenges to the decision makers. India is virtually inaccessible through her land frontiers in the north. The high altitude of the Himalayas with few mountain passes (most of which are snow covered and, therefore, remain closed for most part of the year), protect India not only against an invasion but also against the cold dry winds blowing from the north. The decision makers not only have to equip and train the army for high altitude warfare, but also, have to plan for war on the plains. The Indian subcontinent is also, surrounded on three sides by water bodies (the Bay of Bengal in the east, the Arabian Sea in the west and the Indian Ocean in the south). In fact, India's maritime area equals two-thirds that of the land area.

Strategically, India's location astride major Sea Lanes of Communication in the Indian Ocean and the fact that 97 per cent of trade in volume terms and 76 per cent in value terms is sea borne, make it imperative for India to possess an ocean going navy. Moreover, the Gulf war and the US retaliation on Mullah Omar's Afghanistan have emphasised the increasing importance of naval power in significantly altering the course of war.

This study attempts to look at the growth and development of the Indian Navy in the 1990s, apart from looking at the power projection

capabilities of the Indian Navy. The first chapter in the study focuses on the development and growth of the Indian Navy till the beginning of 1990s, since independence. The second chapter draws attention to the changes in the international strategic situation in the 1990s and its impact on the Indian Navy. Chapter three looks at the force structure and the evolution of the doctrines of the Indian Navy. It also deals with the role the navy is expected to play in the country's nuclear doctrine. Chapter four compares the Indian navy with those of the US, Pakistan and China. The last chapter concludes the study and looks at the road ahead for the navy.

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CHAPTER -1

INTRODUCTION

The September 11 terrorist attacks on the World Trade Centre, New York, and the consequent US retaliation on Mullah Omar's Afghanistan, using power projection capabilities of the US Navy have brought to the fore the role of Navy in modern warfare in the 21st century. There are strong arguments that today's strategic environment is dictated by the primacy of precision munitions, principally those delivered by missiles. The arrival of the microchip and its use in weapon systems like land attack cruise missiles and Unmanned Aerial Vehicles (UAVs) makes land attack from the sea a realistic proposition. This particular development has further blurred the line demarcating sea power from land power and ushered in an era of revolution in naval affairs (RNA). The RNA questions the very foundations of our concept of naval power by shifting its pre-occupation from the command of the sea to joint operations conducted from the sea. That the navies are meant to influence operations on land and not merely fight the Mahanian big battles on the high seas has dawned upon most of the navies now engaged in fighting to support littoral battles ashore. It is believed that the post-Cold War world, any navy that wants to exercise autonomy in its use of the sea would need the power projection associated

with land attack cruise missiles. The changing nature of naval warfare and naval strategy has given a fresh impetus to the navy's role in land attack and revived the interest of naval planners in land attack weapon systems. The Indian navy's enumeration of its formal doctrine focuses on three aspects of operations – naval diplomacy, rapid reaction manoeuvrability along with concentration of firepower deep inland from the sea.

In this context it is essential to assess nature of doctrines, strategies, force structure, combat capability etc. of the Indian navy. Is the Indian navy ready for revolution in naval affairs? Is the Indian navy capable of safeguarding India's vital national interests at sea? Have the predictions, made in late 1980s, about India's naval expansion come true to the detriment of India's neighbours? Is the Indian Navy prepared for the warfare in the 21st century? These are some of the questions that are addressed in the following pages with special reference to developments in Indian navy in 1990s. But, before proceeding to address these questions, the geographical setting of India and the development of the Indian navy till the 1990s since independence would be appropriate.

INDIA: THE GEOGRAPHICAL MILIEU

The Indian subcontinent is separated from the Asian landmass by the lofty Himalayas, which include some of the world's highest peaks. The

Himalayas form an impregnable barrier and can be crossed with great difficulty through its high altitude mountain passes – which for most part of the year remain closed due to inhospitable terrain and hostile weather conditions. The Indian peninsula projects into the Indian Ocean and divides the Indian Ocean into almost equal halves. The Indian coastline runs to a length of 6100 kilometres and is augmented by about 1400 kilometres of islands and rocks of Lakshadweep in the Arabian Sea and 723 islands and rocks of Andaman and Nicobar in the Bay of Bengal. Some islands in the Andaman and Nicobar group are closer to Coco Island (Myanmar) and the Malacca straits. The provision of an Exclusive Economic Zone (EEZ) in the new legal regime of the sea increased India's area of responsibility from 83,200 square kilometres to some 2.8 million square kilometres or over two-thirds of the total area of land. [1]

The Indian Ocean is the third largest ocean in the world. It is about half the size of the Pacific Ocean and only slightly smaller than the Atlantic Ocean. Some of the distinguishable characteristics of the Indian Ocean include:

(i) The northern part of the Indian Ocean is surrounded by Africa, Asia and Australia and it resembles a huge bay. This is one of the factors

[1]. Rahul Roy Chaudhury, *Sea Power and Indian Security,* (London, 1995), pp 13-14.

contributing to Indian Ocean's geopolitical and geostrategic significance.

(ii) The Indian Ocean offers lines of communication between the Atlantic and after the opening of the Suez Canal, between the Mediterranean and the Pacific. This increases the importance of the various gateways to the Indian Ocean: in the west via the Cape of Good Hope; in the north-west through the Suez Canal, the Red Sea and the Bab-el-mandeb strait; in the east via Malacca strait and further south-east via the Indonesian island as well as well as past Australia to both the north and the south[2]. In the post Second World War years, the Persian Gulf and the straits of Hormuz emerged as the strategic chokepoint – primarily due to increasing dependence, particularly, of the industrialized and industrializing countries on oil. [3]

The western and eastern parts of the Indian Ocean underwent separate developments and the Indian subcontinent thus faces in two directions and, at the same time, separates the two parts.[4] K.M. Panikkar emphasized the geographic unity of the Indian Ocean region. According to him what differentiates the Indian Ocean from the two other major oceans "are not the

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2. Braun Dieter, *The Indian Ocean: Region of Conflict or Peace Zone?, (*Delhi, 1983), pp 1-2.
3. Hanks, Robert J and Cottrell, Alvin. J, 'The Strait of Hormuz: Strategic Chokepoint" in Cottrell Alvin. J and Associates, ed., *Sea Power and Strategy in the Indian Ocean,* (Beverly Hills, 1981), PP 73-116.
4. Mehrish B.N, "Geo-politics of the Indian Ocean", in Chandra, Satish, Arunachalam. B, Suryanarayan. V ed., *The Indian Ocean and its Islands, Strategic, Scientific and Historical Perspective,* (New Delhi, 1993), p.26.

two sides of the subcontinent of India which jut out far into the sea for thousand miles to its tapering end at Cape Comorin". He is of the view that despite the vastness of its surface and oceanic character, the Indian Ocean has some features of a land-locked sea. [5]

The two most important regions of the Indian Ocean are the north - west and north-east. The Persian Gulf, with 60 per cent of the world's oil resources, the Gulf of Aden through which the Suez Canal traffic emerges, the strategically important island group of Seychelles, Diego Garcia and the Maldives and the Pacific gateways through Malacca and Sunda straits, all lie within 2500 kilometres of Indian territory.[6] Geographically, therefore, India's very location makes her the predominant power in the Indian Ocean and the presence of extra –regional navies in the Indian Ocean along with rapid advances in weapons technology present both challenges and opportunities to the Indian Navy.

INDIA'S MARITIME HISTORY

The history of seafaring in the Indian Ocean unlike in the Atlantic Ocean and the Pacific Ocean dates back to very early times. The motto of the present day Indian Navy, 'Sha No Varuna' ('may the ocean

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5. K. M. Pannikkar., *India and the Indian Ocean*, (London, 1951), pp 18-19.
6. Rear- Admiral Kailash K. Kohli, "India's Maritime and Geo-strategic Interests in the Indian Ocean", in Chandra (ed), n.4 pp.65-66.

Gods be auspicious unto us') dates from the Vedic period. It is an invocation in the ancient language of Sanskrit to Lord Varuna, the presiding deity of the oceans.

India was at the centre of interaction between the eastern and western parts of the Indian Ocean. In the west, the Egyptian and Persian empires extended their influence sea wards, later giving way to the Romans and Muslim Arabs, while in the east, from about the beginning of the Christian era, it was the Indians (extending towards south -east Asia), the Malayans and the Chinese who travelled the seas. In 1007 A.D., Emperor Rajendra defeated the Sri Vijaya Navy, and established Cholan power on the Malaysian Peninsula.[7] The Mughals, though a great power, concentrated on establishing scientific frontier of India in the North West and were primarily a land /continental power.[8]

Among the Europeans, the Portuguese were the first to come to the Indian Ocean, through the Cape of Good Hope and encountered decisive opposition from Arabs on and off the east coast of Africa. In1641, they were driven out of Malacca by the Dutch who were interested primarily in the Malay Archipelago (the Spice Islands). Later on, the French and the English fought for the control of the Indian Ocean. The English were victorious and

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7. Roy-Chaudhury, n.1 p.15.
8. George K. Tanham, *Indian Strategic Thought, An Interpretive Essay,* (Santa Monica, 1992), pp 13-15.

in the following decades founded their empire in India by entering into alliances and signing treaties with local rulers. By 1900, Britain had turned the Indian Ocean into a British lake and had military control over all the important approaches and exits.[9] The British policy in the Indian Ocean region was based on three fundamental conceptions:

1. That no other great power should be able to establish on the Indian Ocean bases and ports having secure land and air communications with its own main base.
2. The control by British sea and air power of the naval gateways into the Indian Ocean; and
3. The maintenance of a strategic reserves for the defence of India herself and other parts of the Indian Ocean.[10]

This scheme was largely based on the one devised in the early part of the sixteenth century by Alfonso de Albuquerque, favoured controlling all important entrances and exits to the Indian Ocean. Consequently, from 1784 until the entry of the Japanese Navy in December 1941, the Indian Ocean remained a British lake.[11]

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9. Dieter, n.2 p.6.
10. George G. Thomasan, *Problems of Strategy in the Pacific and Indian Ocean*, (New York, 1970), p.35.
11. Kenneth McPherson and Peter Reeves, "The Foundations of Indian Naval Power", in Bruce Robert H. ed., *The Modern Indian Navy and the Indian Ocean: Developments and Implications* (Canberra, 1989). p.69.

The Indian Navy was, obviously, set up by the British to meet their own colonial objectives. The growth, missions and the role of Indian navy was limited because:

1. The expansion of Indian navy did not serve any strategic purpose because the Royal Navy controlled the Indian Ocean.
2. The colonization of India rested essentially on the maintenance of sea communications with Britain. The British government could not afford to risk this link through the expansion of the Indian navy.
3. Britain's security doctrine in the Indian Subcontinent rested not only on the control of the Indian Ocean, but also on the defence of the north-west frontier, like the Mughals. Since the Royal Navy controlled the Indian Ocean, the deployment of a large army was an essential feature of British domination in the area. As a result, the army dominated Indian security policy even after independence.[12]

THE GROWTH OF INDIAN NAVY (1947-1990)

The partition of India on the basis of the two- nation theory resulted in the creation of two sovereign and independent states of India and Pakistan.

[12]. Roy – Chaudhury, n.1 pp.17-18.

The partition of the Subcontinent also led to the division of the armed forces and it was agreed that the reconstitution of the armed forces was to be carried out on the basis of territorial considerations, and not communal ones. Military personnel were given the choice of leaving the services or volunteering for either the Indian or Pakistani armed forces, with the proviso that this would be inapplicable to Hindus and Muslims serving in the Indian or Pakistani armed forces, respectively. Whereas equipment and movable stores were to be divided largely in proportion to the respective strengths of the armed forces, the technical training establishments were to be allocated on the basis of geographical location.

This principle was not followed during the division of warships. Ships were to be allocated on the basis of the actual needs of the two dominions, rather than the estimated strength of their naval personnel. The Navy's technical training establishments were divided between India and Pakistan on the basis of geographical location. While, items for the maintenance of ships and establishments were divided in proportion to the strengths of the two navies. Meanwhile, items of special stores for a particular class of ship or establishment were divided in the same proportion as the allocation of ships and establishments. In July-August 1947, the division of naval personnel took place on the basis of "territorial considerations".

Thus, the Indian Navy essentially, in 1947, comprised of four sloops, the *Sutlej, Jumna, Kistna* and *Cauvery*; two frigates, the *Tir and Khukri*; twelve fleet and four motor minesweepers, including the *Bombay, Bengal* and *Madras*; four trawlers; four harbour defence motor launches; a corvette, the *Assam*; a survey ship and a motor launch. The training establishments and other assets which the Indian navy was allocated include: the mechanical engineering schools (HMIS *Shivaji*); the cookery, physical training seamanship, damage control and disciplinary schools, which existed in an embryo form (HMIS *Akbar*); the original torpedo school (HMIS *Valsura*), and a temporary establishment for combined operations training (HMIS *Hamla*). It was also given the dockyard organization (including repair and store facilities), the castle barracks and a high-powered wireless station (HMIS *Talwar*) in Bombay, and barracks and jetty accommodation (HMIS *Circars*) at Vishakapatnam.[13]

Similarly, a large number of north Indian Muslim officers, petty officers, migrated to Pakistan, leaving a big void in the establishment, especially in the areas of communications, engineering, torpedo and gunnery. After independence, most of the British officers, who largely constituted the senior cadre, chose to leave. India had to obtain some senior

[13]. ibid, pp. 23-26

British officers on lease, who were instrumental in laying the foundations of an independent Indian Navy.[14]

The modernisation and expansion of India's navy can roughly be divided into three phases.[15] The first phase started immediately after independence, a prospective plan for the navy was prepared under the guidance of Admiral Parry (who was on loan from the British Admiralty), which recommended the gradual development of two carrier fleets. The plan called for a balanced navy, consisting of two light fleet carriers, cruisers, destroyers and auxiliary craft, and it "emphasized the necessity to build a submarine force and an air arm within a period of ten years. The plan also included proposals for the setting up of training establishments, base repair organizations and other infrastructural facilities, such as headquarters, store depots, communication stations, etc."[16]

The successful implementation of the Parry expansion plan rested essentially on two factors : sufficient government funding to set up various training establishments and procure the required warships, and the ability to acquire relatively sophisticated warships from foreign sources. For several reasons, including India's non-aligned foreign policy, the perception of

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[14]. G.V.C Naidu, *The Indian Navy and Southeast Asia,* (New Delhi, 2000), p.32.
[15]. G.V.C. Naidu, "The Indian Navy and South East Asia", *Contemporary Southeast Asia,* (Singapore), vol. 13 (1), (June 1991), p.74.
[16]. Adm A.K. Chatterji, "Indian Navy: 1947-87", in Gandhi S.S .ed., *Defence Review Annual,* (New Delhi, 1989), p.66.

threats to Indian security, and Britain's reluctance to supply certain warships to India, the plan could not be implemented soon after the formalization of the expansion plan.[17]

Moreover, soon after Independence, the Indian Navy was involved in securing the accession of Junagadh codenamed Operation EXERCISE PEACE, but its role in success of the operation went unnoticed by the government. The Navy did not participate in India's police action against Hyderabad (Operation CATERPILLAR). The Navy, also, did not play any role in the Kashmir conflict. The Indian army, therefore, retained its dominant role in defence policy, while the Air force was provided a major role in support of land warfare. Moreover, the Indian concern over the actions of the communist Chinese government in Tibet in 1950 maintained the army's dominance over defence policy (because India was at that time preoccupied with safeguarding its territorial integrity and saw Tibet as a buffer between India and China: a legacy of the British Raj). The absence of a naval threat to Indian security further decreased the navy's claim to a greater share of defence budget.[18]

India's major sea-going vessels in mid 1950s have been listed in table 1.1. The Indian government allotted 1.88 per cent of the budget for

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17. Roy –Chaudhry, n.1 p.32.
18. Roy –Choudhary Rahul, "The Role of the Navy in Indian Security Policy", *Contemporary South Asia,* vol 2 (2), (1993), p.152.

defence in 1950-51, of which only 4.80 per cent was given to the navy. The situation remained the same throughout the 1950s with minor modifications. In 1955-56, the defence sector was allotted 1.96 per cent of budget with the navy getting 10.16 per cent of the defence budget. Renewed attention in the late 1950s for the replacement of ageing World War II vintage vessels gave the navy a chance to acquire modern ships. A second modern cruiser, INS *Mysore*, was added in December 1957. Under the replacement programme, three frigate squadrons consisting of eight ships were procured.[19] The idea of acquiring an aircraft carrier was once again raised and in 1959 a decision was taken to acquire HMS *Hercules* from Britain. In April 1958, the contract for the loan of British officers ended and for the first time an Indian Rear Admiral, R.D. Katari, was appointed as the Chief of Naval Staff (CNS) in the rank of Vice-Admiral. [20]

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19. K. Sridharan, *A Maritime History of India,* (New Delhi, 1982), pp. 323-24
20. Naidu, n.14, p.36.

Table1.1 Major Sea-Going Ships of the Indian Navy in 1955*

	Type	Name
Cruiser	Ex HMS Achilles	INS *Delhi*
Destroyers	Ex British R Class	INS *Rajput*
		INS *Ranjit*
		INS *Rana*
	Ex British Hunt Class	INS *Godavari*
		INS *Gomati*
		INS *Ganga*
Frigates	Ex British Bird Class	INS *Jumna*
		INS *Cauvery*
		INS *Kistna*
	Ex British River Class	INS *Tir*
Minesweepers	Bangor Class	INS *Konkan*
		INS *Rohilkhand*
		INS *Rajputana*
	Bathrust	INS *Madras*
		INS *Bombay*
		INS *Bengal*
Inshore Minesweepers		INS *Bimlipatam*
		INS *Bassein*

* The Indian Navy also had in its possession several other miscellaneous ships such as landing ships, survey vessels, patrol boats, etc.

Source: K. Sridharan, *A Maritime History of India* (New Delhi: Publications Division, Ministry of Information and Broadcasting, Government of India, 1982), p.430.

India received its first light fleet carrier in March 1961, and renamed it INS *Vikrant*. Before reaching India, it underwent a thorough reconstruction and was refitted with modern electrical and electronic equipment. The ship was complemented by an air group comprising ten sea *Hawks*, six *Alizes* and two *Alouettes*. By then India had already established a suitable naval air station at Cochin in May 1953, called INS *Garuda*.[21]

In December 1961 the Indian navy played an active role in the military operation for the independence of Portuguese territory (Goa, Daman and Diu) in India. Its missions were three fold:

a) to acquire control of Anjidev island (off Goa)

b) to support land operations off Diu; and

c) To prevent the Portuguese sloop, *Alfonso de Albuquerque*, from leaving the Port of Marmagoa.[22]

During the ensuing military operation (December 18-20, 1961) the *Alfonso de Albuquerque* put up a spirited defence against two Indian frigates, but soon ran aground. The landing parties from an India frigate and cruiser, however, suffered several casualties on Anjidev Island. For the first time since independence, the navy was somewhat able to prove its effectiveness in a military operation[23].

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21. ibid, p.36
22. Sridharan, n.19, pp 327-28.
23. Roy- Chaudhury, n.1 p.49

1962 INDIA-CHINA WAR: During the 1962 India-China war, Indian navy's fleet remained on a state of high alert for the duration of hostilities, and the navy did not participate in the conflict.[24] The United States sent the aircraft carrier USS *Enterprise* in support of India.[25] After the 1962 Sino-Indian war, though Nehru maintained that he did not expect a Chinese attack on India's coasts, the government indicated a willingness to consider the inclusion of armed submarines in the Indian fleet. While the war with China did not result in an immediate expansion of the Indian navy, it set the stage for the acquisition of the submarines for the force. A period of tension with China soon after the conclusion of the war also led to the deployment of naval *Sea Hawk* strike planes to Gorakhpur in the central Himalayan foothills. In justification of the government's defence priorities, Defence Minister Y B Chavan noted the importance of the navy to Indian security, but made it clear that in view of the present availability of resources and the overall circumstances of the country's defence requirements, it had to take a rather low priority at the time, and allocations for the Indian navy were drastically reduced to enable the expansion of the army and air force[26]. The Indian navy was allotted its lowest outlay ever in percentage terms, after the 1962 war.

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[24]. ibid, p.50.
[25]. Stephen P. Cohen, *India: Emerging Power*, (Washington, 2001), p.136.
[26] Roy- Chaudhury, n.1 pp.50-51

1965 INDIA-PAKISTAN WAR: The navy regained the attention of the defence planners in the late 1960s. The 1965 Indo-Pakistani war was a watershed, which enabled the navy to put up a strong case for naval expansion. Pakistan possessed a modern navy (though small in size) with American help under the Mutual Defense Assistance Programme. It was capable of intimidating the Indian merchant and naval fleet in the Arabian Sea as well as in the Bay of Bengal. During the 1965 war, the main task force of the Pakistani navy, including the cruiser *Babur*, sneaked out of Karachi and bombarded a small town, Dwarka in Gujarat. A Pakistani submarine, called *Gazi* also lurked around the Western Coast, close to Bombay harbour.[27] The Indian navy was instructed not to proceed more than two hundred miles beyond Bombay. India probably feared that its old, World War II ships would not be a match for the Pakistani navy, despite a clear overall numerical superiority of the Indian Navy. India could not use its aircraft carrier *Vikrant* because it was dry-docked.[28]

Indonesia also played a role during the 1965 Indo-Pakistani war. Sukarno had made vague threats to intercede on Pakistan's side. Later Pakistan's Air Marshal Asghar Khan revealed in his memoirs that Sukarno

[27] Sridharan, n.19 p.330.
[28] Naidu, n.14, p.37.

had in fact offered to divert Indian attention from Pakistan by seizing the Andaman and Nicobar islands (about 80 miles from Sumatra) in the Bay of Bengal.[29] Given the close relations between Beijing and Jakarta under Sukarno, India also feared a Beijing-Islamabad –Jakarta axis, all of whom possessed submarines. It was felt that India would be most vulnerable on its southern flank, with the navy as the weakest link in the defence perimeter[30]

Another factor that strongly supported the case for naval expansion was the British decision in 1967 to withdraw its forces east of Suez, raising fears of a vacuum in the Indian Ocean. In March 1968 Admiral A. K. Chatterji had claimed (through with considerable exaggeration) that the "Indian navy would eventually be in complete charge of the Indian Ocean after the withdrawal of the British fleet east of Suez."[31] This was the first clear indication of the Indian navy's ambition in the Indian Ocean. In the revised naval plan, the acquisition of submarines was given top priority.

The year 1968 was a milestone in the history of the Indian navy. In July, India acquired its first "F" Class attack submarine, INS *Kalveri*, and in October the first Indian-built frigate, INS *Nilgriri,* was launched at Mazagon

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[29] S.N. Kohli, *Sea Power and the Indian Ocean: With Special Reference to India,* (New Delhi, 1978), p.133

[30] Raju G.C.Thomas, *Indian Security Policy,* (Princeton, 1986), pp.152-53.

[31] Raju G.C.Thomas, "The Indian Navy in the Seventies", *Pacific Affairs*, vol.48 (Vancouver), (1975-76), p.505

Docks. In 1968, the Chief of Naval Staff was elevated to the rank of full Admiral, bringing him on par with the chiefs of the army and air force. In another development, the Indian navy became a two fleet navy, with Vishakhapatnam as the headquarters of the Eastern fleet. By the late 1960s Indian naval officials had started talking about a navy that could play a role beyond coastal defence.[32]

In April 1971, the Indian government provided military assistance to Sri Lanka, in order to counter the Janatha Vimukathi Peramunna (JVP) insurrection, a terrorist organization of Maoist origin. The main task of the Indian naval force lay in preventing the seaborne supply of arms and ammunition to the terrorist movement. This was carried out successfully. [33]

INDIA PAKISTAN WAR of 1971: The first parliamentary elections in Pakistan had resulted in constitutional deadlock with the Awami League (AL) bagging all but two seats in East Pakistan and also emerging as the single largest party with absolute majority. The Pakistani elite, instead of choosing the democratic way to settle the constitutional deadlock, relied on, military crackdown in East Pakistan which resulted in refugee influx into India to the tune of around 10 million. Before the war began, India had signed the Indo-

[32] Naidu, n.14 pp .40-41
[33] Roy – Chaudhury, n.1, p.62

Soviet Friendship Treaty in response to Henry Kissinger's secret visit to China primarily because India feared the emergence of a Washington-Islamabad- Beijing axis and the impact it would have had on India's security.[34]

The 1971 Indo-Pakistani war was very significant in many respects; First, India successfully overcame some of the earlier fears of using unfamiliar Soviet-made systems. Secondly, the Indian navy's personnel, perfectly co-ordinated Soviet and British-made ships, for employment in war. Thirdly, the Indian navy could confidently severe its historical attachment to British weapons systems. Fourthly, old naval doctrines (mostly borrowed from Britain) were scrapped and new doctrines evolved. The Indian navy was much ahead of its contemporaries in adaptive thinking and planning, when it attacked the Karachi harbour in the 1971 war with Soviet Styx (SS-N-2A) missiles. The aggressive use of "Osa" class missile boats enabled it to attack ships and shore facilities around Karachi. The Indian naval leadership in a bold departure from doctrinal shibboleths closed in within 10 miles from Karachi harbour and fired the missiles. Besides, being a decisive attack on Pakistan's only naval port, it was also a frontal attack on the Mahanian concept of sea power. And finally, and most importantly, all three armed

[34] Surjit Mansingh, *India's Search for Power: Indira Gandhi's Foreign Policy 1966-1982*, (New Delhi, 1984), pp.142-44

services were involved in the war for the first time, and hence had to co-ordinate their actions.[35]

During the war, in the Arabian Sea, the Indian navy destroyed Pakistani warships and effectively dissuaded the Pakistani navy from carrying out offensive operations. The blockade of Chittagong in the Bay of Bengal, meanwhile, prevented the transfer of Pakistani military personnel to West Pakistan, and helped bring the war to an early end. In effect, the navy established complete command of the sea in the east, and probably effective command in the west. Pakistan's maritime trade was brought to a complete halt, while Indian shipping continued as normal. In terms of naval destruction, India lost the frigate *Khukri* (sunk by a torpedo from a Pakistani submarine), while Pakistan lost a submarine (*Ghazi*), a destroyer (*Khyber*), three Patrol boats (*Comilla, Jessore* and *Sylhet*), and several auxiliary vessels. [36]

At the height of the war on December 10, a carrier task force of the American Seventh fleet (then deployed off South Vietnam) set off for the Bay of Bengal. "The ship skirted the southern edge of the Bay of Bengal while heading westward and never came near the scene of fighting, remaining south of Srilanka. Nevertheless, its manoeuvres had a profound

[35] The extent of coordination between the services is questioned by many: see Kaul, Ravi ed., *The Chanakya Defence Annual 1971* (Allahabad, 1973), p.193
[36] Roy-Chaudhury, n.18, p.154

impact on civilian policymakers and the Indian armed forces, especially the hitherto quiescent navy. What Richard Nixon and Henry Kissinger intended as a political gesture to an already defeated Pakistan and a new partner China lives on in Indian history as a symbolic demonstration of U.S. hostility to India. The fact that the Enterprise had in 1962 sailed into the Bay of Bengal on a mission in support of India against China was forgotten; the gambit was thereafter seen as the harbinger of an American strategy of encircling India."[37] Further more, it was seen as an implicit nuclear threat (the *Enterprise* presumably carried nuclear weapons) and stimulated Indian interest in both strengthening seaward defence and acquiring a nuclear deterrent (which proved to be one of the immediate reasons for India carrying out a Peaceful Nuclear Explosion (PNE) in 1974).[38] The Soviets accused the United States of "gunboat diplomacy" and "gross blackmail against India".[39]

Superpower Activities in the Indian Ocean: Since the late 1960s the naval activities of the superpowers in the Indian Ocean increased considerably. Naval facilities were provided to the Soviets in Aden and Socotra (South Yemen), Berbera, Somalia (1974-78) and the ports of Assab

[37] Cohen, n.24 p.136

[38] The *Enterprise's* mission was one reason India acquired a large number of submarines from the Soviet Union. These provide the backbone of the Indian Navy's strategy of defending against intrusions by a major naval power. ibid, p.136

[39] Marcus B. Zinger, "The Development of Indian Naval Strategy Since 1971", *Contemporary South Asia*, vol 2(3), (1993), p.339

and Massawa in Ethiopia. Whereas, the United States had maintained a minimal naval force in the Indian Ocean since the end of Second World War. This essentially consisted of two ships based at Bahrain. In December 1966 the United States leased the nine islands of the British Indian Ocean Territory (BIOT) for communication and supply purposes. In March 1973 the Coral Atoll of Diego Garcia became an American naval communication base.[40] The presence of American and Soviet navies in the Indian Ocean, in addition to the superpower rivalry, "were responses to a greater mix of their domestic bureaucratic politics, regional events and primacy of national interests" and not as was believed, due to 'power vacuum' or 'reciprocal escalation'.[41]

The victory in the 1971 Indo-Pakistani war led to greater allocation to the navy from about 3% in the 1962-63 defence budgets to 9.7% in 1976% in 1976-77, which enabled the navy to undertake its second phase of expansion.[42]

THE UNITED NATIONS CONFERENCE ON THE LAW OF THE SEAS (UNCLOS)

The changes in the international law of the sea critically affected India's economic and military interests in the Indian Ocean, and brought about an .

[40] Rais Rasul.B, *The Indian Ocean and Superpowers: Economic, Political and Strategic Perspectives*, (New Delhi, 1987), pp.145-77
[41] ibid, pp.2-4.
[42] Naidu, n.15, p.77

expansion of the Indian navy. The territorial sea of India's long coastline was legitimized to a distance of 12nautical miles (nm), and a contiguous zone of an additional 24 nm was provided. India was also provided a 200 nm EEZ for its mainland and island territories, and a legal continental shelf of 200-350 nm. This dramatically increased India's responsibility from 83,200 sq. km, to some 2.8 million sq. km area of sea or over two-thirds of the total area of land.[43]

India's other maritime interests and objectives included undertaking mining activities in the deep sea-bed in the Indian Ocean, in the areas assigned to it under the Law of the Sea Conference; the halting of poaching and illegal fishing in Indian waters; and the security of its stake in Antarctica.

With the passage of the Coast Guard Act in Parliament on August 19, 1978, a regular coastguard was constituted as an armed force of the state, with Vice Admiral VA Kamath as its first Director General, for the surveillance of the Exclusive Economic Zone (EEZ) and the implementation of statutory duties listed in the Coast Guard Act.[44]

[43] Roy-Chaudhury, n.1 pp.81-82
[44] ibid, p.84

Indian Navy from 1980-1990

In the late 1970s and early 1980s, several events took place in the Indian Ocean area, which had major implications for American foreign and military policy as well as expansion of Indian navy. In order of appearance, they were essentially the overthrow of the Shah of Iran, a close ally of the U.S., by an Islamic revolution; the ensuing hostage crisis, which demonstrated the extent of hostility faced by the United States in the region; and the Soviet invasion of Afghanistan, which was often perceived as a move towards the acquisition of warm water ports and the oil fields of the Middle East.[45] In an attempt, therefore, to defend American political and economic interests in the area, President Carter formally warned the Soviet Union in early 1980 that any attempt 'to gain control of the Persian Gulf region would be repelled by any means necessary, including military force.[46] In this endeavour, the Pentagon aimed to increase the military capability of the Rapid Deployment Force (RDF), seek additional access facilities to enhance RDF mobility, upgrade base facilities in the area (primarily Diego Garcia), and expand fleet rotation in the Indian Ocean.[47]

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[45] Rais, n.36, p.51

[46] Bowman, Larry. W . and Lefebvare Jefferey. A, " The Indian Ocean: US Military and Strategic Perspectives", in Dowdy William l. and Trood Russell B., ed., *The Indian Ocean: Perspectives on a Strategic Arena,* (Durham, 1985), p.414

[47] ibid, 427-31

For most of the 1980s the Soviet Union also maintained a regular force of warships in the Indian Ocean. These were not meant to match American warships in the area, but to challenge American naval dominance. They also represented a form of reassurance and commitment to Soviet allies in the area. The Soviet Union maintained limited base facilities at Dahlak island of Ethiopia, Socotra and Aden, and carried several companies of naval infantry aboard its vessels in the Indian Ocean.[48]

A basic shift in India's defence policy occurred during this period. The *Enterprise* episode revealed how quickly the United States could change its policies, one year supporting India against China and only a few years later supporting both China and Pakistan against India. The *Enterprise*, as much as anything else, led to India's version of the Monroe doctrine, "the Indira doctrine"[49] The Indira doctrine simply stated held: India's security was coterminous with South Asia and any interference by an outside power in the region was to be considered an anti-India act. This doctrine was a major departure from the past, wherein India's security was equated and restricted to safeguarding the territorial integrity of the country from foreign aggression or attack. The new doctrine showed the increased capabilities of India, which she had acquired during the course of the decade (including

[48]. Harrison, Selig S. and Subramanyam K., ed., *Superpower Rivalry in the Indian Ocean: Indian and American Perspectives*, (New Delhi, 1989), pp.3-4
[49] Cohen, n.24 p.137

testing a nuclear device in1974) and also an increasing recourse to the use of force in solving problems.[50]

By 1986 India was able to dispatch a frigate, INS *Godavari*, to South Yemen to rescue Indians working here[51] In November 1988, India restored the government of Maldives to power within twenty four hours of dispatching of air, naval and ground forces, demonstrating India's ability to flex her new found power[52]. The navy, also, played an important, and fairly successful, role in India's Sri Lanka policy. In late July 1987, the Indian government sent two frigates to Colombo at the personal request of President Jayewardene. The frigates were a symbolic expression of India's commitment to Jayewardene personally, and intended primarily to serve as a warning against any attempt at a coup.[53] The terms of the Indo-Sri Lanka Agreement provided a specific role for the Indian navy and coastguard, in contrast to that of IPKF. While the latter was given a general task to "guarantee and enforce the cessation of hostilities", paragraph 2.16 (B) of the agreement stated "The Indian navy/coastguard will cooperate with the Sri Lankan Navy in preventing Tamil militant activities from affecting Sri Lanka".[54]

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[50] Zinger, n.35 p.338
[51] ibid, p.340
[52] ibid
[53] Gunaratna, Rohan, *Indian Intervention in Sri Lanka: The Role of India's Intelligence Agencies*, (Colombo, 1993), p.224.
[54] Kumar, Satish, ed., *Yearbook on India's Foreign Policy 1987-88*, (New Delhi, 1988),pp.233-8

A battalion of IPKF men and equipment sailed for the Jaffna peninsula from Vishakapatnam on July 29, 1987. This was followed by regular movement of troops and supplies to Srilanka. It comprised over 300,000 military personnel (in view of normal rotation procedures), over 100 armoured and 7000 other vehicles, some 100,000 tonnes of stores, and over 19,000 tonnes of fuel, oil and other lubricants. In effect, the vast majority of military personnel and material transported between the two countries was carried aboard naval vessels and merchant ships temporarily acquired by the navy. In addition, the Indian navy shelled LTTE coastal bastion and mounted commando assaults against LTTE assets.[55]

The Indian navy at the beginning of 1988 leased a nuclear powered submarine from Soviet Union. The 5000 tonne Charlie-I- Class guided missile submarine, inducted into the Indian navy as *INS Charka* was leased for three years. This was the first transaction of its kind, and bestowed upon India the status of being only the sixth country in the world to operate a nuclear-powered submarine, which has since been returned to the Soviet Union, at the end of the lease period.[56]

Table 1.2 and 1.3 show the growth of the Indian naval forces between 1971-1990 and expenditure incurred on the navy respectively. The Indian

[55] Roy-Chaudhary, n.1, p.140.
[56] ibid, pp.115-6

navy had become a formidable force by 1990 and with the acquisition of a nuclear-powered submarine and an aircraft carrier *INS Viraat;* countries of the Indian Ocean littoral started questioning the rationale for such power projection capabilities.

Table 1.3 shows that the naval expenditure for most part of the first four decades remained well below 10 per cent and it was only in the last few years of the 1980s that the naval expenditure started increasing and reached 13.53 per cent for the year 1989-90. The low defence outlay of the navy can be explained in terms of absence of immediate naval threat in the 1940s and the 1950s. It started increasingly rapidly due to: the British withdrawal east of the Suez, 1978 UNCLOS, increasing US presence in the Indian Ocean in order to counter Soviet invasion of Afghanistan etc.

Table1.2 Growth in Indian Naval forces 1971-90

Weapon system	1971	1985	1990
Submarines			
Nuke-guided missile SSGN	0	0	1
Attack SS	4	8	18
Aircraft carriers			
Cruisers	1	1	2
General purpose CC	2	0	0
Guided missile GG	0	0	2
Missile destroyers			
Guided missile DDG	3	3	8
Frigates			
General purpose FF	1	0	0
Guided missile FFG	3	2	4
Anti-submarine ASW	5	14	14
Training FFT	0	4	3
Corvettes			
Guided missile PGG	0	3	13
Anti-submarine PCS	0	0	3
Coastal forces			
Fast attack craft-missile	0	16	12
Fast attack craft-gun	0	0	2
Offshore patrol craft OPV	0	0	7
Large patrol craft	6	6	12
Amphibious forces			
Landing ship tank LST	1	0	8
Landing craft tank LCT	2	6	9
Landing craft utility LCU	0	0	7
Mine warfare forces			
Fleet minesweepers MSF		10	12
Inshore minesweepers	8	7	10

Leased from the former Soviet Union returned in January 1991.
Source: Ramesh Thakur, "India as a Regional Power", *Asian Defence Journal*, (May 1990), p.5

Table1.3: Naval Expenditure in Terms of Defence Expenditure and Defence Expenditure in Terms of GNP (in percentages)

From 1948-1990

Year	Defence Expenditure in terms of GNP (%)	Naval Expenditure in terms of Defence Expenditure in %
1950-51	1.88	4.80
1955-56	1.96	10.16
1960-61	1.85	11.61
1965-66	3.70	3.97
1970-71	3.04	7.94
1975-76	3.48	8.77
1980-81	3.15	8.93
1985-86	3.44	12.53
1989-90	3.60	13.53

Source: Rahul Roy Chaudhury, *Sea Power and Indian Security* (London, 1995), pp 181-186.

Some of the naval analysts in late 1980s made predictions that the Indian naval expansion was a cause for concern for the Indian Ocean region because India was acquiring power projection capabilities that could one day endanger their own security.

The Australian navy became a two fleet navy in 1980s as a result of the Indian naval expansion. The Southeast Asian states started acquiring submarines and technologies citing the threat from Indian naval expansion. The 1980s was witness to security dilemma with regard to Indian naval expansion, and countries in the Indian Ocean region began acquiring modern

technologies and vessels fearful of the power projection capabilities of the Indian navy.[57]

Apart from looking at the growth of the Indian navy, this chapter tried looking at the factors, which led to the growth of the Indian navy and the government's reluctance to increase the budget of the navy because of no immediate threat and its preoccupation with safeguarding of the territorial integrity. It was the role played by the navy in the 1971 Indo-Pakistan war that made the government realise the importance of a strong navy. But it was only in late 1970s and early 1980s that the government started taking steps in this direction and the results were there for everyone to see at the end of 1980s.

[57] Robert H.Bruce, "Implications for International Security: Observations on the Security Dilemma and the Nature of Concerns Provoked by Indian Naval Expansion", in Bruce, ed., n.11, pp.69-104.

Chapter-II

CHAPTER -2

THE LOST DECADE

The Indian Navy, which attracted a lot of attention in the late 1980s, so much so that it was featured on the cover of the '*Time*' magazine because it was in the process of acquiring a blue water capability, came under intense public scrutiny and criticism, for all the wrong reasons.[1] The Indian Navy was at the centre of attention for: succession struggles; bad maintenance of its ships; freeze on recruitments due to defence cuts; decrease in operational efficiency etc. and had to sail through turbulent waters.

The reasons for such dismal state of affairs have been many, which will be addressed in the following pages. Before that, the questions that need to be addressed are: was India truly acquiring a blue-water fleet? Was the Indian Naval expansion justified? Were the Indian Ocean littoral states justified in rearming their navies citing the threat to their shores from Indian naval expansion?

[1] "Superpower Rising" *Time*, vol. 133(14), April 3, 1989.

Indian Naval Expansion: How Legitimate?

The Indian navy, as we have seen in the previous chapter, had acquired formidable naval capabilities towards the end of 1980s. The countries of the Indian Ocean littoral reacted strongly to this development and had started rearming their navies, primarily due to the security dilemma faced by them.[2] This debate on the Indian naval expansion brings us to one of the major hypothesis of this study: contrary to what was made out in the late 1980s and early 1990s, the naval expansion proved to be a myth and the Indian navy actually shrank in size by the end of the 1990s.

In late 1980s, the defence minister of Indonesia, Mohammad Jusuf, stated that north Sumatra was very vulnerable to threats from major power rivals in the ocean. Indonesia was more explicit in June 1989, when at a meeting in New Delhi, Indonesia's naval chief, Admiral Rakefendo, formally conveyed to the Indian officials his government's concern over India's naval expansion.[3] According to a *Time* report, an Indonesian army colonel described his government as "concerned " about India's long term intentions, explaining this to be the main reason for the

[2] Robert H.Bruce, "Implications for International Security: Observations on the Security Dilemma and the Nature of Concerns Provoked by Indian Naval Expansion", in Bruce, Robert H. ed., *The Modern Indian Navy and the Indian Ocean: Developments and Implications*, (Canberra, 1989), pp.109-116.
[3] *Defence and Foreign Affairs Weekly*, (4-11 July 1989), p. 4.

Indonesian decision to build a large naval base at Sumatra that would provide a quick access to the Bay of Bengal.[4] Moreover, lacking the quantitative and qualitative strength to match Indian naval capabilities, most littoral states viewed this naval expansion with concern. Perhaps this is why many of them considered superpower naval presence in the region as a mixed blessing. A former Prime Minister of Singapore categorically stated that an overwhelming presence of one navy needs to be balanced by the presence of other similar grade navies.[5]

Australia, also expressed similar sentiments. From Canberra's perspective, there were legitimate grounds for concern that India's naval expansion might have a knock-on effect in terms of stimulating the further and perhaps competitive proliferation of military power amongst Australia's South East Asian neighbours. For Australia this concern was reflected in the relocation at massive expense of large parts of defence forces from bases in South East Australia to the north and west of the continent, and the acquisition of extremely costly new weapon systems including F/A- 18 fighter –bombers for the air force and 'ANZAC' frigates for the navy.[6]

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[4] Ross H. Munro, "Superpower Rising: Propelled by an Arms Buildup, India Asserts its Place on the World Stage", *Time*, vol. 133(14), April 3, 1989, p.9.
[5] Pervaiz Iqbal Cheema, "Security Conference on the Indian Ocean", *The News*, September 17, 1992.
[6] Tim Huxley, "India's Naval Expansion and Australia", *Contemporary South East Asia*, vol. 1(3), (1992), p.413.

Echoing widely held fears on the Indian expansion, the Heritage Foundation, America's leading conservative think tank, called upon India to publicly explain the reasons for its expansion. Heritage had suggested that India publish a white paper defining the goals of India's naval expansion.[7]

Many experts did not see the Indian navy as a threat and were of the view that India had legitimate interests to protect, which called for the expansion of the navy. C. Uday Bhaskar opines "it took the Indian navy 40 years to attain a force level drawn up in a 1948 plan paper and has today a principal surface combatant battle order that is less than what existed in 1961" and also "the existing capability of the navy should be nurtured and more importantly, the evolution of Indian navy should not be influenced from quarters either ill-informed or inimical to larger Indian interests".[8]

Moreover, India had been awarded the status of a pioneer investor to exploit a 150,000 sq km under sea plot for mineral rich nodules 2000 miles (3200 km) south west of the tip of India in the Indian Ocean. The nodules are rich in strategic materials like chrome and molybdenum etc., which are fast being depleted on land. The location of the plot, south of Mauritius, means that the Indian Navy must have capacity of protecting it from poachers and accord safety to Indian

[7] *Newstime* (Hyderabad), March 24, 1990.
[8] *Indian Express* (New Delhi), December 5, 1990.

vessels operating there. Therefore, it could be said that the operational radius of action of the Indian Navy should be at least 3500 kilometres from the shoreline. Under the law of the sea, India also has exclusive exploitation rights to the EEZ extending 200 km from the mainland and the shoreline of its island territories. This provision of an EEZ in the new legal regime of the sea increased India's area of responsibility from 83,000 sq. km to some 2.8 million sq. kms, or two –thirds of the total area of land.

The Indian Navy's "blue water" capability must allow for ships to set up patrols at that distance for at least a month. Since some naval vessels of countries whose interests clash with those of India operate in the Indian Ocean, it is necessary that the navy be able to intercept such vessels including aircraft carriers before they are able to launch their onboard aircraft and missiles at Indian targets. This can be done at a distance from the shore. "For those who tend to echo foreign concern about the growth of the Indian navy, it is necessary to point out that Indian naval ships have never been part of a contingent used to coerce littoral states in far off places. That is what is happening in the Indian Ocean and it is being done by those nations that have at some

point of time colonized India or have, as did the US, directly threatened India with their naval presence".[9]

The opinion on the issue was best summarised in a daily "the US, which was concerned with India's growing naval power projection capabilities, sustained a campaign in the Indian Ocean littoral states that, it was a threat to countries as far as Australia. After joint exercises with various US allies began, the word got out that the Indian navy was not really a threat at all!"[10] Other experts contend that "the American plan was to dovetail the Indian navy in a jigsaw of forces held together by a common interest in regional stability and keeping open commerce lanes in Asia" and thus "entrust greater security responsibility on India".[11]

So, the Indian naval expansion has to be seen as the legitimate drive towards safeguarding India's Sea Lanes of Communications (SLOCs) and the so called perceived threat of the Indian Ocean littoral states was an overreaction due to the western propaganda.

Strategic Situation in the 1990s: Impact on Indian Navy

Apart from the international factors, which had profound impact on naval planning and strategies, domestic factors also had a

[9] *Patriot* (New Delhi), December 7, 1990.
[10] *Patriot,* April 17, 1993.
[11] *Tribune* (Chandigarh), October 29, 1991.

major role in the indifference shown towards the navy in 1990s. But, here, international factors are dealt with first, primarily those relating to India's strategic environment.

End of the Cold War and the Indian Ocean Security: The end of the cold war removed an important strategic superstructure that had been imposed on the turbulent politics of the region. Festering animosities were able to surface in places like horns of Africa and the Gulf, which had previously been recipients of substantial numbers of arms under the cold war regime.

The watering down of the superpower presence in the Indian Ocean region implied that, with the exception of the Gulf security, the wider Indian Ocean territory was now considered of second-order importance in terms of global security. Indeed, in order to garner its "peace dividend" at the conclusion of the cold war, Washington sought to extricate the United States from the role of global policeman and to define more closely where its vital security interests lay. One implication of this new development was that it was necessary for Washington to pass the policeman's baton to the United Nations, which could henceforth be required to participate more widely in maintaining regional security.

Oil Security and the End of the Cold War: The 1991 Gulf war triggered by the Iraqi invasion of Kuwait heightened radical concern about oil security on the part of the industrialized nations. It had the effect of re-emphasizing the strategic fundamental fact about the Indian Ocean that oil security was one of the most pressing international issues.

In developing the routes into the Gulf and in the subsequent prosecution of the war, certain US and allied strategic assets in the Pacific and Indian Oceans emerged as vital. These included Hawaii, Clark and Subic bases in the Philippines, Singapore, Australia (in terms of communications and early warning), Diego Garcia, Djibouti and in the Gulf itself, Oman and the UAE and, of course, Saudi Arabia. The pre-positioned material on Diego Garcia, which was deployed in the battle theatre only 10 days after the commencement of the of the crisis, was especially useful in the context of the "tripwire" force that the United States had to put in place in Saudi Arabia early on in the crisis. Of these resources, Clark and Subic are no longer in the possession of the United States, but the relationship with Singapore has been further developed and US resources on Guam have been upgraded in an endeavour to cover the loss of the Philippines bases. In terms of access to the Gulf, the

Kuwait war demonstrated the importance of the Indian Ocean route and as a back up to the routes through Europe.[12]

The war also focused the attention of larger regional countries on the capabilities of the western allied participants in new systems of C4I (command, control, computation, communication and intelligence), in so-called "smart weapons", and in the military doctrine of the air- land battle. The war was therefore followed by attempts on the part of those countries that could afford them, to acquire at least –some of these capabilities. It thus had the effect of forcing an upgrading of the capabilities of weapons in the Indian Ocean region, and especially in the Gulf, South Asia, South East Asia and China.[13]

Evolution of Regional Capabilities and New Technologies: Another phenomenon that characterised the Indian Ocean in post-cold war period, was, the evolution of strategic capabilities of the principal Indian Ocean actors. There were a number of elements that were behind the rising capabilities of the region powers like:

1. The diminution of the superpower presence had caused a shift in relativities in favour of the leading regional powers in the Gulf.

[12] Sandy Gordan, *Security and Security Building in the Indian Ocean Region*, (Canberra, 1996), pp.37-38.
[13] Ibid, pp.41-42

2. A second general feature was that in some places – and this was especially true of South East Asia- rapid economic growth assisted in military modernization. Some countries, such as Malaysia, acquired modern fighters and naval vessels and submarines for the first time. Thailand had also put in a bid to acquire the state of the art AIM 120 air-to-air missile.[14] Southern Asian countries possessed a range of ballistic missiles, including the intermediate range Chinese – origin SS- 20s and of Saudi Arabia, Iran's 1000 km range Tondar 68 (version of the M-18 developed with Chinese assistance); Iraq's 900 km Badr2 (a scud clone), Pakistan's crated Chinese M-11 short range missiles.[15]
3. A third feature of the region was the increasing capabilities of the larger regional powers to develop indigenously important defence capabilities. In the light of the defeat of the largely Soviet- equipped Iraqi force, nations such as India, that were heavily reliant on weapons and doctrines of the former Soviet Union, had to re-assess their doctrines and force structures in a fundamental way.

[14]Theresa Hitchens, "Thais Use AMRAAM as US Fighter Buy Lever", *Defense News*, 4-10 Sepetember 1995

[15]"Prithvi SS 150/250- The Indian Battlefield Support Missile", *Asian Defence Journal*, no. 10, 1994. p.51

At the same time, the larger regional nations had become capable of producing a number of new technologies locally. In this process, they were assisted by two developments – the increasing tendency for key military and civil technologies to converge, and the development of key linkages with outside powers capable of supplying dual – use technology and transfer of technology.

Indian Navy in the Era of Coalition Politics, Changing World Order and Economic Restructuring

The Indian Navy which was at the centre of attention in late 1980s due to its "blue water" ambitions, lost the momentum due to the disintegration of the Soviet Union, coalition politics and economic restructuring.

The disintegration of the USSR hit Indian defence planners hard. The Eastern fleet, which primarily consisted of ships and submarines made in former USSR had to sail through rough weather. The disintegration meant that the spare parts needed for the maintenance of the fleet were not forthcoming and the condition of ships deteriorated to such an extent that over 150 memoranda were submitted to

Vishakhapatnam dockyard by Russian technicians, regarding abysmal level of maintenance.[16] Also, the negotiations with the concerned commonwealth of Independent States (CIS) to overcome the problem of spares were getting delayed.[17] On August 21, 1991 INS *Andaman* sank in the Bay of Bengal. It was said to have a very old doubling plates on her hull, and her bulkheads were corroded.[18]

Indian Navy was also affected, to a large extent by the suspension of the Rupee- Rouble trade between India and the former Soviet Union. This agreement had proved to be beneficial to India, both militarily and economically. Militarily it enabled India to acquire weapons, platforms ammunitions and in turn pay in Rupees for the hardware procured. The Soviet- Union utilised the rupee in buying the goods produced in India. Economically, the Soviet Union helped India in the establishment of economic infrastructure like dams, refineries and steel plants.[19]

Russia and the successor states of former Soviet Union now demanded hard currency, because of their own economic restructuring and adoption of free market- oriented economies. Moreover, since India was also undergoing structural adjustment, it found it difficult to fulfil these conditions.

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[16] *Newstime*, March 18, 1992
[17] *Blitz* (Bombay), December 17, 1994
[18] *Newstime*, March 18, 1992.
[19] Surjit Mansingh, *India's Search for Power- Indira Gandhi's Foreign Policy 1966-82*, (New Delhi, 1984), pp.142-44

India, in 1991, faced an acute financial crisis due to the burgeoning economic debt and was on the brink of defaulting on her loans, because of the populist policies followed by successive governments. India was forced to open her economy and to structurally reform it. This financial crisis proved to be a bane for the defence services in general, and for the Navy, in particular. The following table (table2.1) represents the defence expenditure on the armed services. An examination of the table suggests that expenditure on Navy fell from 13.5% in 1989-1990 to 11.5% in 1992- 1993 and was around 12-13% throughout the 1990s. The naval outlay began to increase at the end of 1990s and the naval outlay for the year 1999-2000 was 14.8 per cent.

In the 1991-92 budget the Indian navy was allotted Rs 15,426.46 crore and in the following year i.e., 1992-93 it was allotted Rs 16,347.04 crore which was a decrease in real terms (see table 2.2).[20] The Navy compensated for the cuts by savings in administration, fleet exercise and reducing the

[20] *Telegraph* (Calcutta), February 23,1992

Table 2.1: Defence Expenditure on the Armed Services (all figures in percentages) in the 1990s

Year	Army	Navy	Air Force	Defence Production	Defence R & D
1989-90	55.5	13.5	23.1	3.7	4.2
1990-91	56.3	12.7	24.1	2.6	4.3
1991-92	55.7	12.8	24.8	2.5	4.2
1992-93	53.3	11.5	29.4	1.3	4.5
1993-94	53.3	12.3	27.7	2.2	4.8
1994-95	53.6	11.9	27.8	2.2	5
1995-96	54	13.3	25.7	1.8	5.3
1996-97	52.8	12.9	27.6	1.2	5.3
1997-98	52.6	13.2	25.4	3.3	5.5
1998-99	54	14.5	22.8	2.7	6
1999-2000	52.4	14.8	22.4	4.3	6.1

Source: G.V.C.Naidu, *The Indian Navy and South East Asia*, (New Delhi, 2000), p.99.

"sea-time" and "airtime" of naval ships and aircraft.[21] The Arun Singh committee had recommended that defence allocations to the Navy should reach around 18 to 20 % by 2000.[22] Admiral Vijay Singh Shekawat said, "With a 15 per cent defence budget allocation for the Navy, all I can possibly do is arrest the downslide. What I require is not just to arrest the downslide, but a significant reversal for which 18 to 20% of total defence budget is essential."[23] The Tenth Finance Commission in its report submitted in December 1994 also recommended that naval expenditure be increased to 30 per cent of the defence budget in two

[21] ibid
[22] *Times of India* (New Delhi), April 23,1993
[23] *Bangkok Post* (Bangkok), August 22, 1994

stages.[24] Some Naval analysts believed that tightening of purse strings by India in 1990s was influenced by views on regional security and economic reforms launched in mid 1991.[25] Admiral Shekawat also cited the above reason in an interview "It was a consequence of the difficult economic situation that the country had to face and has only just begun to ease as the economic reforms show results".[26]

For the first time, the Ministry of Defence publicly estimated the essential costs of the Navy in the Ninth Five year defence plan (1997-2002) (approved by the CCS in December 1997) as Rs 14000-15000 crore. Consequently, the Navy is estimated to have been allocated Rs 33000crore in total in the Ninth Five Year plan, 45% of which, or Rs 14, 850crore, is destined for the capital sector.[27]

The Indian navy has continuously received the least share of defence expenditure among the three armed services. Although in 1998-99 it received its highest share ever (Rs 6,015.53 crore), the Indian navy's budget for the year was far lower than the pensions for the three services (Rs 12,000 crore).

Naval expenditure can also be perceived in terms of current and constant terms. The naval expenditure in current terms has grown from

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[24] Rahul Roy-Chaudhury, "India's Maritime Challenges in the Early 21st Century", *Indian Defence Review* (New Delhi), vol.14(2), (1999), P.97
[25] *Bangkok Post,* n.20
[26] Interview in *Maritime International* (Mumbai), vol. 1 (12), p.7
[27] Roy-Chaudhury, n. 24, p.97

Rupees (Rs) 14,416.17 crore in 1989-90 to Rs 45,694.00 crore in 1999-2000. But this increase of around 250 per cent does not reveal the true picture because it does not take into account the annual inflation rate, the depreciation of the Indian rupee in the international market and the increasing technological costs of modern weapon systems (produced either indigenously or sourced from abroad).

The annual rate of inflation for most part of the 1990s remained well over 10 per cent and dropped below an average rate of 5 per cent only after 1997-98. The rupee also lost its value in the international market due to the devaluation done by the Indian government in early 1990s. So, when one assesses defence expenditure in current terms it does not reveal the true extent of defence spending.

On the other hand, the real naval expenditure can and should be calculated in real terms i.e., in constant terms. The expenditure in constant terms (1980-81) prices gives a completely different picture. The naval expenditure in constant terms in 1989-90 was Rs 7,092.76 crore and it increased to a mere Rs 10,372.54 crore in 1999-2000 i.e., only Rs 3,279.78 crore.

Table 2.2: Naval Expenditure in Current and Constant Terms and as Percentage of GDP

	Current (Rupees)crore	Constant1980-81,Rupees crore	Percentage of GDP	Percentage of total government expenditure
1989-90	14,416.17	7,092.76	3.17%	11.09%
1990-91	15,426.46	6,833.93	2.88%	8.74%
1991-92	16,347.04	6,309.96	2.65%	8.20%
1992-93	17,581.79	6,259.12	2.49%	7.82%
1993-94	21,844.73	7,099.54	2.49%	8.45%
1994-95	23,245.23	6,857.34	2.24%	7.73%
1995-96	26,856.29	7,331.77	2.21%	7.89%
1996-97	29,505.08	7,582.81	2.09%	7.68%
1997-98	35,277.99	8,572.55	2.26%	7.92%
1998-99	41,200.00	9,599.60	2.33%	
1999-2000	45,694.00	10,372.54	2.31%	

Source: Jasjit Singh, *India's Defence Spending: Assessing Future Needs*, (New Delhi, 2000), p.27.

Moreover, the case of the navy is disturbing as may be seen in table 2.3. Capital expenditure, which was growing at an average annual rate of around 26 per cent in current terms, came down to around half the figure in current rupees. But the effect, in constant 1980-81 rupees was debilitating, coming down to nearly one-fifth of the earlier decades. The acquisition of warships and submarines had markedly slowed down during the past decade or so. The obvious result was that warship acquisition had

Table 2.3: Growth of Capital Expenditure: Indian Navy

Average, annual rate of growth	1963-64to 1987-88 (25 years)	1978-79 to1987-88 (10 years)	1988-89 to1997 -98 (10 years)
In current rupees	24.86%	25.62%	12.66%
In constant(1980-81) rupees	16.01%	15.64%	3.44%

Source: Jasjit Singh, *India's Defence Spending: Assessing Future Needs*, (New Delhi, 2000), p.60.

slowed down to levels far below replacement rates, leave alone the levels required against planned growth. Even the construction of the indigenous *Delhi* class guided missile destroyer was dragged out due to reduce funding. The construction of Karwar naval base, (Project Sea Bird) (which was to develop into a major port facility), for relocation of naval forces from overcrowded Mumbai, has also, been delayed. The result, naturally, has been that shortages will now persist for a longer period, additional resources have to be allocated to arrest the slide-back induced by low funding during the past decade, and cost have increased because of delays. If the current rate of growth of capital expenditure continues, it would leave a drastically shrunken navy in the coming decade, severely circumscribing the combat capability of the navy.[28] There has been some improvement in the acquisition process in the last two years. But this will have to be increased significantly if the force levels of 1980s are to be

[28] Rahul Roy-Chaudhury, "The Indian Navy: Past, Present and Future", in Jasjit Singh ed., *Asian Strategic Review 1995-96*, (New Delhi, 1996), p.101.

maintained. At current prices, this may require at least 26 per cent average annual growth in the coming years, besides the money required to make up existing deficiencies.

The 1990s also marked the end of one-party dominance system in India and emergence of politics of survival. One newspaper commented in mid 1990s "Ever since Sharad Pawar was moved from the defence ministry to Maharashtra as Chief Minister, the portfolio has been managed by Mr. Narsimha Rao who is far too immersed in the politics of survival to accord any priority to our nation's defence."[29] Even the governments of H.D. Devegowda and I.K. Gujral did not give adequate attention to modernization of the armed forces. Experts believe that the government had an ad-hoc approach to defence preparedness where planning is pending almost to the point of wishing it away.[30]

This chapter focussed on the change in international security environment, consequent to the disintegration of the Soviet Union. To recapitulate; the Indian navy was the wing that was hit hardest by the disintegration. Moreover, the economic liberalisation initiated by the

[29] *Blitz*, December 17, 1994
[30] ibid

Narsimha Rao government under the structural adjustment programme of the World Bank proved to be the last straw on the camel's back because the navy was left high and dry. The tightening of the purse strings affected almost all the aspects of the navy right from recruitment, combat capability, routine maintenance, to the procurement of spare parts. Effort was also made in this chapter to highlight the impact on long term naval procurement due to the advent of coalition politics at the national level.

Chapter-III

CHAPTER -3

Indian Navy: Force Structure and Doctrines

This chapter attempts to look at the force structure, strategy and the doctrines of the Indian navy. The international strategic environment, as stated earlier, influenced the Indian navy. The decade of 1990s is important for the Indian navy in more than one respect. It marks the period when the Indian navy came out of its self-imposed isolation and interacted with the regional and extra-regional navies in a major way. The Indian navy also brought out its first Strategic Defence Review since independence, which talked of: sea based deterrence, economic and energy security, forward presence, and naval diplomacy. The navy also took to information warfare and sought to incorporate C4I (command, control, computation, communication and intelligence). But before we turn to examine the force structure and the strategic doctrine, it would be appropriate to look at the joint naval exercises conducted by the navy in 1990s with the regional and extra regional navies.

JOINT NAVAL EXERCISES

In a major departure from its earlier policy for more than two decades, the Indian Navy came out of its self –imposed isolation and started interacting with a number of other navies in the Indian Ocean littoral and outside in a variety of ways. This came about in the form of joint naval exercises, visits to foreign ports, bilateral naval assistance, cooperation in disaster relief, and training of naval personnel from other countries etc.[1]

For much of the 1950s, the Royal Navy arranged annual exercise amongst navies of India, Pakistan and Sri Lanka, with the participation of the Royal Navy and at times, of the Australian and New Zealand navies as well. These exercises took place for a three weeks period in August off the North-Eastern Sri Lankan port of Trincomalee, and thereby came to known by the acronym JET (Joint Exercise Trincomalee). Essentially JET provided the navies with an opportunity to carry out crucial anti- submarine training exercise, which was really not possible due to the absence of submarines in virtually all Indian Ocean navies.[2]

In 1977, at the height of big power rivalry, in the Indian ocean, the then Janata government whole–heartedly approved of fairly large scale joint naval exercises with major units including an aircraft carrier of

[1] G.V.C.Naidu, *The Indian Navy and Southeast Asia*, (New Delhi, 2000), p.97.
[2] Rahul Roy-Chaudhury, "Indian Naval Diplomacy", *Indian Defence Review*, vol.10 (1) (1995), p.53.

Royal Australian Navy- a very close ally of the USA and Royal New Zealand navy- both co-members with the USA of the Australia, New Zealand and the United States (ANZUS). Major units of our navy including *Vikrant* took part.[3] Indian desire in not participating in joint naval exercises with both the superpowers stemmed from the desire to maintain a distance from them and was also consistent with the non-aligned foreign policy followed by India.[4]

The first Navy, with which India held joint naval exercise after a hiatus, was the Indonesian navy off Surabaya in 1989. This was soon followed by similar exercises with a number of South- East Asian and West-Asian navies, and the navies of Australia, New Zealand, the US, Russia, France and the UK.[5]

India and the US in 1995, signed a comprehensive defence document. The document opened the way for a series of naval exercises between the two and for the first time they were "meaningful" in terms of the level of information exchanged and of the participating vessels. *Malabar II*, an exercise held in June 1995, even involved US nuclear-powered submarines.[6]

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[3] Vice-Admiral S.Mookerjee, "Joint Naval Exercises: Overdue change of Course", *USI Journal*, (New Delhi), Apr- June 1992, p.160

[4] *The Hindustan Times* (New Delhi), June 29, 1992

[5] Rahul Roy- Chaudhury, "Naval Cooperation: India and the Indian Ocean", *Strategic Analysis* (New Delhi), June 1996, pp.327-28

[6] Sandy Gordan, Desmond Ball et. al., *Security and Security Building in the Indian Ocean Region*, (Canberra, 1996), pp.57-58

The reasons that prompted the Indian navy to adopt a new policy were many. First, the end of the cold war removed the previous suspicion about India's close links with Moscow. Second, India was taken aback by the strange reaction that came, especially, from the ASEAN countries about the growing power projection capabilities of the Indian navy and its ambitions in South-East Asia.[7] Third, these led to improvements in the Indian navy's tactics and strategies. Interaction with foreign navies, especially with the highly professional and technologically advanced ones, enabled the Indian navy to learn valuable lessons in fighting wars and peace operations.[8]

Not all tend to agree with the above arguments. A report from Washington confirms that Indian strategic doctrine will be subverted by the too close military-to-military contacts between two countries.[9] The joint exercises "enable the United States to influence strategic thought among top naval brass, lend legitimacy to its prolonged presence in the North Arabian Sea and in case its voice is not heeded to in New Delhi, to do what it can to prevent the kind of naval action on Karachi that saw the destruction of its port facilities and ships in harbour in 1971.[10]

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[7] Naidu, n.27, p.98
[8] Roy-Chaudhury, n.5, p.322
[9] *Patriot,* April 17, 1993
[10] ibid

Losses in the Lost Decade

The lost decade, a term coined by naval top brass, refers to the period between 1987 and 1997 when the navy did not place a single order for a major warship. The debris of this decade includes the hulks of the aircraft carrier INS Vikrant , a nuclear submarine, tanker and dozen of smaller frigates.[11]

Jane's Fighting Ships had predicted that the Indian navy would remain main naval power in the Indian Ocean for many years ahead. However even *Jane's* felt sorry for the once powerful navy's decline. "This was the force that was going to dominate the Indian Ocean ready to challenge even superpower incursion--------. In 1995 there has not been placed a new warship order for five years and not more than 40% of the fleet is fully operational".[12] The *Military Balance* too, in 1995-96, reported that only 50% of warships estimated "were combat – capable".[13] *Jane's Fighting Ships* 1997-98 reveals "half of all schedule refits have been postponed, having been undermined by bureaucratic delays and lack of government

[11] *Indian Express*, December 5, 1998
[12] *The Pioneer*, May 18, 1998
[13] ibid.

understanding of navy's needs, according to outgoing naval chief V.S. Shekhawat in September 1996". [14]

Table 3.1: Force Structure of the Indian Navy in 1990s

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
Carrier	2	2	2	2	2	2	2	1	1	
Submarine	1	0	0	0	0	0	0	0	0	0
SSN	0	0	0	0	0	0	0	0	0	0
SS	18	17	15	15	15	15	19	17	19	
Destroyers	5	5	5	5	5	5	5	6	6	
Frigates	20	21	21	17	18	18	19	18	18	
Corvettes	10	13	14	15	15	17	18	19	19	
Missile craft	12	9	8	6	6	6	8	6	8	
Patrol Inshore	13	14	12	12	12	12	11	11	13	
Minewarfare	20	22	20	20	20	20	20	20	20	20
Amphibious	0	0	0	0	0	0	0	0	0	0
LST	1	1	1	1	1	1	1	2	2	
LCM	9	8	8	8	8	8	8	8	8	8
LCU	9	7	7	7	7	7	10	7	7	
Manpower(000's)	55	55	55	55	55	55	55	55	55	55

Source: *Military Technology*, various years (1990 to 2000)

The above table calls for a close scrutiny. It represents the plight of the most neglected wing of the armed forces. It clearly proves that other countries were overreacting to India's naval expansion.

Aircraft Carrier: The Indian Navy began 1990s with two aircraft carriers, INS *Vikrant* and INS *Viraat*. The INS *Vikrant* saw action in 1971 Indo-Pakistan war. The carrier is now in Mumbai harbour and has been converted into a naval museum after being decommissioned.

[14] ibid.

The Indian Government signed an agreement with the Russian government for the replacement of the carrier and the *Admiral Gorshkov*, a 44,500 tonnes, Kiev class carrier which is being converted into a short take-off but arrested landing (STOBAR) carrier, will be joining the Indian fleet soon. The INS *Viraat* will also be decommissioned in 2-3 years. The Indian Navy will again have one aircraft and whenever it is docked for maintenance, the Indian navy will be without an operational aircraft carrier like it happened when INS *Viraat* went to docks recently. The implications for the Indian fleet, in functioning without a carrier are:

1. India's growing maritime interests would not be adequately protected. Without a carrier during warfare, the navy would not be able to maintain "sea control" over its area of operation. It would be unable to ensure the air defence of merchant convoys beyond the range of land based aircraft, or provide additional anti-submarine resources to counter a conventional submarine threat.
2. The navy's offensive punch in a war against Pakistan would be less effective. While the carrier is not expected to repeat the 1971 performance of the INS *Vikrant* in a future war against Pakistan, its employment is critical to naval operations.

3. The navy's suitability for the support of foreign policy objective would decline. Amongst the different types of warships, the carrier is best suited to the function of naval diplomacy. The aircraft of the carrier could be used to display naval prowess and project power ashore.[15]

The Indian navy, ideally, needs to have three carriers, with at least two of them on duty at any time, to react rapidly to a crisis either in the Arabian Sea or the Bay of Bengal, with the Indian Ocean as a shared responsibility. [16]

The P.V. Narsimha Rao government cancelled the construction of a replacement carrier.[17] The effort towards construction of a 24000 tonnes Air Defence Ship (ADS) at Cochin was cleared by the ministries of Defence and Finance and has been cleared by the Cabinet Committee on Security (CCS).[18] Expected to cost Rs 1600crores, it will take 10 years for launch.

Various arguments were advanced against aircraft carriers and in support of greater submarine capability for the navy. First, the aircraft carriers were variously described as a "white elephants" or "sitting ducks"

[15] Rahul Roy-Chaudhury, "Indian Navy: A Change in Strategy", *Indian Express*, September 18, 1991.
[16] Hormuz P. Mama, " India's Naval Future : Fewer Ships, but Better", *International Defence Review*, vol.26(2), 1993,p.162
[17] Roy-Chaudhury, n.15.
[18] Roy- Chaudhury, "India's Maritime Challenges in the Early 21st Century" *Indian Defence Review*, vol. 14(2), (1999), p.95.

because of the huge costs of their purchase as well as operation and maintenance and because of their vulnerability on the high sea. Second, it was argued that major naval powers, such as the US and the former Soviet Union, have started scaling down their earlier plans to acquire more carriers starting from late 1970's and others like China, Japan, Canada and Australia did not find much use for carriers and hence do not posses them. Third, another major weakness with carriers is the number of complementary ships required as escorts for its operational effectiveness.

However, it would be too simplistic to underrate the utility of aircraft carriers. For a country like India, the navy is expected to perform a variety of functions and not just the protection of trade routes and far away island on both sides of the coast. Only a balanced navy, withy a fair mix of both deterrent and offensive capability, can credibly defend the coasts, protect the maritime interests, especially the off shore economic assets such as oil platforms, guard the EEZ, keep open the SLOCs and undertake survey activity.[19] In December 1988, the Third of the Standing Committee on Defence (Twelfth Lok Sabha) on the *Upgradation and Modernization of the Naval Fleet* strongly deplored the government "for failing to realize that such threat perceptions can be countered only by possessing a floating

[19] Naidu, n.27 , p.53.

airfield hundreds of miles into the sea in the form of an aircraft carriers with necessary support, since an aircraft carrier is the only maritime hardware that will tilt balance against our adversaries''.[20]

Submarines: In early 1988, India procured a nuclear powered submarine on lease (Charlie-I class guided missile submarine) renaming it INS *Chakra*. Rajiv Gandhi, on the eve of its commissioning said that the submarine was propelled by nuclear power, "but not armed with nuclear weapons. Nor is there any simulation of nuclear weapons on board the submarine" and that it was equipped for training and self- defence.[21] The pros and cons of possessing a nuclear submarine were: theoretically, a nuclear submarine can stay under water for up to three years (depending upon the efficiency of the reactor and psychological endurance ability of the crew), unlike conventional submarines, which would have to surface every 72 hours to charge batteries and release the exhaust. Apart from other attributes, it is also difficult to detect a nuclear submarine because of its speed, quick re-deployability, ability to operate at depths up to 500 miles, and other

[20] Ministry of Defence, *Upgradation and Modernisation of Naval Fleet (1998- 99),* Third Report, Twelfth Lok Sabha, December 21, 1998, p.15.
[21] *The Statesman*, (New Delhi) February 4, 1988.

attributes.[22] The biggest attendant risk is the possibility of a nuclear accident because of mechanical fault and radiation leak.[23]

Questions were raised regarding the necessity, in the first place, to acquire such a vessel on lease at enormous cost. It was argued that familiarization and operational knowledge about these submarines, or what is called valuable "hands –on" experience, would be of enormous use, in the longer run.[24]

The effort towards indigenous construction of a nuclear powered submarine has not met with much success. Project Advanced Technology Vehicle (ATV) was given the go ahead by Indira Gandhi in early 1970s, after Brezhnev promised her complete support for the project. Now after thirty years and spending more than Rs 2000 crore on development of the "indigenous reactor" the nuclear lobby has decided to buy the Russian reactor, which was offered to them offered to them in 1969 itself.[25] It is interesting to note that Admiral Vishnu Bhagwat had called for a technical audit of the project publicly and it was one of the reasons cited for his dismissal because the government felt that he had violated the Official Secrets Act.

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[22] *Hindustan Times* (New Delhi), January 7, 1988.
[23] P. Moorthy, " Nuclear Arms Control at Sea", *Strategic Analysis*, vol. 12, July 1988, pp 436-47
[24] C. Uday Bhaskar, "The Security Policy of India and the role of the Indian navy", *Strategic Analysis, vol.15,* no.7, October 1991, p. 797.
[25] *The Pioneer* (New Delhi) October 11, 1999.

CONVENTIONAL SUBMARINES: Two conventional submarines were commissioned in to the Indian fleet in 1992 and 1994 as *INS Shalki* and *INS Shankul.* India had signed a major deal with HDW of Germany to acquire two advanced type 1500 diesel-electric submarines and started a new programme to build these under license in India.[26] Moreover, 8-kilo class submarines were commissioned into the navy between 1986 and 1991.[27]

India's submarine fleet also faced cutbacks. The fleet at the end of 1990s comprised of four ex-Russian Foxtort- class diesel-electric submarines (SSKs), nine kilo- class SSKs and four *Shiskumar*- class (HDW type 209\1500) vessels. According to naval planners, the number of submarines will fall to ten by 2010. Additionally, a 30-year submarine construction plan was formulated in 1997 to utilize Mazagon Docks Limited's ship building capability. To maintain a force level of 20 conventional submarines there would be a requirement of delivery of at least one submarine every year through a series of construction programmes. A major disadvantage of all Indian submarines is that unlike Pakistan's

[26] Naidu, n.27, p.57.
[27] John Jordan, "The Indian Navy – Major Expansion Ahead", *Jane's Intelligence Review*, vol 3(7), p.292.

Submarine Harpoon- armed Agosta and Daphne-class submarines; they do not have anti- ship missiles.[28]

The Indian navy also commissioned INS *Delhi*, at 6500 tonnes on November 15, 1997. It was described as "the most powerful warship ever built in India". Work on *Delhi* (project 15) began in the early 1980s with technical assistance by the Russian Gevernoye Design Bureau, and the design was "frozen" in 1988. The ship was launched in 1991 and was originally scheduled to be commissioned in 1995, but the collapse of the Soviet Union and curbs on Indian defence spending during the early 1990s caused a two-year delay.

The Indian navy for many years seemed to follow a "belt and suspender" strategy in its procurement: that is, it gathered ships and equipment from as many different sources as possible in order not to be tied to just one hardware supplier. Political equidistance and fear of excessive dependence upon any of the great powers were the reasons behind this unusual behaviour.[29] One naval commentator had this to say about the Indian *Godavari* class frigate, "[it] has sensors from six different nations that network with the Italian IPN- 10 combat direction system.... Systems on the distributed network include Russian radars and fire control; hull and variable

[28] Rahul Roy- Chaudhury, *India's Maritime Security,* (New Delhi, 2001), p. 93.
[29] Andres de Lionis, "Mix and Match: India's Puzziling approach to Naval Procurement" *Jane's Intelligence Review,* vol 10(11), (1998), p.32.

depth sonars (VDS) from four different countries; Dutch navigation; Italian INS-3 electronic contermeasures/electronic support measures; and Indian radars".[30]

Navy during the Kargil War

The Kargil War was an attempt on the part of Pakistan, to capture the heights and to threaten the Srinagar-Ladakh national highway 1A. Due to escalation of tensions, the Indian navy was put on high alert (operation TALWAR) as a direct result of Pakistan's build-up.[31] Before the commencement of operations, the navy was to carry out its exercises in the eastern theatre; however, later on, as a result of the developing situation, the scene of the exercises was shifted to the western theatre. The Indian navy was well poised to control the SLOCs and put an effective blockade of oil and vital routes to Pakistan. The naval formations had moved up to the mouth of the Gulf and were within striking distance of the enemy. The aircraft carrier was also kept in operational readiness with seven days notice

[30] James C. Bussert, "India's Navy Blends Eastern and Western Ships, Systems", *Maritime International*, (December 1993), p.41
[31] From Surprise to Reckoning: The Kargil Review Committee Report, (New Delhi, 2000), p.101

to meet any eventuality. The amphibious units of the army were also moved from Andaman and Nicobar Islands to the western theatre.[32]

It is believed that naval formations included all *Ranjit* class destroyers, some *Godavari* class frigates, one *Kachin* class destroyer and kilo class submarine. Aware of its vulnerability, Pakistan ordered its ships not to tangle with any Indian vessel.[33]

India's Draft Nuclear Doctrine: Navy's Role

This section looks at India's *Draft Nuclear Doctrine* and the role that it envisages for the navy. The arguments in favour of acquisition of sea-based deterrence are growing stronger by the day. They argue that the "Americans were forced to abandon the land-based missiles for retaliatory purposes, due to phenomenal cost of keeping them in move and more countries, primarily the p-5 countries are moving away from land-based deterrence to sea-based deterrence".[34] The arguments advanced against mobile strategic missiles are that the infrared signature of the mobile battery

[32] Major General Ashok Krishna, "The Kargil War" in Chari ,P. R. and Major General Krishna ,Ashok (ed) *Kargil: The Tables Turned* (New Delhi, 2001), p.135-37.
[33] Ibid. p.137.
[34] *The Pionee,r* October *11, 1999.*

can be easily picked up by aircraft/satellites and thus their chances of detection remain very high. Secondly, a very highly developed and robust infrastructure/ rail system is necessary to move the missile battery. Thirdly, these missile batteries must be deployed in uninhabited/sparsely-populated areas.[35]

The nuclear-propelled ballistic missile bearing (SSBNs) apart from offering multiple choices to national decision makers is considered the most survivable strategic nuclear force. The inherent attributes that make them a natural choice for hosting strategic weaponry are:

1. **Responsiveness:** The SSBNs are an all-weather platform and, therefore, provide prompt response to any threat that challenges national security or interests.
2. **Flexibility:** The relative high stealth nature of the SSBN offers tremendous flexibility for its deployment. Apart from its ability to move undetected to the desired launch area, its high underwater speed helps it to reach the launch area in the least possible time and therefore supports quick redeployment.

[35] Vijay Shakuja, "Sea Based Deterrence and Indian Security", *Strategic Analysis*, vol 25(1), 2001, pp 30-31.

3. **Survivability:** The SSBN can make a quick get-way to a safe haven between the time it is detected and the time the retaliatory weapon is launched and is therefore, a survivable weapon.
4. **Endurance:** The ability to stay under water over long periods without logistical support is an important attribute of the SSBN.
5. **Connectivity:** The SSBN communicates using acoustic energy, which is most suitable source for underwater communication and offers effective, reliable, robust and survivable communication between shore/command platform and the submarine.
6. **Readiness:** The SSBN also possess the capability to be alert and ready at all times to launch weapons or shift to another area of deployment.[36]

The objective of the *Draft Indian Nuclear Doctrine* is "effective credible nuclear deterrence and adequate retaliatory capability should deterrence fail". It goes on to add that "nuclear forces will be effective, enduring, diverse, flexible and responsive" and they will be "based on a triad of aircraft, mobile land-based missiles and sea-based assets".[37] India also proclaimed the policy of "no first-use" of nuclear weapons.

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[36] Ibid, pp 27-28.
[37] D.N.Moorty, "Ambiguity in India's Nuclear Agenda", *Jane's Intelligence Review*, vol 11(11), 1999, p.45.

The draft doctrine was vehemently criticized for its silence on many issues. Most importantly, the Kargil conflict highlighted the nature of nuclear deterrence on both sides of the border. Pakistani politicians went on record to state that India did not launch an all-out war because it was afraid of the "Islamic Bomb". In contrast, media reports quoted some Indian politicians as saying that, despite the strong action against the Kargil intruders, Pakistan did not escalate the situation into a full-fledged war because it was afraid of the Indian nuclear capability.[38]

Although the ideal weapons platform for the country's declared nuclear doctrine of "no first-use" of nuclear weapons is a SSBN and a "second strike" capable nuclear-powered submarine armed with nuclear tipped ballistic missiles (SLBM). The Defence Research and Development Organization (DRDO) and the navy are not building such a boat. Instead, their short-term policy remains the deployment of a surface ship launched version of the "Prithvi" ballistic missile, the "Dhanush" (with a range of 300 kms), along with the deployment of the "Sagarika" missile to arm the SSGN ATV in the medium term.[39]

[38] ibid, p 49.
[39] Roy-Chaudhury, n.18, p.97.

The limited range of these missiles will necessitate deployment well within Pakistan's EEZ (of 360 kms), where the warships would be most vulnerable to Pakistani Air force and naval Orion aircraft.[40]

The ATV project is running behind schedule. In December 1998 the report of the Standing committee on defence stated: "in the face of the presence of sub-surface nuclear submarines and sub-surface ballistic nuclear submarines of China and the US in the Indian Ocean in which India has a vital stake, *the committee recommended to the government to review and accelerate its nuclear policy for fabricating or for acquiring nuclear submarines to add to the deterrent potential of the Indian navy"* (original emphasis).[41]

Indian Naval Strategy and Doctrine

The Indian navy did not formulate any doctrine till 1998 when it came out with its first Strategic Defence Review. Till 1998 the naval strategists formulated India's maritime strategy by looking at India's perceptions of regional security and India's maritime interests. And in the absence of any authoritative strategic literature on the Indian Navy or its maritime concerns and strategies, the kind of ships and weaponry that were procured in support

[40] Roy-Chaudhury, n.29, pp 137-43
[41] Ministry of Defence, n.20 p.15.

of the navy's role and missions for probably the only indicators that provided some insight into the navy's strategy.

India's naval strategy to a large extent can be seen as an extension and continuation of the British strategy, which relied on safeguarding India's land frontiers from external aggressions by creation of buffer zones between Russia, and China on the one hand and Indian on the other. This necessitated the maintenance of a huge army intended to safeguard and protect "the Jewel in the crown", because India was accessible only through high mountain passes through her land frontiers. Moreover, the British created buffer zones around India and any interference by external powers in these buffer zones was considered an anti-India act. The British Indian Ocean strategy, on the other hand, was based on heavy fortification and guarding of the entry and exit routes. Therefore, if the strategic passes in the Indian subcontinent's mountainous north-western, northern and north-eastern frontiers could be sealed against penetration, and if Indian Ocean with its limited gateways of ingress could be exclusively controlled by the Royal Navy, and if the political restlessness of its indigenous populations could be moderated, then

India would function as a truly secure and puissant "English barrack in the Oriental Seas".[42]

The Royal Navy became one of the objects through which the entry and exit routes could be manned. The British dominated the Indian Ocean completely and the Indian Ocean was called the "British Lake". The British strategy envisaged creation of concentric rings around India in order to defend India. After independence, the Indian Government also continued with the same policy. The British continued to protect the entry and exit routes of the Indian Ocean and consequently there was no direct maritime threat to the country. India continued the British policy and accordingly concentrated on safeguarding the territorial integrity and neglected the development of the naval wing.

It was only after the British decision to withdraw its forces east of Suez in 1967 that India started concentrating on developing its navy. The study of acquisition patterns and the force structure also reflect the British influence on the Indian naval strategy.

India accordingly, tried to balance its naval role of sea control vis-à-vis Pakistan and a larger role of sea denial in the Indian Ocean vis-à-vis extra regional powers. The Indian Navy's strategic objective comprised

[42] Ashley J. Tellis, "Securing the Barrack: The Logic, Structure and Objectives of India's Naval Expansion" *Naval War College Review*, vol.XLIII, no.4, (Summer 1990), p.80.

layers of zones and securing those zones depending on the nature of the threat. It was contended that the Indian Navy "should aim for operating in the following zones of defence:

Zone of positive control- Extending upto 500 km from the coast;

Zone of medium control- Extending from 500 to 1000 km from the coast and;

Zone of soft control- encompassing the rest of the Indian Ocean.

These zones are based on the principle of engaging a weapon platform before it can bring our vital assets within the range of its weapons of destruction, or endanger our sea lanes of communication".[43]

The Indian Navy's first Strategic Defence Review (SDR) described four major roles for itself- sea based deterrence, economic and energy security, forward presence and naval diplomacy. In terms of preventive sea based deterrence the Indian Navy aims to possess sufficient maritime power "not only to be able to defend and further India's maritime interests", but also "to deter a military maritime challenge posed by any littoral nation, or combination of littoral nations of the IOR, and also to be able to significantly raise the threshold of intervention or coercion by extra-regional

[43] Sanjay J. Singh, "India's Maritime Strategy for the 90s", *USI Journal* (July-September 1990), pp.352-54. see also Ashley J.Tellis, "Securing the Barrack: The Logic, Structure and Objectives of India's Naval expansion", *Naval War College Review,* (Summer 1990), pp.348-53.

powers".[44] For the mission of economic and energy security the navy must be "equipped with the capability to carry out surveillance over vast tracts of ocean, and must have wherewithal in terms of ships, submarines, aircraft and long range precision munitions to be able to escort, support or rush to assistance of commercial and energy assets in distress".[45]

The Indian Navy's SDR goes on to make the point that "though power projection may not be entirely necessary in India's present context, the requirement for "presence" in areas of interest, crisis or potential conflict would surface regularly, and the Indian Navy must be capable of fulfilling this role very effectively".[46] In terms of naval diplomacy, the SDR states that "in the multi-polar world, the scope of naval diplomacy as been considerably enhanced... The Indian Navy must be increasingly used to support national diplomatic initiatives in the region and beyond".[47] At the same time it concludes somewhat simplistically, "given the global, regional and military realities that India faces, and the enormity of its maritime interest and threats, it would suffice to state that *India's maritime strategy should be to*

[44] Indian Navy, "Strategic Defence Review: The Maritime Dimension-a Naval Vision, May 20, 1998", pp.34-35 cited in Roy-Chaudhury, n.39, p.125
[45] ibid
[46] ibid, p.126
[47] ibid

consolidate its maritime power over the next 25 years" (Original emphasis).[48]

Succession Struggles

The navy in 1990s was also in the news for the succession struggles. Rear Admiral Vishnu Bhagwat filed a petition in the Bombay High Court alleging that he was done out of the Western Fleet's command by the "manipulations" of Admiral J. G. Nadkarni and Vice –Admiral Jain, Flag Officer Commanding, Commander- in- Chief of the Western Naval Command. Bhagwat catalogued in his plaint the "American connection" of the naval top brass. He also accused Vice-Admiral Jain of tampering with his confidential report.[49]

The petition irreparably damaged the chances of Vice-Admiral Jain being promoted to Chief of Naval Staff (CNS). Admiral L. Ramdas became the CNS and Bhagwat, later on went on to command the Western Fleet.

The Government of India, surprised itself by sacking the Naval Chief Admiral Vishnu Bhagwat because "it had been noted for sometime that the

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[48] ibid

[49] Inder Malhotra, "Mindless Mauling of the Navy", *Newstime* (Hyderabad), December 6, 1991

officer has been taking series of actions in deliberate defiance of the established system of cabinet control over the defence forces", for the first time in the history of independent India.[50] It led to a spate of critical articles in the media and also raised a furore in the parliament, with the opposition running for government's throat.

The fiasco occurred over the appointment of Vice-Admiral Harinder Singh, Fortress Commander, Andaman and Nicobar (FROTRAN). Admiral Vishnu Bhagwat refused to appoint Harinder Singh and was interested in appointing Vice-Admiral Modernity Singh, as Deputy Chief Naval Staff, citing Regulation 134. Part III of the Navy Act, 1957 which stated that "the government shall make appointments of Captain and above on the recommendations of the Chief of Naval Staff.[51]

The government sacked the Admiral and appointed Vice- Admiral Sushil Kumar as the naval chief and also transferred the defence secretary Ajit Kumar (who was accused of providing inadequate information to the Appointments Committee of the Cabinet). The issue was a major embarrassment for the government because accusations were being made that the government was hands in gloves with the arms dealers.

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[50] *Times of India*, (New Delhi), December 31, 1998
[51] *Hindustan Times*, (New Delhi), December 18, 1998.

To sum up, the Indian navy in 1990s sailed through murky waters. It has finally sailed out of "the Lost Decade" and with economic restructuring and Kargil War (which sent Indians on a buying spree in the international markets), behind them, things have started looking bright for the Indian navy. The navy's role is also expected to increase after the pronouncements made in the draft nuclear doctrine about the strategic triad and the SDR.

Chapter-IV

CHAPTER-4

Indian Navy and other Indian Ocean Players

The Indian navy has grown virtually from scratch. It has come a long way. From being a coastal defence force during the British Raj, when it served as the Royal Navy's insignificant and junior partner, the Indian navy has come to acquire formidable naval capabilities. It also has the experience of operating both aircraft carriers and nuclear powered submarine. This expansion of the Indian navy, as we have seen, was viewed with concern in the Indian Ocean littoral. India's neighbours and countries of the Indian Ocean littoral started modernising their naval forces. This trend, of modernisation of the naval forces, assisted as it was by the US withdrawal and the increasing uncertainty about the role and capabilities of the big regional powers could be explained in terms of security dilemma. The littoral was also flushed with guns, a product of the cold war legacy. South Asia, an integral and distinct part of Indian Ocean region, gatecrashed its way into the nuclear club. The region assumed added importance in the post September 11 scenario and the northern Arabian Sea and the Indian Ocean are flush with foreign vessels. The decade has also seen, increase in naval capabilities of India's neighbours, friends and foes alike. Pakistan has

acquired Agosta-90B submarines and China is making a serious effort at building a blue water fleet. Where does the Indian navy stand in comparision to these navies?

This chapter attempts to assess the strengths of the major Indian Ocean players viz. the United States, Pakistan, and China. It also focuses on the security implications for India due to rapid modernisation of the Pakistani and the Chinese fleets. The last section of the chapter would also focus on China- Myanmar defence links and their impact on India.

Indian & US Navies: What's cooking?

The 1990s has been a decade of sea change in international relations for India. With economic restructuring Indo-US relations bloomed. Uncle Sam's interest in the region declined, consequent to Soviet withdrawal from Afghanistan. The defence supplies to Pakistan were halted and sanctions were imposed on Pakistan under the Pressler amendment. Pakistan was on the verge of being declared a terrorist state before September 11 happened.

Relations between India and the United States on the other hand, prospered. The current U.S. focus on New Delhi emerges against a background of four major transformations in India. The first and the one that has driven the change in U.S.-Indo relations the most thus far, is economic. The first stage of market-oriented reforms in 1991 brought about a marked increase in both domestic and foreign investment. Since then, the annual growth in India's gross domestic product (GDP) has averaged 6.4 per cent, one of the highest rates in the world. In addition, during the same period, the services sector expanded from 6 per cent to 8 per cent of the economy. The dramatic development of the information technology industry has made India a power in a sector that is transforming the world economy; indeed, the large, prosperous, and prominent Indian-American community is now joined at the hip with "Silicon Valleys" in the United States and in India. Despite its low per capita income, India's economy—with a GDP of $442 billion in 1999— ranks eleventh in the world. On the basis of purchasing power parity, India has the world's fourth-largest economy.

The US-India naval relations were the best ever so far. The Indian Navy and the US navy held joint exercises, *Malabar I, Malabar II,* and *Malabar III,* in 1992, 1995, and 1996 respectively. As stated earlier,

Malabar II involved nuclear- powered submarine *Birmingham* (SSN-695) and also P-3 Orion reconnaissance aircraft.

Both the countries also established Joint Technical Group (JTG), which applied in two areas:

(1) The possibility of US assistance in providing testing equipment and parts for India's developing programmes, primarily its Light Combat Aircraft (LCA), and

(2) Discussing India's keen interest in US unmanned aerial vehicle technology.[1]

The nuclear tests led to an immediate break in US-Indo naval relations, and shortly thereafter, sanctions were imposed that stopped defence cooperation (foreign assistance, military sales, and international military education and training [IMET]). The result was immediate set back to the indigenisation process.

But, fortunately, these sanctions did not last long. The DOD Appropriations Act of 2000, signed into law on October 25, 1999, gave the president authority to waive certain Glenn amendment sanctions, and President Clinton lifted the ban on IMET funds almost immediately.[2]

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[1] Waheguru Pal Singh Sidhu, "Enhancing Indo-US Strategic Cooperation", *Adelphi Paper* no 313, (London), (1997), p.58

[2] Scott A.Cuomo, "US and Indian Navies: Close Again", *US Naval Institute Proceedings,* (February 2002),p.42

Such cordial sanctions are a result of change in US naval doctrine. The focus on a global threat during the cold war years has shifted to regional challenges and opportunities. Consequently, the doctrine of open-ocean war fighting at sea, against erstwhile Soviet naval and nuclear forces, is increasingly changing to one of power projection and the employment of naval forces from the sea, in order to influence events in the littoral regions of the world. Moreover, the "littoral" continues to be defined vaguely as areas adjacent to the oceans and seas within direct control of, and valuable to the striking power of sea-based forces, although it is understood to extend to more than a thousand miles inward (effectively defined by the range of the land attack Tomahawk missile).[3]

In July 1995, the United States re-commissioned the Fifth Fleet which was the first fleet to be constituted in 50 years. Tasked with operations in the Persian Gulf, the Arabian Sea, the Red Sea and the Western Indian Ocean, the fifth fleet is organizationally a component of the US Central Command, with Head Quarters at Mac Dill Air Force Base in Florida.[4]

The US also maintains considerable military and naval assets in a number of key and strategically located states of the Persian Gulf and the Arabian Sea, especially the member states of the Gulf Cooperation Council (GCC)-

[3] Rahul Roy-Chaudhury, *India's Maritime Security*, (New Delhi, 2001), p.103
[4] ibid, p.106

Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE. It also monitors all activity in the Central Indian Ocean from Diego Garcia. Its other allies in the Indian Ocean littoral include Singapore, Thailand and Australia.

Evolving US naval doctrine is increasingly expected to stress power projection and influence vis-à-vis littoral states, with new weapon systems designed and developed for such missions. In this respect, the New Submersible Ship Nuclear (NSSN) and the new DD-21 land attack destroyer (at a cost of $750 million each), currently undergoing development in the US, are the first of new warships to be specifically designed for littoral operations.[5] Moreover, the growth of Islamic fundamentalism, the attacks on American military, diplomatic and economic assets within and outside the US have resulted in enhanced presence of US navy in the Indian Ocean.

The Arch Rivals: The Naval Dimension

The struggle between "secular" India and "Islamic" Pakistan has manifested itself in nuclear arms race in the subcontinent. Pakistan continues to bleed India by the proxy war in the Kashmir. The two countries have fought four wars among themselves and the latest being the Kargil war in the

[5] ibid, p.113.

summer of 1999, in which as stated earlier, the navies of both the countries did not participate though, they were put on full alert.

The Pakistani navy had to change its naval strategy after the 1971 war. Pakistan till 1971 had two wings separated by hostile Indian terrain of around 1000 miles. The Muslim League in 1947 had argued for inclusion of Lakshadweep and Andaman and Nicobar islands in Pakistan, in order to protect communications between the two wings, to no avail.

The loss of its eastern wing, now Bangladesh, altered the naval strategy. The break-up of Pakistan freed Pakistan from whatever little responsibility it had for the defence of that far-flung territory. Now it could concentrate exclusively upon its immediate environment. It is a compact area extending from Karachi to Gwadar and intruding into the Arabian Sea up to the extent that Pakistan can project its capability, which for the want of an aircraft carrier had to be land-based. But financial and material constraints have hampered the acquisition plans of the Pakistan navy.[6]

The cold war, had brought USA into the Indian Ocean, and its strategy revolved around the Persian Gulf and Pakistan did not fit into that strategy. Consequently, USA did not transfer any naval equipment to Pakistan till the US strategy was again influenced by regional issues like the downfall of the

[6] K.R.Singh, "Pakistan: Evolution of Naval Strategy", *USI Journal*, vol.76 (518), (October-December 1994), p.501

Shah of Iran and the Soviet involvement in Afghanistan. But, both the US and China, could not satisfy Pakistan's requirement for modern sophisticated large surface vessels capable of modern sophisticated sea-control role. In view of these constraints, it seemed that Pakistan consciously opted for sea-denial as main plank of its naval strategy.[7]

Thus, Pakistan's sea-denial strategy was largely based upon a mix of effective maritime reconnaissance, long range guided anti-ship missile preferably launched from helicopters or fixed-wing aircraft, and from modern submarines.

This strategy can be seen in the naval acquisitions that Pakistani navy made in the last decade. The Pakistan navy in 2000 comprised of surface and sub-surface vessels as shown in the following table (Table 4.1).

[7] ibid, p.502

Table 4.1: Force Structure of the Pakistani Navy in 2000

Ships & Vessels	no	Type
Frigates	6	*Tariq* class (ex-UK Type 21)
	2	*Shamsher* class (ex-UK *Leander* class) (to be withdrawn)
Submarines	1+2	*Khalid* class (*Agosta* 90B Type)*
	2	*Hashmat* class (*Agosta* type)
	3	*Angor* class (*Daphne* type)
	3	SX 404 class (midgets)
Light Forces	2	*Jalalat* class**
	1	*Larkana* class
	4	Ex-Chinese *Huangfen* type (OSA 1) missile FAC (obsolescent)
Mine Warfare Forces	3	*Munsif* class minehunter (French "tripartite" type)
	2	ex-US MSC type coastal mineswepers
Auxiliaries	1	*Moawin* fleet oiler (ex-Dutch *Poolster*)

*The 2nd and 3rd *Khalid* class submarines are being assembled in Karachi for delivery in 2002/2003. The 3rd boat will be fitted with the MEMSA air- independent propulsion system, to be eventually retrofitted on the first two boats as well. The *Angors* will be withdrawn in paralleled with the *Khalid* entering service.

** Another 2 *Jalalat* class missile FPBs are under construction.

Source: *Military Technology* vol.24(1), (2000), p.305-06

The Air Independent Propulsion (AIP) system, which is to be incorporated in Agosta 90B submarines, confers certain advantages on Pakistani Navy.

(a) The AIP is a non-nuclear auxiliary system which extends the submerged endurance of the sub from three or four days to much as two weeks thereby enhancing it endurance in terms of submerged patrol.

(b) Nature of tactical engagement in warfare: an AIP would be able to carry out short bursts of speed to attack targets at its limits of engagement.[8]

The other two Pakistani submarines would be retrofitted with AIP.[9] The primary armament of the Agosta 90BAIP submarines is French Exocet SM 39 anti-ship, a lightly accurate under- water-launch- capable missile, fired from 21-inch (533mm) torpedo tubes.

Submarines are considered crucial in Pakistan's naval war fighting plans vis-à-vis India, being perceived as an effective means to counter the quantitative superiority of Indian surface and sub-surface, naval forces. Pakistan could interdict, Indian Sea Lanes of Communications (SLOCs), and also attack on shore and off shore high offensive strategy and with

[8] Richard Scott, "Boosting the Staying Power of Non-nuclear Submarine", *Jane's International Defence Review,* (November 1999), pp 41-50

[9] Ayesha Siddiqua-Agha, *Pakistan's Arms Procurement and Military Buildup 1979-99: In Search of a Policy,* (New York, 2000), p.162

increasing dependence on qualitatively advanced technology weaponry, to be matched against qualitatively superior force.

Pakistan also received three land-based P-3C Orion maritime reconnaissance and strike MR\S aircraft, twenty-eight air- launched Harpoon anti-ship missiles, and torpedoes, under the Hank–Brown amendment. The endurance of the Orions is far greater than that of the *Atlantics* and they enable the Pakistani navy's air wing to cover the entire western coast of India till the southern tip of the peninsula. The shooting down of a Pakistani navy *Atlantics* aircraft by the two Indian MiG-21 fighters over the Kori Creek and also of the Orion aircraft on October 29, 1999, provided an opportunity to Pakistani navy to expand its airborne strike capabilities. Pakistan's naval air wing's strength is portrayed in the following table.

Table 4.2: Naval Air Wing of Pakistan

1 MP/ASW squadron (ASW)	with 3 *Atlantics* , 2 F-27s, 2 P-3C *Orions*
2 Helicopters squadron	1 with *Sea Kings* and 4 *Alouette* IIIs, 1 with 3 LYNX Mk3s

Source *Military Technology*, vol. 24(1), p.306.

The Pakistani navy has also equipped its six Amazon class frigates (Type-21) acquired in 1993-94 with Harpoon anti-ship missiles. In May 1997, the Pakistan navy commissioned the new naval base at Ormara on the Makran coast, 200 kilometres west of Karachi in Baluchistan province.[10] This is the second naval base after Karachi. Pakistan is also carrying out a major expansion of Gwadar port about 300 kilometres west of Karachi, with Chinese aid and technical (including design) assistance.[11]

The Pakistani navy also includes a small special operations unit, called the Naval Special Service Group. The group is based at PNS *Iqbal* (Karachi) and operates three 110 tonne Italian made midget submarines and a number of CEZF/X100 two-man chariots of the same origin.[12]

The China-Pakistan axis in both the development of infrastructural facilities and naval hardware supplies to Pakistan also adds to India's woes. The 1978 inauguration of the Karakoram Highway provided a physical outlet for China through Pakistan and offers a possible route to be used during wars or emergencies for military supplies apart from offering China an outlet to the Indian Ocean.[13]

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[10] Asad Mansoor, "The Pakistan Navy- Custodian of the Country's Coastline", *Military Technology Special Supplement*, (1998), p.11

[11] *Times of India,* December 10, 1999

[12] Adres de Lionis, "Pakistan's Naval Special Service Group", *Jane's Intelligence Review*, vol.6(3), (March 1994), p.109

[13] Mushahid Hussain, "Pakistan-China Defence Co-operation: An Enduring Relationship", *International Defense Review*, vol. 26(2), (1993), p.109

The Pakistan-China defence cooperation was further reinforced in the 1990s and the events responsible for such cordial relations deserve attention

1. Pakistan was one of the few major countries, which publicly expressed solidarity with China in the aftermath of the June 1989 crackdown on pro-democracy protestors at Tiananmen Square.
2. China, reciprocated by selling a 300MW nuclear reactor to Pakistan and China also became the first country in the world to break what was virtually an international nuclear blockade imposed on Pakistan under US pressure since 1976, when Pakistan had announced a deal with France for the purchase of a nuclear reprocessing plant.
3. China, further transferred M-11 surface-to surface missiles to Pakistan.[14] China, as stated earlier also helped in setting up of infrastructural facilities at Gwadar on the Makran coast. (The naval arms transfers to Pakistan from China are shown on table 4.3).

Pakistan's nuclear doctrine also raises the costs for India. Pakistan has adopted a first-use policy that offers a number of benefits. It is cheap and cost-effective policy whereby it is not compelled to maintain a large nuclear arsenal. On the contrary, India's no first use policy is a costly one with the premise that India has to absorb the first strike and associated large number

[14] ibid, p.110-11.

of casualties and thereafter has sufficient nuclear weapons for retaliatory strike for punishment unacceptable to the aggressor.[15] This policy of no-first-use calls for adequate second strike capability, and this capability, as has been stated in chapter III, should rest with the navy as submarines are an integral part of second strike capability.

[15] Vinod Anand, "Contours of Pakistan's Nuclear Doctrine", *Strategic Analysis*, vol. 24(3), (June 2000), p.624

Table 3.3: China's Arms Transfers to the Pakistani Navy

No. Order	Weapon Designation	Weapon Description	Year of order	Year of Delivery	No. Delivered	Remarks
2	*Romeo* class	Submarine	1988			For final assembly in Pakistan
2	*Jiangwei* II	Frigate				These two ships are being fitted for final delivery in near future
0	*Hainan* class	FAC-patrol	1976	1977	3	
0	*Huangfen* class	FAC-patrol		1971		
12	*Shanghai* class	FAC-gun			12	
4	*Hegu* class	FAC		1981	4	
0	*Huangfen* class	FAC		1984	4	

Table 3.3: China's Arms Transfers to the Pakistani Navy (contd...)

4	*Hainan* class	FAC-patrol		1975-78	4	
2	*Hainan* class	FAC-patrol		1980	2	
4	*Huchuan* class	FAC-torpedo			4	These were later passed on to Bangladesh after 1971
4	Type 347 G	Fire Control Radar	1996	1997	(1)	For 4 *Jalalat*-2 class FAC; for use with type 76A 37mm gun
4	C-801/802 ShShMS	ShShM System	1996	1997	(1)	For 4 *Jalalats*
32	C-802	ShShM	1996	1997	8	For 4 *Jalalats*

Source: Shrikant Kondapalli, *China's Naval Power* (IDSA, New Delhi, 2001), pp242-43

India-China Naval Equations

India and China emerged as independent nations towards the end of 1940s after centuries of subjugation by foreign powers. Both take pride in their ancient civilizations. Despite sharing similar problems in the initial years their perceptions of the world order differed in many respects. China's vision was conditioned by Marxist-Leninist Maoist thought whereas India's vision was shaped by Gandhi and Nehru.

India and China fought war with each other in 1962, which apart from shattering the vision of Nehru's Panchsheel also humiliated India, because of unilateral withdrawal by the Chinese forces. Thereafter, diplomatic contact between the two was broken. It took another thirty years for the relations to normalise.

In the meantime, after the death of Mao, PRC under Deng Xiaoping embarked on the process of economic liberalization in the early 1980s, with the initiation of the four modernizations (Agriculture, Industry, Science and Technology and Armed Forces). China recorded high growth rates in the following two decades and has now started to turn its attention towards acquiring a blue-water fleet.

This desire to acquire a blue-water fleet also implied a change in military doctrinal strategies. The move towards new strategies was primarily due to:

1. The unease that prevailed throughout the Pacific Rim in the early 1990s. Massive economic fluctuations in the region, an obvious decline in Russia's role and military capabilities, an unclear picture of the US' commitment and uncertainty over Japan's position all contributed to this uncertainty. It is impossible to predict, with any confidence, where the next threat will come from or what form will it take.
2. Another factor affecting China's military strategy was energy. China's energy needs have risen by over 50 per cent in the last 10 years and it is the largest user outside the US. A recent analysis by the London based Centre for Global Energy Studies shows that China's demand for oil will increase to 6 million barrels per day by 2005. Domestic production at that date is unlikely to have increased much beyond its current rate of 3.3 million barrels per day. If economic growth is to be sustained, much will have to be

imported by sea, significantly increasing the importance of safeguarding these supply lines.[16]

3. Another factor is China's aspiration to become a regional superpower and it clearly feels the need to achieve regional military supremacy to assert authority over neighbouring states.[17]

Even, the old doctrines have either been modified or replaced. When the People's Republic Army Navy (PLAN) was established, the guiding principle, adopted by the Chinese high command, for the people's navy was coastal defence. The coastal defence strategy, which remained the guiding principle for the PLAN for well over three decades, stressed the principles of "safeguarding the waters, consolidating seashores, defending cities".[18] This doctrine was also in tune with people's war of Mao, which was the overall national defence strategy.[19] General Su Yu modified People's War doctrine and introduced the term "People's War Under Modern Conditions", after the Chinese experience in the Korean War.[20]

This doctrine of People's War Under Modern Conditions was again changed in early and mid 1980s by the then PLAN commander, Admiral Liu Huaquing. Offshore defence and a blue-water strategy of power

[16] John Downing, "Maritime Ambition: China's Naval Modernisation", *Jane's Navy International*, vol.103 (4), (1998), p.12
[17] ibid, p.12.
[18] Srikanth Kondapalli, "China's naval Strategy", *Strategic Analysis*, vol. 23(12), (March 2000), p.2038
[19] Savita Pande, "Chinese Nuclear Doctrine", *Strategic Analysis*, vol.23(12), (March 2000), p.2012-14
[20] ibid, p.2014

projection into the high seas replaced the coastal defence strategy. This offshore defence strategy was implemented in 1986.[21]

This offshore defence primarily meant Active Defence. Active Defence is defence exercised for anti-attack purposes, that is, it does not exclude the possibility of offensive strikes for the purpose of self-defence or for offence after a period of defence. The scope of green-water was defined to reach from Vladivostok in the north to the Straits of Malacca in the south and to the "first island chain" in the east. The swath extends upto 1000 nautical miles from the Chinese mainland and includes Japan, the Philippines, and the South China Sea. The development plans envisaged the navy becoming a green-water fleet by the year 2000. In the longer term, a blue-water capability is envisaged by the year 2020. Precisely which islands they refer to is unclear but they appear to the east of the first chain and the Kuriles in the North, the Bonin and Mariana islands and Papua New Guinea in the south. By 2050, China hopes to have a world class fleet, one whose area of operations, is at present, undefined.[22]

The navy, which used to be the least important among the PLA's branches, has now attained greater importance than the other three armed services. Naval intelligence sources estimate that PLAN receives the highest

[21] Kondapalli, n.18, pp.2039-40
[22] John Downing, "China's Evolving Maritime Strategy: Part: 1 Restructuring Begins", *Jane's Intelligence Review,* vol.8(3), (March 1996), p.13.

amount of funding annually among the armed services, at 35 per cent of the defence budget. In comparison, the Air Force and the Army receive 29 per cent each, and the ballistic missile forces 7 per cent of the defence budget.[23] The PLAN at present consists of the following surface and sub-surface vessels:

Table4.4: Force Structure of the PLAN

Destroyers	1+1	*Hangzho* class (*Sovremenny* type)*
	1	*Shenzhen* class DDG*
	2	*Luhu* class DDGs
	16	*Luda* class DDGs
Frigates	9	*Jiangwei I/ Jiangwei* II classes
	24	*Jianghu* I, II & III classes
Submarines	1	*Xia* class SSBN
	5	*Han* class SSNs
	1+1	*Song* class*
	4	*Kilo* class*
	14+2+ 3	*Ming* class*

[23] Roy-Chaudhury, n.3, p.96.

Table4.4: Force Structure of the PLAN (contd...)

	30	*Romeo* class (Reserve and Training)
Light forces	14+	*Houxin* class Missile FAC
	100	*Huangfeng* class (OSA type) missile FAC (Obsolescent)
	70	*Hoku/Hegu* classes (Komar type) missile FAC (Obsolescent)
	20	*Shanghai* class patrol craft (Obsolescent)
	96	*Hainan* class patrol craft
	90	*Huchuan* class patrol hydrofoils
	300	Smaller patrol boats and craft of the *Huangpu, Yulin, Taishan, Huludan, Shantou, Shandong,* & *Haikou* class
Mine Warfare Forces	23	Soviet T43 class ocean minesweepers
Amphibious Forces	3	*Yukan* class LSTs

Table4.4: Force Structure of the PLAN (contd...)

	13	Ex-US LSTs (511-1152)
	28	*Yudao/ Yulin* class LSMs
	150	LCMs
	300	LCUs
	1	LSM (More building)
Supply ships	1	*Nanyun* class AOR,1 *Dayun* class (more building)

The second *Hangzhou* class DDG was to be delivered in early 2000, and preliminary negotiations are reported for an additional 2-3 ships. The new *Shenzhen* DDG ("*Luhai*" type) is currently undergoing operational evaluation, following which the design of follow-on ship(s) is to be finalised. The older *Jianghu* class frigates are being progressively withdrawn.

Tentative plans were formulated for the 4 KILO class submarines (2 project 877EKMs and 2 project 636s) to be supplemented by local construction of a further 6 boats, but no developments are reported. Rather, Russia has offered to supply another 2-3 boats. An additional *Song* class diesel/ electric was being built for commissioning in 2001, but there are conflicting reports about a possible third unit. Construction of the *Mings* has resumed with a additional 2 boats, and three more are planned. The first boat in anew SSN class (type 093) is under construction and is tentatively expected to be completed by 2004.

Source: *Military Technology*, vol.24 (1), 2000, p286.

The China's naval air wing structure is given in table 4.5

Table 4.5: NAVAL AVIATION

Equipment	**800Shore-based combat aircraft** which includes	
	Bomber/Anti-ship strike	3 Air divisions with 80 H-5s and some 80H-6s
	Fighter/Ground attack	6 Air divisions with 180 J-7s , 280 J-6s, 75 Q-5s, 70 J-811s (under control of air defence organisation)
	Maritime Patrol/ASW	10 Be-6 MAIL, 7 SH-5s
	Helicopters	40 Z-5s, 13 SA-321s, 50 Z-9s
	Transports	Y-5s, Y-7s, Y-8s, Li-2s.

NB 3 KA-27 and 5 Ka-28PL ASW helicopters were procured in 1999 for use onboard the new DDGs

Source: *Military Technology*, vol.24 (1), 2000, p286.

As is evident from the table, the PLAN's minor contribution to China's strategic triad is provided by its one *Xia* class nuclear-powered ballistic missile submarine (SSBN). This is armed with 12 CSS-N-# submarine-launched-ballistic missiles (SLBMs) which have a range of 2460nm (4560km).

The nuclear attack submarine element comprises five mainly torpedo-armed *Han* class nuclear powered attack submarines (SSNs), the primary role of which is unclear. They could be used for anti-surface operations. The rest of the surface combatant force, numbers 54 vessels, represented by a mix of destroyers and frigates (*Luhu, Luda, Jiangwei, Jianghu*, and *Chengdu*), the majority of which date back to the 1970s. They are all fitted with surface-to-surface missiles and guns, but only 35 per cent have (short-range) surface-to-air missiles (SAMs).

The bulk of the PLAN comprises nearly 1000 smaller patrol and coastal combatants and some mine countermeasures craft. About 200 of these carry SSMs, but they too have only a very limited air-defence capability.[24]

China is pursuing a plan for construction of an aircraft carrier. China has been gathering information about carriers for some years, and has improved

[24] Downing, n. 18, p.12-14.

its knowledge of carrier design when it bought the Australian carrier Melbourne for scrap. It also contracted to purchase the Russian Kuznetzov class (70 per cent completed) carrier Varyag for disposal. These developments suggest that China may opt for a similar ski jump/arrestor wire design. If so, the indigenously designed F-10 aircraft, a sea based version of which is scheduled to appear in 2020, would seem to be a prime candidate.

China- Myanmar relations and Implications for India

Myanmar is India's gateway to South East Asia and at the same time links China to the Indian Ocean. People's Republic of China since late 1980s has provided not only diplomatic support to Myanmar but has also assisted in building of infrastructural projects. China, according to some reports, also helped the State Law and Restoration Council (SLORC) in settling its differences with some of the ethnic insurgent groups in Myanmar's north-east, including several which could have interrupted cross-border trade.[25]

Media reports since late 1992 indicate that Myanmar has accepted a Chinese offer to build a deepwater port on Hainggyi Island at the mouth of

[25] Andrew Selth, "Burma and the Strategic Competition Between China and India", *The Journal of Strategic Studies*, vol 19(2), (June 1996), p.214-15

the Bassien River that flows into the Bay of Bengal. Some think it to be an outlet for Chinese exports and as end of the southern Myanmar Road to the Indian Ocean long sought by successive regimes in Beijing.[26] The need for such a route has greatly increased with the economic growth of Yunnan and Sichuan provinces. Reports have also referred to the construction of a large naval base capable of providing refuelling and maintenance facilities for visiting Chinese warships.[27]

There have also been claims that China is building a maritime reconnaissance facility of some kind on Myanmar's Great Coco Island, just 30 nautical miles from India's Andaman group.[28] The Chinese naval transfers to Myanmar are given in table 4.6

Some have indicated that Myanmar is increasingly getting wary of the Chinese connection and is interested in diversifying its contacts with the outside world so as to decrease its own dependence on China. This change, they suggest might also be due to the increasing demographic profile of the ethnic Chinese in Myanmar. Not only do the Chinese dominate the urban centres but also the rural areas in the northern areas (following severe

[26] William Ashton, "Chinese Bases in Burma- Fact or Fiction?", *Jane's Intelligence Review,* vol. 7(2), (February 1995), p.84.
[27] ibid, p.85
[28] ibid

flooding in southern China, large numbers of Chinese have moved into northern Myanmar).[29]

The change in mood is reflected in Rangoon's backing away from an earlier much-touted scheme to open a trade route from Yunnan in China through Myanmar along the Irrawady River to Bay of Bengal. Since July 1997 Myanmar has been a member of the ASEAN and much to the delight of New Delhi, relations with India are also improving after a long freeze.

Nevertheless, the nature of the Chinese involvement still concerns India. The establishment of what is believed to be a Signals Intelligence (SIGINT) on Great Coco Island would enable the Chinese military personnel to monitor Indian naval communications on the area, as well as India's ballistic missile and satellite launch vehicle tests off its eastern coast (Chandipur-on-Sea and Sriharikota). Moreover in August 1994, three Chinese trawlers, flying Myanmar's flag, were apprehended in Indian waters off Narcondam Island.[30]

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[29] Antony Davis, "Burma Casts Wary Eye on China", *Jane's Intelligence Review,* vol 11(8), (June 1999), p.40

[30] Roy-Chaudhury, n.3.p.101.

Table 4.6: China's Naval Arm Supplies to Myanmar

No. Ordered	Weapon Designation	Weapon Description	Year of Order	Year of Delivery	No. Delivered	Remarks
2	*Jaingnan* class	Frigate		1993	(2)	
10	*Hainan* class	FAC-patrol	1990	1991-93	10	
4	*Shanghai* class	FAC-patrol	1990			
4	*Huchuan* class	FAC-torpedo	1989		4	
10	*Hainan* class	FAC-patrol		1991-93	10	6 in 1991 and another 4 in 1993
6	*Houxin* class	FAC-missile		1995-97	6	In December 2000 2 of these were delivered, 2 in july 1996 and another 2 in late 1997.

Source: Shrikant Kondapalli, *China's Naval Power* (IDSA, New Delhi, 2001), pp 243.

Aboard the vessels were several charts clearly identifying hydrographic details of the area around the Andaman Islands. The transfer of naval ships to Myanmar from China (as shown in the above table) is also disturbing from an Indian point of view.

The perfect nature of China-Myanmar relations is difficult to decipher. What is very clear, however, is that the honeymoon of the early 1990s between China and Myanmar is over. From here on in, the relationship promises to be far more complex with far greater grounds for friction.

This chapter, to sum up, looked at the change in naval doctrine of India, consequent upon the disintegration of erstwhile Soviet Union. The growing stress on maritime power by India's long term rival in the region, China, and the growing capabilities of Pakistani navy which has adopted sea-denial as its maritime strategy, in order to increase the costs of intervention for the Indian navy were also discussed.

Conclusion

Chapter-5

Conclusion

The Indian Navy, as we have seen, has sailed past the lost decade. There have been fundamental shifts in the doctrine, strategies and priorities of the navy. The 1990s also saw emergence and revival of new threats in the form of terrorism, piracy, gun-running, drug trafficking etc... Protection and safeguarding of the SLOCs became utmost important. The Indian Ocean has emerged as a powder keg after the nuclear tests conducted by India and Pakistan waiting to explode at the slightest provocation.

The primary hypothesis around which this study revolved was: contrary to what was made out in the late 1980s and early 1990s, the naval expansion proved to be a myth and the Indian navy actually shrank in size by the end of the 1990s. This as we have seen, has primarily happened due to the following reasons:

1. The disintegration of erstwhile USSR hit the defence forces hard. The Indian navy was the prime casualty. Navy's eastern fleet which consisted of ships and submarines supplied by the former USSR found spares difficulty to come by. The suspension of the Rupee-Rouble trade proved to be a bomb-shell. With empty coffers and fluctuating

economy India, just could not fulfil the need for hard currency, which was laid as a precondition for the supply of spare parts.

2. The nature of polity made matters worse for the navy. The emergence of coalition and minority governments at the centre meant that the government could not take a holistic view and appreciate the needs of the navy. The Kargil war proved to be a watershed because it sent Indians on a buying spree with a never ending shopping list.
3. India's economic restructuring based on the Rao-Manmohan model accorded a low priority to the defence forces and instead attempted to reform the economy's structure. No wonder that the defence allocation for the navy for most of the 1990s never exceeded 13 per cent of the defence budget! The navy is the most capital-intensive force, and the reluctance on the part of the government to mobilise and allocate the capital required for the purposes of modernisation, acquisitions and procurements, indigenisation and maintenance of the navy proved to be next to impossible. The following table (Table 5.1) illustrates the declining strength of the Indian navy through out the 1990s and tries to predict the strength of the Indian navy in the first few years of the 21st century, going by the present rate of obsolescence and the rate of replacement.

Table: 5.1

	1990	1995	2000	2005	2010	2015
Submarines	18	19	14	14	10	6
Aircraft Carriers	2	2	1	0	0	0
Destroyers	5	5	8	7	5	4
Frigates	19	14	9	9	6	6
Total	44	40	32	30	21	16

Source: Rahul Roy-Chaudhury, "India's Maritime Challenges in the early 21st Century", *Indian Defence Review*, vol. 14(2), (1999), p.95.

The above table proves beyond doubt that India failed to capitalise on the power-projection capabilities that it had acquired in the preceding decade. In 1990 India possessed 18 submarines, 2 aircraft carriers, 5 destroyers and 19 frigates. In 2000 the strength of principal combatants had fallen from 44 in 1990 to 32 (14 submarines, 1 aircraft carrier, 8 destroyers and 9 frigates). The strength is expected to fall further if some remedial action in the form of acquiring new principal combatants in not undertaken on a war-footing. Apart from allocating a certain fixed percentage of defence budgets for updating and modernisation of the fleet, the need of the hour is not only to replace the worn-out ships but also to devise a plan to ensure that navy does not fall to such dismal levels in future.

The Road Ahead

The primary missions that the navy is expected to perform in the 21st century are the following:

1. The security and stability of SLOCs in the Indian Ocean (especially the security of energy supplies from West Asia to India).
2. The effective conduct of surveillance of the extended maritime zones and to ensure the safety and security of India's maritime assets.
3. To promote maritime and naval cooperation in the Indian Ocean
4. To defend the state from naval threats and challenges; and
5. To deter the use of nuclear weapons.

The mainland Indian peninsula, surrounded by the Arabian Sea and the Bay of Bengal, thrusts deep into the Indian Ocean providing both opportunities and challenges. Our island territories are spread far and wide, and some are far closer to other countries than to the Indian mainland. In fact, countries like Indonesia and Thailand, with which we share maritime boundaries, are our "immediate" neighbours. In accordance with the international law of the Sea (UNCLOS III, 1982), the peninsula and island territories provide us with a vast, and expanding, maritime space. Geographically, India lies astride the major Sea Lanes of Communication

(SLOC) in the Indian Ocean, providing it with considerable strategic importance and potential. Moreover, the vast portion of our foreign trade 97 per cent in volume and 76 per cent in value terms is seaborne. It is interesting to recall that in 1951, the first British Chief of post-Independent India's Navy, Vice-Admiral Edward Parry, has stated that India is "an island, in that she is nearly inaccessible across her land frontiers".

In the emerging security environment, India's dependence on the sea will increase in terms of trade, energy resources, shipping, sustainable exploitation of marine resources, and ocean research and exploration. Its transportation routes will be increasingly vulnerable to disruption and a range of criminal and clandestine activities like maritime piracy, gun running, drug trafficking, human smuggling, pollution, accidents etc.... Apart from increase in the number of reported cases of piracy, India's location between the golden crescent and the golden triangle, (the major areas which are the epicentres of drug production and distribution worldwide) only make matters worse for the navy.

Surveillance of India's maritime interests in the extended maritime zones assumed importance of its own in the 1990s. The Indians were caught napping during the Kargil war (one of the main reasons for the Kargil debacle was the failure on the intelligence front). Surveillance is also

important in order to deter any Pakistani adventure at sea, like it undertook in the prelude to the 1965 war in the Rann of Kutch. In order to increase India's surveillance capacity along the sea coast, the Defence Research and Development Organisation (DRDO) has developed indigenous small radar which could be fitted onto naval vessels to monitor movements across vast stretches of sea. The radar, meant for smaller platforms, could also be fitted onto helicopters doing reconnaissance, Dr. V.K. Aatre, Scientific Advisor to the Defence Ministry and Director General of DRDO, said on the sidelines of the Indian Science Congress in Lucknow on January 3, 2002. The naval surveillance radar has passed the design and development stage and will be ready for field trial within the next couple of months, he said. [1]

Promotion of naval cooperation has come to occupy a prime position among the navy's missions. The Indian navy as we saw finally kicked off the cold war mentality and started interacting with the regional and extra-regional navies in a major way. The self-imposed curtain was lifted. Holding of joint naval exercises, conducting search and rescue operations, nabbing of the pirated vessel, port calls, and friendly visits to foreign ports all increased in both duration and intensity. Promotion of naval cooperation among the neighbours and the countries of the Indian Ocean littoral are also in tune

[1] *Deccan Herald*, January 4, 2002.

with the Article 51 of the Indian Constitution. This process in a way, culminated in the International Fleet Review held at Mumbai. Appropriately titled 'Bridges of Friendship' and organised by the Indian navy it included 58 Indian warships and further 24 warships from 19 overseas navies.[2]

Protection and safeguarding India from the new naval threats and challenges, is also one of the prime responsibilities of the navy. This responsibility can be seen in terms of plans for acquisition of new weapon systems and increasing efforts towards indigenisation.

India and Russia plan to begin the induction of the jointly-developed "BrahMos" supersonic cruise missile into their armed forces by 2003-end. Subsequently, they will aggressively hawk these missiles in the international arms market to rake in the moolah. Unlike other weapon systems, the "BrahMos" missile can be launched from land, sea, sub-sea or air-based platforms. "This anti-ship missile was first tested in June 2001 after three years of joint designing. It should enter full-scale serial production phase towards the end of next year after some more developmental flights," said a defence official. Indian and Russian scientists are, at present, fine-tuning two basic "BrahMos" missile weapon complexes - a "universal" version configured for submarine, warship and shore-based systems; and a

[2] Guy Toremans, "Indian Navy Puts Fleet on show", *Jane's Navy International*, (April 2001), p.9.

"BrahMos-A" airborne system for different aircraft. While Pakistan is not known to have such a missile, China has equipped some of its ships with the 120-km range "Moskit" class cruise missiles procured from Russia. The "BrahMos" should give India the edge it needs in the heavily-militarised Indian Ocean and surrounding areas. The stealthy (low radar signature) "BrahMos", with a "fire-and-forget" guidance system and "a higher destructive capability aided by the large kinetic energy of impact", can penetrate most anti-missile defences of warships. Officials say the export of "BrahMos" will, of course, be restricted to "friendly third-world countries", identified by mutual consent. They are quite sure "BrahMos" can corner a major chunk of the estimated $ 10 billion demand for such missile systems.[3]

The government is also making efforts to develop and sustain the momentum of its submarine building project. Towards this end, the government has approved a 30-year submarine building project heralding a new era in defence indigenisation, Admiral Madhvendra Singh, the Chief of Naval Staff, said about the programme. "This is a long programme. It is a watershed in the defence indigenisation programme".[4]

The Indian navy has also made efforts towards the acquisition of the C4I capabilities. The need for such capabilities has been felt after the rout of

[3] *Times of India*, April 10, 2002
[4] *Indian Express*, January 24, 2002

Iraqi army in the Gulf war in 1991, which primarily relied on Soviet made weapons, by the allied forces using the US C4I capabilities. The navy plans to introduce Bachelor of Technology (B. Tech) to equip its officers and provide them with technical orientation, in order to increase navy's combat capability. Engineering will now be a more direct tool in war making. There are more efforts to bridge the gaps in the education of the modern-day sea warrior. Officers are being sent to such institutes as the Stimson Centre in USA and King's College and the International Institute for Security and Strategic Studies (IISS) in the UK.

Vice-Admiral Madanjit Singh, the Navy's Chief of Personnel, champions the concept of a scholar warrior, and feels education is critical. Such education is being meshed in career progression. "About 25 officers are abroad doing research on security and strategic affairs," he says. But more far-reaching is the effort to reorient naval war fighting through engineering skills. Besides giving a combat edge, such technical orientation will make the force leaner. Specialisation for combatants in such areas as weapons, communications, sensors, computers and electronics will assist in shipping out surplus manpower tasked exclusively with maintenance by an estimated 20 per cent.[5]

[5] *Hindustan Times*, January 24, 2002

The continuing militarization of the Indian Ocean, and the dynamic role of technology in naval warfare, will also influence the country in the 21st century. It is imperative, therefore, that maritime security issues are perceived in a holistic, and not a compartmentalised, manner. The naval battlefield environment is changing rapidly. The Information Age has spawned the 'revolution in military affairs' (RMA), which is producing new lethal weapon systems and facilitating the militarization of outer space and cyber-related crime. The RMA in turn has spawned the 'revolution in naval affairs' (RNA), which has greatly enhanced night capabilities, yielded precision weapons and seamless communication networks, and considerably reduced response times for naval forces. Stealth technology remains critical. The Indian Navy will need to incorporate these aspects in its war fighting doctrine. Like the Industrial Revolution, the Information Revolution is bringing about fundamental changes in society, economics, politics and warfare. But there is a key difference: While the Industrial Revolution transformed the parameters of scale and emphasised physical mass and access to natural resources, the Information Revolution blurs or removes boundaries in both time and space and de-emphasises physical resources.

The Indian navy is an integral part of India's second-strike capabilities, which, as we have seen, is to be "based on a triad of aircraft,

mobile land-based missiles and sea-based assets". In this regard, two Russian-built nuclear submarines will join the Indian Navy in 2004, a Russian daily has reported. The *Novye Izvestia* daily said that India would lease two Project-971 nuclear-powered multi-role submarines (codenamed Bars in Russia and Schuka-B in NATO classification), whose construction has been frozen for several years because of funding problems. Under a contract being negotiated by the Russian state arms exporter, Rosoboronexport, India will acquire the submarines for five years after financing their construction. The plan is still to be approved by the Indian Government, the paper said. Russia has built 14 Project 971 submarines, with the last one commissioned in December. It is Russia's most silent multi-role submarine and is armed with eight torpedo tubes and 28 Granit nuclear-capable cruise missiles with a range of 3,000 km. Under the Missile Technology Control Regime (MTCR), Russia cannot export submarines with long-range cruise missiles and will replace them with Klub-S missiles, which have a range of 300 km. The submarines will help India balance China's growing presence in the Indian Ocean and the Bay of Bengal till such time its Navy inducts the indigenous nuclear-powered submarine - the Advance Technology Vessel (ATV).[6]

[6] *The Hindu*, January 28, 2002.

Admiral Madhvendra Singh made a meaningful statement on India's sea-based nuclear capability while discussing the issue at a conceptual level at his first Press conference after taking over as the Chief of Naval Staff on December 29. "Any country that espouses a no-first use policy (like India) must have an assured second-strike capability. All such countries have a triad of weapons, one of them at sea. It is far too difficult to hit moving and hidden targets as they are impossible to be found and destroyed. For the most potent nuclear states the most powerful leg of their triad is hidden, moving and underwater,"

"The nuclear retaliatory capability power should be distributed equally among all the three wings of defence land, air and sea based. Nuclear retaliatory platform should be evenly distributed and disbursed so that no single strike can spoil it", Naval Chief Admiral Madhvendra Singh further added.[7]

The navy's Air Defence Ship (ADS) venture is also showing some results. India's first aircraft carrier, ADS, being built by the Public-Sector Cochin Shipyard Limited (CSL) for the Navy, would be ready for sea trials by 2009. CSL Chairman & Managing Director Commander (retd.) M.K. Murthy said that this was the first aircraft carrier to be built in the

[7] *Hindustan Times,* January 24, 2002.

country. The cutting of steel for the warship would be done by 2003. Murthy added that apart from naval architects, a French firm was also involved in designing the ship. The Navy had paid Rs.30 crore to CSL to create additional infrastructure at the building dock for the construction of the ADS. [8]

The navy's doctrine is also expected to undergo changes. Three elements appear to be at the core of the Indian Navy's doctrine - the development of rapid reaction manoeuvrability, along with the concentration of firepower; land –attack capability to influence the war on land; and naval diplomacy. Over the years, the Indian Navy has developed into a multi-dimensional force with lethal weaponry and sensors, and enhanced reach. It has encouraged indigenisation of technology and production. Its modernisation continues to keep pace with rapidly advancing technologies and doctrines of modern warfare. The latter was most visible during the first International Fleet Review hosted by the Indian Navy last February, which was attended by 24 warships from 19 countries, as stated above. In addition, 10 other countries sent senior naval representatives. Apart from this, it could be relevant here to recall the seizure of the Japanese-owned/Panamanian-

[8] *Deccan Herald*, January 24, 2002.

registered freighter, the MV "Alondra Rainbow" from pirates in the Arabian Sea in late 1999, by the Navy and the Coast Guard.

Thus the Indian navy has indeed come a long way since its inception. The navy's strength has been its adaptability. It has moulded itself as the environment evolved. The strategic changes induced a decrease in the strength of the navy, but the lessons learnt in the lost decade, should not be forgotten and instead steps must be taken to prevent the recurrence of such events.

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