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MARITIME STRATEGY OF BANGLADESH IN THE NEW MILLENNIUM

Abstract

Maritime strategy means the sum total of national policies, objectives and schemes to promote sovereign rights in maritime fields in which the sea/rivers are substantial factors. Naval strategy is but that part of it which determines the movements of the fleet when maritime strategy has determined what role and which part of the fleet must play. The main elements required for maritime strategy are merchant fleet, a fishing fleet, a naval fleet, the shore support-such as ship building and ship management, maritime infrastructure, seamen to man the ships and the learning institutions to train the manpower. These issues are discussed in the context of Bangladesh.

The history of Sea Power is largely, though by no means solely, a narrative of contests between nations, of mutual rivalries, of violence frequently culminating in war. The profound influence of sea commerce upon the wealth and strength of countries was clearly seen long before the true principles which governed its growth and prosperity were detected. To secure to one's own people a disproportionate share of such benefits, every effort was made to exclude others, either by the peaceful legislative methods of monopoly or prohibitory regulations, or, when these failed, by direct violence.[1] The clash of interests, the angry feelings roused by which facilitate and enlarge the operations of shipping and

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1. Alan Westcott, "Mahan on Naval Warfare" in *Maritime Strategy Paper*, prepared by Department of History and International Affairs, Royal Naval Staff College, Greenwitch, 1982, p. 1.

tend to protect it by multiplying points of safety - are key to conflicting attempts to appropriate the larger share, if not the whole, of the advantages of commerce, and of distant unsettled commercial regions, led to wars. Three things - production, with the necessity of exchanging products, shipping, whereby the exchange is carried on, and oceans, much of the history, as well as of the policy, of nations bordering upon the sea. The sea, therefore, is a great medium of communications of commerce. The very sound "commerce" brings with it a suggestion of the sea, for it is maritime commerce that has, in all ages, been most fruitful of wealth; and wealth is but the concrete expression of a nation's energy of life, material and mental. The power, therefore, to insure these communications to one's self, and to interrupt them for an adversary, affects the very root of a nation's vigour, as the free access to rain and sun - communication from without does the life of a plant.[2]

Advances in technology, the emergence of strategic nuclear weapons, coupled with arms sales have brought sophisticated weaponry within the reach of many small countries. However, the advent of good communications, the development of satellites and other surveillance devices and the ability to strike at maritime targets from long ranges together reduce the validity of the traditional concept of command of the sea.[3] Two other recent developments merit amplification: the increasing importance of seabed resources and the formulation of a new Law of the Sea. Four types of marine resources can be distinguished: food, hydrocarbons, manganese nodules and other mineral resources, such as sand and gravel. Of these,

2. *Ibid.*

3. Julian Corbett, "Some Principles of Maritime Strategy", in *Maritime Strategy Paper*, prepared by Department of History and International Affairs, Royal Naval Staff College, Greenwitch, 1982, p. 14.

hydrocarbons are at present (and will probably remain for at least the coming decades) economically by far the most important. Although the Middle East contains the bulk of proven oil reserves, the pattern of exploitation world-wide and hence of distribution and of the sea lines of communication will continue to change. Manganese nodules are very widespread in the ocean depths beyond the continental shelf but, for economic reasons, they are not yet commercially exploited. However in the future they could well become an important source for metals such as copper, cobalt and nickel. In the decades ahead, greater use will be made of salts, iodine, bromine and uranium extracted from sea water. From the bottom of the ocean, extraction of tin, phosphorides, nickel, zinc, silver, cobalt, polymetallic sulphide and polymetallic manganese nodules etc.[4] will gradually be viable. Although no accurate estimates of the quantity of these minerals are available, the polymetallic manganese nodules could be found in trillions of tons. Apart from this enormous mineral wealth, power generation from wave motion and tide, and temperature difference in the different depths of the ocean are real and exciting possibilities. In due course, if land areas which constitute a mere 31% of this planet prove inadequate to house and feed the teeming billions of human beings, whole cities may built in the oceans. Seaweed, in addition to fish, can be used as a protein rich food. The potential of the oceans to increase man's wellbeing is enormous and nearly as unfathomable today as the oceans are themselves.

At the time of the last two United Nations Conference on the Law of the Sea (UNCLOS) - in 1958 and 1960 - the prevailing philosophy was still that of *Grotius' mare Liberum* of

4. Adm R H Tahliani, "Maritime Strategy for the Nineties", *Indian Defence Review*, 1989, p.19.

1609: the seas were held to be essentially free; they could neither be 'exhausted' by 'promiscuous use', nor (and partly therefore) could they be 'enclosed', 'occupied' or 'appropriated'.[5] That the seas may indeed be exhausted by promiscuous use has now been well proved, and on several counts: too much fishing; too much pollution; too much traffic leading to too many wrecks and accidents; too many incompatible, conflicting and dangerous uses; too much 'first come, first served' with the world's common wealth; too much plain injustice. In convening UNCLOS-III, the international community indicated that the conditions of *mare Liberum* were understood no longer to obtain, and that an agreed, or at any rate respected system of tenure had become necessary. As a result of the UNCLOS-III, 1982, the world community now recognizes an Exclusive Economic Zone of 200 nautical miles from the coast as that nation's ocean space which is exclusively for that country to exploit for mineral wealth, hydrocarbons, maritime life, etc.[6] As this planet begins to run out of mineral wealth on land, the developed nations who are also the largest consumers of these mineral resources, must inevitably turn to the enormous wealth in ocean bottoms for the continuance and indeed increase in their levels of wealth and standards of living. Therefore, one can safely predict that in the decades to come, oceans/seas themselves would become bones of contention. The oceans hold for mankind a promise and a challenge, which could make a world of difference to the prosperity and lifestyles of the human race and in particular, those who live in countries whose shores are washed by the

5. Elizabeth Young, "New Laws for old Navies. : Military Implications of the Law of the Sea", in *Maritime Strategy Paper*, Royal Naval Staff College, *op. cit.* p. 91.

6. UN Conventions on the Law of the Sea, 1982.

seas. Bangladesh presents a case in point. These possibilities make a strong case for a strategy, rather for a maritime strategy, which is not merely a defence and security related doctrine for any country but rather the total response of Bangladesh to the oceans/seas/connected rivers in and around it.

Why Does Bangladesh Need a Maritime Strategy?

Maritime strategy is chiefly about the use of the sea, using it for one's own purposes and bringing its use to one's advantage in peace and war. Vice Admiral Sir Peter Hill-Norton described it as "rather a pretentious word for defining as precisely as possible what one is setting out to do and then working out how one proposes to do it".[7] Maritime strategy means a sum total of scheme of national policies and objectives to promote sovereign rights in maritime fields in which the sea/rivers are substantial factors. Naval strategy is but that part of it which determines the movements of the fleet when maritime strategy has determined what part of the fleet must play in relation to the commercial activity of the country. It must affect or dominate every aspect of national, political, economic, diplomatic as well as military considerations, for it scarcely needs saying that it is almost impossible that a war can be decided by naval action alone. Since men live upon the land and not upon the sea, great issues between nations at war have always been decided - except in the rarest cases - either by what the army can do against the enemy's territory and national life, or else by the fear of what the fleet makes it possible for country's sustenance. Though Bangladesh is not a military power to reckon with at present, as a nation state we

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7. Cited in Vice Admiral J H F Eberle. *Maritime Strategy Paper*. Royal Naval Staff College, *op. cit.*, p. 87.

definitely have a right to protect ourselves. It is essential that every citizen is capable of thinking about our economic interests in the Bay of Bengal, coastal belt and its adjacent areas including defence posture. We should have such power at the disposal of our state that would allow us to pursue a policy free of intimidation or adverse influence of other nations in our sea areas.

It is, therefore, necessary for Bangladesh to have a maritime strategy which is required in situations short of naked aggression. This may be a situation of economic asphyxiation in the form of a naval blockade. It is crucial to mention that 90% of our trade is carried over the sea and over 75% of it, is carried by foreign ships. As such even a formal naval blockade is not required to stop this traffic. All that an adversary requires to do is to create a few incidents off our shores. That will be enough to scare off foreign shipping. Together with this, some incidents in our international airports, all communication with the rest of the world and our foreign trade will come to a grinding halt. Unless we have some sort of force, unless we can act on our own, unless we can stand up to such blackmail and take even limited corrective action in such a non-war situation, no amount of protest and condemnation by us and our friends and lip service by influential powers will be of any avail. Bangladesh is one of the least developed countries with a population of 120 million, which is predicted to reach the figure of 210 million by early next millennium (2020) at the present rate of growth.[8] With the agricultural sector stagnating, there will certainly be a limit beyond which agricultural productivity cannot be stretched by using better and more scientific agricultural

8. *The Daily Star*. Dhaka. 12 July. 1999.

inputs even for the present 120 million, more than 60% of which is living in sub-subsistence standard. The solution lies in the living resources of our territorial sea, Exclusive Economic Zone, and oil, gas and other minerals lying on or underneath our national continental shelf. Our salvation lies in the tremendous amount of economic activities that fishery and off shore mineral exploration and exploitation and all the allied industries and professions will generate. Acceding to the convertion UNCLOS-III of 1982, will make available about 1 to 3 hundred thousand square kilometres of sea, either as internal sea, territorial sea or exclusive economic zone. There will constitute virtually the extended territory of Bangladesh, wherein all living and non living resources belonged to us.[9] Furthermore, the ocean floor, and what is beneath it will also be within our exclusive national exploitation rights upto a distance of 350 miles or more from the base line. It is known that this part of Bay of Bengal is very rich in fish. Gas is already found and there is good prospect for oil. Millions of people of our coastal belt live on fishery and its related persuits. There is also likelihood of getting other minerals, on or beneath our portion of the continental margin. What we do is to establish our aim clearly and the aim is to make use of Bay of Bangladesh, need from both economic and military point of view, as both these factors are required to ensure the economic well being of our people, so as to safeguard against aggression in any form, economic, political or military Bangladesh maritime strategy must evolve from this aim. Against this backdrop, the purpose of this paper is to look at the present scenario of the Bay of Bengal/Indian Ocean and

9. Goverment of Bangladesh, *The Territorial Water and Maritime Zones Act 1974*, published in the Bandgladesh Gazzette Extra. Fed 14, 1974. P. 4230.

other factors with a view to establishing a conceptual framework and formulating our maritime strategy.

Factors Affecting Bangladesh's Maritime Strategy

Strategic Changes after the Cold War : Since the end of Cold War, a structural change of great importance has taken place in the international system. The fall of Communism, the end of the Cold War and emergence of the sembalance of what we call the New World Order are events we have come to pass. Now is the time of the new millennium. We live in an age in which, war is no longer fought for territorial gains or independence as apparent from the popular dictum for modern day warfare, Ethnic cleansing, skirmishes and conflicting territorial claims are strategic issues of the Asian region. Needless to say, all these changes have forced new strategies based on the following :

a. Global movements towards democratic political system and market economies;

b. Intensification of national ethnic and religious identities; and

c. Re-organization/decline in military power and rise of economic powers.

The context of new strategies adopted by the major outside power, the littoral states of the region have also adopted new strategies to safeguard respective security and interests. There are different opinions among these littoral states about external naval presence in the Indian ocean. Some of these countries think that without economic and military assistance from outside powers their political system would become vulnerable. On the other hand, some of the countries are of the opinion of making independent regional approach to the problems. Thus, there is a general fear among the smaller

states that in the changed circumstances, regional powers will dominate them both economically, politically and militarily.

In our present day world, the international situation depends to a large extent on the balance of forces. Now a days the use of long range and highly accurate missiles is radically changing conditions under which these armed forces will be used. History does not guarantee that a developing state like Bangladesh will be able to maintain its sovereignty from possible aggressions without having effective defence force. A careful study of over 200 armed conflicts since 1945 reveals that inspite of the enormous proliferation of armed conflicts in the modern world much of Europe and North America have remained outside the continents experiencing war.[10] Overwhelming majority of armed conflicts have taken place in the territories of Third World countries and Eastern Europe. It is difficult to quantify indirect interventions, be they in the form of arms supplies or political moves, or even the use of force without active participation in the war. But since the developed countries still enjoy near monopoly in armaments production, their participation in wars around the globe, however indirect, is not insignificant. We should bear in mind that friendly relations between foreign countries at any given time is a product of mutual interests only. As an independent country, Bangladesh is required to exercise her sovereign rights in maritime issues like in political and economical fields.Exercise of sovereign rights in the maritime field is expected to contribute to the prosperity of the people by harnessing all available resources for economic emancipation. It will make a mockery of our hard earned independence if we

10. Jasjit Singh. "Indian Ocean in Global Strategies" (Mimeograph), IDSA. New Delhi, 30 Nov. 1984, p. 20. See also, *The Daily Star*, Dhaka, 23 July, 1999.

now subordinate our national interests to those of our neighbours or bend our policies to accommodate their conventionist roles. Therefore, any deterioration of relationship in this field is a potential threat and as a sovereign state we must have a maritime strategy assisted by minimum naval preparedness to render the threat posed ineffective.

Myanmar Factor : Myanmar is an insular country and so far followed a policy of non alignment and neutrality. But her recent entry to ASEAN is bringing her back into the international scenario. Moreover, her recent buying spree of Chinese naval craft, missiles and the construction of three naval bases at Coco Island have given a new turn to her defence and foreign policy. Her GDP is well over US$ 22bn and her defence budget is more than US$ 1.5bn, which is more than double than that of Bangladesh. From some 11 infantry battalions as at independence, and just six loyal battalions at the low point in February 1949, the total strength of the Tatmadaw (Army) had reached 400,000, as 1988 estimate.[11] The Tatmadaw is now the largest and best equipped military force that Myanmar has ever mustered. It is now the second largest in Southeast Asia, and will probably be the largest by the turn of the century. The new capabilities include ground stations for collection of foreign Signal Intelligence (SIGINT) as well as for ocean surveillance, mobile SIGINT facilities, tactical SIGINT systems for military operations, Electronic Warfare (EW) systems, capacities for monitoring micro-wave tele-communications, and a better capability to jam HF radio broadcasts. The Cocos SIGINT station undoubtedly has severalfunctions including collecting intelligence on regional

11. *Asian Defence Year Book*, Kualalumpur, June, 1999, p.106.

military activities, especially naval and air movements in the Bay of Bengal, monitoring activities of the naval ships, movement of merchant ships covering a range of 250 km and intercepting telemetry associated with Indian ballistic missile test launches.[12] Myanmar's capabilities for telecommunications surveillance and cyber warfare are probably more advanced than those of any other in South Asia. Myanmar took a step forward to have own arms manufacturing industry in the early 1950s when a factory producting small arms and ammunition was created under the then Burma Army Ordnance Workshop Yangon in 1957. Hecklar and Koch and Fritz Werner of Germany were contracted to build the first of several factories for producing assault rifles and pistols and their rounds in 1981. Myanmar Fritz Werner, a joint venture was set upto undertake production of new generation arms and ammunition including 51mm, 60mm, 81mm and 120mm mortar rounds.[13] They also plan to build a factory to produce replacement for the G-3 family of small arms, M-21 carbines, M-22 assault rifles, M-23 light machine guns and their rounds. Weapons currently under production in Myanmar include the mortar round 2 inch and 3 inch ML mortars, BA92 41mm and BA80 51mm rifle grenades, BA88 offensive, BA91 defensive and BA109 general purpose hand grenades and the BA81 81mm artillery rocket, 60mm mortar and 81mm Carl Gustav rocket launcher. Her naval strength is more than 10,000. Her naval force consists of 4 corvettes, 6 missile crafts, 62 patrol crafts, 35 river patrol launches, 17 LCUs/auxiliary ships mainly meant for policing her 1,900 miles coastline and sea areas. A new naval base at Hanggi island can accommodate 2500 tons ships. For naval applications, the

12. *Ibid.* p.106.

13. *Ibid.* p.171.

Naval Engineering Depot and the Myanmar Shipyard in Yangon have built several types of inshore patrol vessels, coastal patrol craft and fast attack craft, mostly powered by Mercedes engines.[14]

The India Factor : India occupies an important geo-strategic position in the Indian Ocean having a jutting coastline of 7,000 nm, 10 major, 22 intermediate, 300 minor ports and 1284 islands. India spent Rs.356 billion ($ 10.2 billion) for her defence in 1998. She has over 943 merchant vessels with 6,8,01,599 gross tonnage to be escorted along her sea lanes. Her 2.2 million sq. miles of EEZ is rich with millions of tons of living and non living resources. All these need continuous surveillance by her Navy. The Navy has a strength of 55,000 men with one Aircraft carrier, 19 submarines, 8 destroyers, 17 frigates, 27 corvettes/missile crafts, 21 patrol craft, 24 minesweepers/hunters, 49 LCUs/auxiliaries, and 120 aircrafts/Helicopter/ Maritime Patrol Aircraft (MPA). The Indian Coast Guard has 32 ships, 23 rescue boats and 32 aircraft as well.[15] Indian strategic interests range beyond its land borders. In the maritime context, India sees itself as the major power in the Indian Ocean. India sees its security as being dependent on retaining a strong naval presence in the Indian Ocean, hence its significant investment in naval power. Broadly speaking, the overwhelming strength of the Indian Army (1.2m) gives it superiority on land and it ought to be able to dominate the air battle.

India, of course is developing her defence from a traditional power posture to Asian/Great power posture. India's projected war making capabilities, as estimated by an Indian expert, are shown below :[16]

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14. *Ibid*, p.171.

15. *Janes Fighting Ships*, 1999-2000, p.297

a. The Traditional Power Posture, 1963-1971. One-Full and One-Half War Capability.

Single Full War : War against Pakistan on land, air and sea.

Single Half War : Land based border war against China.

b. The Transitional Power Posture: 1972-1988. One-Full and Three-Half War Capability.

Single Full War : War against Pakistan on land, air and sea.

First Half War : Land based border war against China.

Second Half War : Latent Nuclear Weapons Capability

Third Half War : Proximate Island Interventionism.

c. The Extended Power Posture : 1989 - 1995. Two-Full and Two-Half War Capability.

First Full War : War against Pakistan on land, air and sea.

Second Full War : Latent Nuclear Weapons and IRBMs.

First Half War : Land based border war against China.

Second Half War : Proximate Island Interventionism.

d. The Asian/Great Power Posture, 1996-2000. Three-Full and Three-Half War Capability.

First Full-War : War against Pakistan on land air and sea.

Second Full War : Nuclear Weapons with IRBM/ICBMs.

Third Full War : Naval Power in the Indian Ocean.

First Half War : Land based border war against China.

Second Half War : Proximate Island Interventionism.

Third Half War : Defence of Maritime Zone.

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16. Raju G C Thomas. 'The Growth of Indian Military Power: From Sufficient Defence to Nuclear Deterrence', in Ross Babbage and Sandy Gordon (eds), *India's Strategic Future* (London : Macmillan Academic and Professinal) 1992. p.43

In May 1974, India detonated its first nuclear weapon and in the wake of this test went for the excuse that the device was essentially for peaceful purposes. India also started to invest heavily in developing missile systems and the appropriate guidance and warhead technologies. The missile programme came under the Integrated Guided Missile Development Programme (IGMDP) which commenced in 1983. This resulted in the first nuclear capable delivery systems in 1993, in the form of the Prithvi (Earth) missile family. The Indian Army has a dedicated missile artillery regiment with 75 Prithvi 150 missiles.[17] The Prithvi 150 has a range of 150 km and a payload of 1,000 kg. The Indian Air Force (IAF) has some 25 Prithvi 250 missiles on order, these have a 250 km range and a 500 kg payload. The final member of the Prithvi family is the Prithvi 350 which can deliver a 250 kg payload over 350km. Beyond Prithvi the next stage in Indian missile develop-ment is the development of a Medium Range Ballistic Missile (MRBM). This is the Agni (Fire) system which was tested in 1993 and 1994. The inservice variant of Agni is due to have a range of 2,500 km and a 1,000 kg warhead.[18] The last element of the Indian nuclear weapons programme will be sea based. The Sagarika (Oceanic) missile system with a 300 km range is under development, and is due to be employed from the Advanced Technology Vessel (ATV), an indigenous nuclear powered submarine design. It is reported that two missile types are under development for the ATV with the 300 km range weapon being a ballistic missile and the 1,000 km weapon being a cruise missile.[19] Work has already begun on the extended range Agni (3,500km) with the same payload. The

17. *Asian Defence Year Book, op. cit.* p. *93*

18. Janes "Defence Weekly", 28 April. 1999. p.7.

19. David Saw, "Defence in India", *Asian Military Review*, April 1999. p.4.

goal is to achieve a range of 5,000km. India has already disclosed that it plans to acquire Theatre Missile Defence (TMD) system, based on foreign and indigenous technology and equipment.[20]

Against this backdrop when India went nuclear again in May 1998, followed by Pakistan's quick riposte, it at once, tore down the edifice of a precarious peace maintained over the longest period of their chequered relationship and drastically altered the familiar contours of South Asia's security order. With the unpredictable fingers on nuclear buttons now in possession of the region's two adversaries, the danger of a holocaust of terrible intensity looms large over the whole region. The ruling establishments in both the countries are charged up with their newfound power without quite knowing what to do with it, thus making it susceptible to indiscretions The sheer dictates of geography as well as the complex politics of the region bring Bangladesh unavoidably under the general sweep of its ominous implications. In the event of a nuclear conflict, Bangladesh can hardly escape its devastating consequence. So, forced by the emerging nuclear realities, Bangladesh and possibly other smaller countries of the region, will have to rethink their security *vis-a-vis* nuclearised India and Pakistan.

History of Bengal Navy : Bangladesh has had rich and ancient maritime traditions. The peculiar physical configuration of Bengal with its rouse rivers and rivulets, creeks and swamps, necessitated building of a navy from very early times. The Pala kings of Bengal were perhaps some of the earliest rulers to have understood this necessity and organized a naval flotilla as indispensable branch of the military establishment. The Bengal navy was known as 'Nau Vataka'

20. *Asian Defence Year Book. op.cit.* p.38.

and commanded by a 'Neekaahys'. Following the Palas, the later Chandras, Varmans the Senas , all built navies of their own which played active part in military operations. It was, however, under Muslim Sultans of Bengal that the navy flowered into a organized fighting force - trained and equipped to deal crashing blows even to the Delhi Emperors. The Bengal navy soon came to organize as the lifeblood of survival for the Muslim of Bengal. An account of the strength of the Bengal Navy may be seen from its action in 1353 A.D, when Sultan Firuz Shah Tuglaq of Delhi invaded Bengal. The Bengal fleet, forward to oppose the Delhi army at every convenient point compelled the latter to slow down its march until they reached banks of the river Kosi where the navy made such a bold move that all the efforts of the Imperial army to dislodge proved futile. To counter the Bara Bhuiyans naval power, Islam Khan (1575) transferred his capital from Rajmahal to Dhaka and made a large number of war boats. By an effective combination of the land force, notably the paik, he devised a well planned strategy and transformed it into a laudable force. Under the able command of appointed Mir-I-Bahr[21] or Chief of the Navy, naval arms penetrated into the far corners of Bengal. In those days timber carpenters and masculine sailors made the primary requirements of a riverine navy. Over a span of few hundred years, the navies of these regions have undergone changes in regard to organization and ability but with a more different role as the maritime interests changed totally from that era to this time.

Maritime Interests of Bangladesh : Bangladesh with a glorious maritime history, is a nation with a worldwide calling. It is our duty to foresee that the level of technological

21. Ishtiaq Hussain Qureshi. *The Administration of the Mughal Empire*. New Delhi. Atlantic Publisher & Distributor. 1990. p.139.

development by any one does not prevent this calling from materializing. To be capable of keeping up and prospering, we must be able to exchange information and maintain trading links with other countries by sea despite the progress of ground and air transports. Let us now review our maritime economic interests in the Bay of Bengal and importance of related sea/river waterways of Bangladesh.

a. Geo-Strategic Consideration : Almost all of our shipping cargoes arrive Bangladesh through Andaman sea/Myanmar coast and via Sri Lanka. It should be necessary to point out that the vulnerability of nations to vital injury varies; and it is vital injury alone that can be considered, for it is by vital injury only that surrender can be enforced. The immediate and greatest danger lies in our dependence on external supplies which lie exposed to attack/blockade and we must make provision to defend those supplies. Moreover, Bangladesh has a long coastline over 700 kilometres and along the coastal beltmillions of people survive on fishing, forestry (more than 8 lac hectres of natural and man made forests in the coastal belt)[22] and salt production (yearly salt production is over 10 to 11 hundred thousand metric tons).[23] Traditionally, the people of these area have been sailing across the sea from time immemorial as the sea is the life blood of the inhabitants, though sea sometimes bring horror to them, habitation becomes painful and impossible. Very often the sea takes away their near and dear ones and they sink into misery. Inspite of all that they built up abode in the coastal belt fighting with the adverse sea for future peace and happiness. We have numerous islands on our coast, prominent among them is the

22. Information from Divisional Forest Office, Chittagong, 1999.

23. *The Daily Azadi*, Chittagong, 16 July 1999.

St Martins, Kutubdia, Sandwip, Hiron Point, and South Talpatti. Maritime boundary off St Martins has not yet been delineated and the ownership of South Talpatti alongwith maritime boundary delimitation is still in dispute. Until these issues are solved, there will remain a source of irritation among our neighbours. Our Island territories happen to sit astride busy commercial/fishing lanes. If properly used, they can act as our maritime flanks. If neglected, they may invite infiltrators, without us being aware of what is happening. As long as some modicum of naval presence is available, particularly in the risks from infiltrators will be minimized. To ensure uninterrupted trade flow we should also see that smuggling, drug trafficking and piracy are not taking place in the Bay of Bengal and the coastal areas. Pollution of our Bay by foreign ships including dumping of hazardous cargo must be checked at any cost. Bangladesh has been allocated total area of her claimed EEZ as Search and Rescue Region (SRR) by the IMO.[24] Any distress call in our SRR should be attended to by Bangladesh and she should have an effective organisation as per international requirement. For all this, Bangladesh needs surveillance capability in the Bay of Bengal. Our ability to safeguard our own maritime interests and contribute to peace and security of the region will be function of our own internal unity, economic strength and maritime capability.

b. The Exclusive Economic Zone/Territorial Waters : UNCLOS-III has given Bangladesh an area of 103 thousand square kilometres of ocean space as our EEZ.[25] This is nearly two thirds of our land area which is 145 thousand square kilometres. When surveys of our Continental Shelf on our seaboard are completed, we will in all probability be able to

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24. *IMO. SAR Convention* Circular 2/Circ/5 of 19 Jan 1996.
25. *The Bangladesh Gazzette, op.cit.* p. 4230.

claim a deeper continental shelf than 200 nautical miles based on the continental shelf principle. Burdened with a large population and lacking adequate natural resources on land, Bangladesh will have to depend more and more on her sea territories. It is expected that by the early next millennium when the population of our country would be more than 210 million, it will be necessary to look towards the sea for food, mineral and energy; and probably for reclaiming land as well. The people of our coastal areas are largely dependent on sea. In our EEZ, all the hydrocarbon, fish and mineral wealth is exclusively ours to exploit. The reality today is that foreign fishing trawlers do poach in our waters because the Navy do not have the wherewithal to keep an eye on all that float in our vast waters and apprehend the poachers. According to international convention, all non combatant ships are permitted right of innocent passage in the territorial waters and the EEZ. Mercifully, exploitation of fossil fuels is only possible by using big drilling ships and production platforms. Exploitation of the immense mineral wealth in the EEZ is over the horizon and this wealth needs to be safeguarded. Bangladesh consumed around 0.9 to 1.2 billion cft of gas in 1998. This figure would shoot up to as high as 1,450 to 1,700 mcft in 2004.[26] The production of gas, of course would increase to 1,300 mcft in the coming years with the addition of new gas fields. But if new gas fields do not come into operation, there might be a shortfall of gas by 2005. If GDP growth of Bangladesh reaches 7 to 8 percent, the gas consumption would be even higher. In this aspect, Bangladesh would need 106 trillion cft of gas in the next 10 years to meet the demands of people. Experts felt the need for continuous exploration work in the Bay of Bengal for finding more reserve

26. *The Daily Protham Alo*. Dhaka. 9 July. 1999.

of gas in the Bay. The Sangu gas field in the Bay already producing 240m to 250m cft of gas daily and pumping only 100 million cft of gas daily in the national grid. The Sangu 2 will also be coming to operation very soon. Number of surveys have been carried out in our Territorial waters and EEZ and there is definite prospect of more gas/oil in our EEZ. At the moment Bangladesh Navy is the only agency providing protection and surveillance in the whole territorial waters and EEZ.

c. Ports and Harbours : A long coastline by itself is not a worthwhile military or economic target. Therefore, the significance of a long coastline is the ports, water ways and harbours strung along it and the economic and military significant targets like oil refineries, gas/oil rigs etc. The ranges, accuracy and homing characteristics of tactical submarine fired missiles these days are such that targets further inland, are also potential targets. To these must be added all the offshore drilling, production and service platforms of our industry. We have two major ports (Chittagong and Mongla) and some 23 coastal inland ports, 11 inland river ports, and over 1,400 launch *ghats* throughout the country.[27] The history of the Chittagong port dates back to the fourth century before the Christ. Even Chittagong derives its name from the Arabic word "Shetgang" (Gang - the Ganges) and the modern Chittagong port came into being on 25th April 1888.[28] At the moment there are 15 jetties which Shore Crane, 13 Railway Crane and Transport shed including two multipurpose berth for containers etc, Besides, there are other 8 jetties for bulk cargo like wheat, cement clinkers, raw phosphate, urea, fertilizer. There are 6 rivers mooring berths for dry cargo,

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27. Information from Director General(DG) Shipping, Dhaka. 1999.

28. *Year Book*. The Chittagong Port Authority. 1999.

edible oil, Petroleum, Oil & Lubricants (POL), crude oil, and repair/laying of etc. There are another 6 lighters jetties for inland coasters and tankers carrying dry cargo, POL, edible oil, inside the country. In the year 1998-99, 1500 ships i.e. 4 ships everyday visited Chittagong. In the same year, Chittagong port handled export worth 20 million metric tons and imports worth 1.22 million metric tons.[29] POL imported in the same year was in the tune of 30 million metric tons. Because of insufficient numbers of jetties in the Chittagong Port, a large number of ships wait at the outer anchorage. The Mongla Port has 5 jetties, 8 moorings, 19 anchorage's and one private jetty. Another 4 jetties for LP Gas being constructed in the private sector.[30] The port handled over 2.4 million metric ton of import cargo and 5 hundred thousand metric tons of export cargo in the year 1997-98. In the same period more than 350 ships visited Mongla port. The closing of even one major port like Chittagong or Mongla due to enemy terrorist action can play havoc with our economy which will become more fragile in times of blockade/hostilities. Out of a total quantum of 17.1 million metric tons of cargo handled through our ports in 1998, Chittagong alone handled some 14.2 million metric tons. Diversion of cargo to other port is possible in some cases but usually the port capacity, combined with rail and road facilities, which are always near breaking point, will not permit worthwhile diversion of cargo. Therefore, prolonged closure of port like Chittagong and Mongla can seriously damage the Bangladesh economy. However, both our ports are situated inland and are restricted in bringing merchant ships of higher draught and length and because of vulnerability to sunken

29. *The Daily Azadi*, Chittagong, 7 July, 1999.

30. *Year Book*, Mongla Port Authority.

ship, cyclone and freshest, it is appropriate to consider developing deeper ports near Moheskhali/Sibsa river. The important inland harbours of Teknaf, St Martins, Kutubdia, Cox's Bazar, Sandwip, Hatiya, Patharghata, Sarankhola, Dublar Char, and Hiron Point along our coastal belt play a major role in our commercial/fishing activities. At the same time marine safety is implemented through a system of Port State Control (PSC) which include efficient inspections when ships are at port, maintenance of data on sub standard ships and exchange of information among participating countries. Although PSC system is prevalent in the other regions, little efforts have been made to introduce such a system effectively in Bangladesh.

d. Navigable Waterways : All our coasters/tankers/cargo boats/launches use the navigable waterways all along the coast and inland rivers of Bangladesh. Important ones being the Teknaf/St Martins/Cox's Bazar to Chittagong/Sandwip and from Chittagong/Sandwip to other parts of the country and from Hiron Point/Dublarchar/Patharghata/Sarankhola to Mongla/Barisal and orther regions of the country. The total navigable river waterways in the rainy season is about 5,968 km and in the dry months its is about 3,600 km.[31] These coastal/sea/inland waterways are marked by buoys and some times even dredged by the BIWTA to allow traffic to pass throughout the year. Out of total goods imported through our ports, more than 1.5 million tons have been transported via waterways, river/routes in 1998-99.[32] Navigable sea/coastal/river routes are still the cheapest mode of transportation for all

31. Information from Director General DG) Shipping, Dhaka.

32. Information from Port Authorities.

cargoes throughout Bangladesh. A comparison of freight rates among rail, road and waterways, as shown below, will provide a clear picture.

(1) Trucks on the road, carrying goods (on weight basis) charge freight at the rate of Tk. 4/00 to Tk. 6/00 per ton per km (freight based on space varies).[33]

(2) Cargoes/goods carried by train, is charged at the rate of Tk.1.15 to Tk. 2.70 per ton per km (rate varies among 14 different class of cargoes/goods).[34]

(3) Coasters/dumb barges/cargo boats using waterways charge freight at the rate of Tk.0.93 to Tk.1.15 per ton per km (depends on type of cargo).[35]

(4) Tank lorry on the road, charges freight for carrying oil at the rate of Tk.15/00 per ton per km whereas inland oil tankers charge freight at the rate of Tk.1.50 per ton per km.[36]

It is also found that a train can carry total tonnage of about 180 to 200 trucks worth whereas a coaster/tanker can carry total cargo of about 250 to 300 trucks and dumb barges at a time can carry weights equal to 400 trucks at a time at a much cheaper rate and to any parts of the country. One can easily imagine how much saving of imported fuel, spares for trucks, road congestion/accidents and pollution and maintenance of roads could be saved by merely using waterways for carrying cargoes. Millions of our people still avail passenger launches through inland/coastal routes for journey and commercial activities. New road making costs us about Tk 6 million per km whereas maintenance of waterways cost us a

33. Information from Truck Owners' Association, Chittagong.
34. Information from Commercial Department, Bangladesh Railway, Chittagong.
35. Information from DG Shipping, Dhaka.
36. Information from Oil Company, Chittagong.

fraction of the aforesaid amount. However, the importance of waterways probably does not get the same priority at the national level in comparison to the roads/bridges. BIWTA is tasked to maintain the coastal sea/river routes inside Bangladesh, and this must be continuously done to avoid heavy load on the road and to provide alternative cheaper mode of transportation. These coastal/river lanes also need protection from piracy, drug trafficking and pollution etc.

e. Merchant Shipping/Inland Coasters/Tankers : At the time of independence, Bangladesh had a negligible registered shipping tonnage. In about 30 years of independence, with 14 public sector (Bangladesh Shipping Corporation) and 11 private owned merchant ships can carry total gross tonnage of about 3 hundred thousand metric tons.[37] In comparison, the total world tonnage of merchant ships stood over 500 million Gross Registered Tonnage (GRT). Only 25.3% of our export cargo and 5.63% percent of import cargo could be carried by the Bangladesh Flag carrier. At the moment Bangladesh has about 120 inland coasters with gross tonnage of about 72 thousand metric tons. There are about 33 inland tankers and 56 Bay crossing tankers with total gross tonnage of about 63 thousand metric tons. About 797 dump barges with gross tonnage of two hundred six thousand metric tons carry cargoes to inland from our ports.[38] Nearly 3,000 wooden bodied cargo boats operate along our coastal harbours/ports and carry much needed salt, fertilizer, wood, frozen and dry fish and other products. These inland coasters, tankers and dump barges play a vital economic role in our country. Since the water borne vehicles still provide access to almost all parts of the country at the cheapest rate, this sector needs to be

37. Information from DG Shipping, Dhaka.

38. *Ibid.*

given special importance. Moreover, this sector minimizes pollution and maintenance cost compare to road transportation. It is worth mentioning that Bangladesh has a Marine Academy functioning since 1962, a Seaman's Training Centre at Chittagong (1960) and Deck Personnel Training Centre (1971) and Marine Diesel Training Centre at Narayangonj (1965) and providing trained personnel not only to our merchant marine/inland coasters/tankers/tugs/launches but also to foreign ships. The merchant marine of a country is not merely an economic tool and asset of a country. In times of hostilities, the merchant marine performs the critical role of bringing all supplies when other foreign shipping may be hesitant or demand exorbitant rates. The fact that we do not have enough registered ships for our modest volume of import/export, also means loss of valuable foreign exchange to pay for the transportation of these goods. Although very modest in size for a country like Bangladesh, it does represent a visible Bangladesh economic asset. Any ship carrying the Bangladesh flag on the high seas must be deemed to be part of and an attack on this ship represents a hostile action against our country. All these offer attractive targets to the enemy in time of hostilities. It is clearly impractical for the Bangladesh Navy to aim to protect our merchantmen on all the high seas of this planet. By the same token, an adversary may also concentrate hostile action against shipping in areas like the Andamans Sea and the Bay of Bengal where the concentration of our shipping would be such as to offer targets in a finite time and space window.

f. Fisheries Resources : At the moment Bangladesh has 73 registered fishing trawlers with gross tonnage of 11 thousand metric tons.[39] Out of them only 60 fishing trawlers are in

39. Information from DG. Shipping. Dhaka.

operations in the Bay of Bengal and the monthly catch averages around 30 thousand metric tons and yearly upto 3 hundred 6 thousand metric tons (official figure is around 14,500 metric tons to 17,500 metric tons monthly).[10] There are also about 6,000 mechanized registered fishing boats from the private sector. Another 5,000 to 8,000 mechanized unregistered fishing boats also operate throughout our coastal belt. It may be mentioned that about 1,40,000 hectres of coastal land are being used for shrimp and other acquaculture. Millions of people from coastal areas live on fishing. In the last 25 years fish processing plants have increased from 15 to 123 and 30 thousand ton of fish is now exported every year. Export earning from fish export from all sectors has increased from Tk.1.5 billion to Tk.15 billion. This can be increased to Tk. 45 billion by exporting one hundred fifty thousand tonres of fish yearly.[41] In Chittagong, there is a Fishery Academy (1975) for training personnel for the fishing vessels and is largely contributing to private sector development since long. Bangladesh has been put in a unique condition. How much more could be grown by applying more scientific and methodical inputs from our rich soil? Where we can look for a solution? The solution lies in the living resources of our EEZ. In this context, the developed countries have been endeavouring to explore and utilize the sea resources for better solution of food economy. The yearly production of marine resources are over US $50 billion in the developed countries. The Bay of Bengal has much potentials in fish and sea food. Besides providing nutrition to our people, fisheries provide the cheap protein as well. Based on the various surveys fish stock available in the Indian ocean for annual catch is about:[42]

40. Information from Fisheries Directorate. Chittagong. June 1999.
41. *The Daily Star*. Dhaka. May. 1999.
42. Fishery Directorate. Bangladesh. July. 1999.

Varieties	Standing Stock	Max. Annual Harvestable Stock
Demersal Fish	1.56 thousand tons	47.5-88 thousand tons
Pelagic fish	60-120 thousand tons	20-40 thousand tons
Shrimp	300 tons	700-800 M. tons

Survey and research should be continued in the entire EEZ and continental shelf for detailed, upto date and reliable information about the minerals available and harvestable stock of various type of fish. Effective and scientific extraction and preservation of sea resources could Change our lot. But are we capable to do so? To accept this challenge we have to consolidate our position in the Bay of Bengal more effectively to derive maximum benefit out of it. We must have effective and modern maritime instruments to master over the whole area of our economic zone.

g. Ship/Boat Building : Bangladesh had a fine tradition of building ship/boats in the days of sail. In spite of our rich traditions, our ship building industry has not exactly covered itself with glory in the post independence years. At the time of independence, there were only two shipyards in the country, namely, Khulna Shipyard Ltd (KSY) and Dockyard Engineering Works Ltd (DEW) Narayangonj. Both the shipyards have experience of building coastal cargo vessels, coastal oil tankers, tugs and other small craft. The DEW has also constructed five riverine patrol craft for the navy. The DEW is located inland on the bank of the river Sitalakhya and was established in 1926. It has the facility to build and repair small vessels upto 300 ft long and 1,500 DWT.[43] Only a ship upto a maximum draught of 10/11 ft can navigate in this river. Likewise, KSY is located also inland, on the bank of the river

43. Brochure of Dockyard Engineering Works, Narayangonj.

Pussur and again only a ship of a maximum of 10-12 ft draught can navigate there.[44] The Khulna Shipyard was commissioned in 1957 and is capable of building various types of small vessels upto 2,000 DWT. The shipyard has sufficient tools and equipment for shipbuilding. The berths are equipped with crane, water, compressed air and electric services. Draught restrictions rules out the possibility of large ship constructions in these shipyards regardless of technical considerations. The operation of Khulna Shipyard has recently been transferred to the Bangladesh Navy as it was about to be laid off. In the meantime, a Dry Dock with a 20,000 ton graving dock has been established (1980) in Chittagong and presently carrying out repairs of merchant vessels including foreign ships very efficiently and effectively.[45] Presently this shipyard does not have shipbuilding facilities yet. If another dock, as planned, can be constructed, this dry dock would be able to earn lot of foreign exchange. At the moment it is working to its full capacity and yearly turnover is over Tk. 150 million. Moreover, all along the banks of Pussur, Buriganga, Karnaphuli, there exists sizable number of private dockyards who can build and repair boats, launches, fishing boats, inland coasters and even inland tankers. The Bangladesh Navy also set up a dockyard in Chittagong in 1979 but it is meant to provide ship repair facilities to the ships of Bangladesh Navy and private ships when it is not required by the Navy. However, the navy has a plan to expand its docking facilities when shipbuilding may also be undertaken in KSY in near future. Shipbuilding is basically a ship assembly operation. Shipbuilding in one dockyard may be accomplished by taking assistance from all the dockyards and associated industries of the country. At times assistance may also be

44. Brochure of Khulna Shipyard Ltd.
45. Brochure of Chittagong Drydock Ltd.

are exported from Chittagong and Mongla. Apart from this, the annual import of foodgrains is in the tune of 25 Lac tons.[46] Bangladesh has to depend on imports of 100% fuel, raw material, spares and military hardware through the sea. We can not afford to stock pile large quantities of these items due financial constraint and as such critical supplies will have to come through the sea. Stoppage of import of foodgrain and about 3 million tons of POL every year will be at the stake of nation's survival. So undisturbed flow of shipping in and out of our ports is vital to the economic survival and defence of the country. Flow of normal trade could easily be impeded by the application of wide coastal state jurisdiction. A glaring example of trade disruption in peace time are the incidents of the Persian Gulf. It may also arise from the conflicting interests of neighbouring countries as in the case of Iran Iraq War. Protection of trade in the Gulf has become a great problem for all the concerning parties including the super powers. We should draw lessons from the happenings of the Persian Gulf. These considerations lead us directly to the paradox which underlies the unbroken failure of our enemies to exercise decisive pressure upon us by operations against our trade. Now, it is true that the difficulty of defending trade lies mainly in the extent of sea it covers. But, on the other hand, the areas in which it tends to congregate, and in which alone it is seriously vulnerable, are few and narrow, and can be easily occupied if we do not have an effective Navy.

h. Usefulness of Bangladesh Navy: As one of the three arms of defence, the Bangladesh Navy is useful for a variety of tasks ranging from the primary role of maintaining sovereignty

46. *The Daily Azadi*, Chittagong, 7 July, 1999.

over the nation's territorial waters, to safeguard Bangladesh's economic interests and exercise maritime control within the exclusive economic zone and the continental shelf; and to protect Bangladeshi shipping/fishing to the usual anti smuggling, fishery protection, anti piracy, search and rescue, disaster management during cyclone and flood etc. in peace time. In the broader perspective as an instrument of military power, the navy has certain classical advantages over the other arms. Firstly, navy is flexible. It can be sent and withdrawn and its size and activities varied at will which is not possible with the other arms once committed. Secondly, by being seen at sea, the navy convey threat, provide confidence or earn prestige in a way that troops or aircraft in their cantonment or bases cannot do. Thirdly, the navy is universal. The sea as compared to land or air is an international medium. It allows naval ships to reach distant countries and it makes the nation a neighbour of every country that is accessible by sea. Fourthly, the coast guard functions of the navy keep it committed all the time to the nations political and economic activities and progress; a type of peace time role which the other arms do not perform.

Founded as a separate military service on 10 Dec 1972, the Bangladesh Navy started with a nucleus of 100 officers and 1,000 seamen.[47] The equipment included two patrol craft and some miscellaneous small arms. From these humble beginnings, the Bangladesh Navy has grown into a coastal and riverine defence force estimated to include 10,500 officers and enlisted personnel. The Navy's centre of operations and training is at the country's major ports Chittagong, Khulna & Mongla. The most formidable ships in the Navy are four vintage frigates purchased from the UK/China. The modern

47. *Asian Defence Year Book. op. cit.* p. 57.

required from shipyards outside the country. The reasons for our shipbuilding industry not doing better are many. Our shipping companies have little or no confidence in our shipyards, because of size and draught restriction, long lead times and higher costs. No nation has been able to generate wealth by resorting to lax productivity norms merely to employ more human beings in shipyards. We have the ability and we can build ships of smaller size in the country and we should do so instead of buying ships from foreign countries.

i. The Defence of Sea borne Trade : Sea is the only link of Bangladesh with the countries of the out side world with the exception of India and Myanmar. 90% of our total exports and imports travel by sea. Some 150 ships including Bangladesh flag vessels arrive monthly in the ports of Chittagong and Mongla. About 14.6 million metric tons of cargo are imported every year. Imports include food grain, cement, POL, sugar, salt, fertilizer, clinker, coal, cotton, timber, iron materials, chemicals and sundries etc. In the same time about 2.5 million metric tons of jute, jute products, shrimp, tobacco, leather, garments, fertilizer, tea, naptha/molasses, hides and skin, frog legs, dry and frozen fish and others general cargoes craft in the inventory are about 19 patrol craft/OPV/ Minesweepers received/purchased from China/India/ Korea/ Singapore and 18 Fast Attack Craft (Missile) and Fast Attack Craft (Torpedo) are also operated by the Navy including number of LCU/LCVPs and coastal tankers and other support ships.[48] This vessels patrol coastal waters and rivers to interdict foreign fishing vessels and assert Bangladeshi's sovereignty over its territorial waters and Exclusive Economic Zone . Some Auxiliary ships, a floating dock and converted Thai fishing vessels and five indigenously built Pabna class

48. *The Military Balance*. 1998-1999.

riverine patrol craft are also giving good service to the Navy. Our defence policy and strategy have been formulated taking cognizance of the regional geopolitical security realities. Among the essential elements of the policy are self-reliance, bilateral cooperation and the adoption of the principal of friendship to all. In line with the defence policy, the navy has to possess the capability for sea surveillance.

What Needs To Be Done?

By geography alone, without taking into consideration the other factors, Bangladesh is truly a maritime nation. Its heritage must be protected and defended with the utmost zeal. We can thus clearly see that the sea is extremely important to us as a sovereign nation, we need to have adequate means for the protection of our interests. Its security and stability will much depend on prevailing international political climate. The end of the Cold War has not resolved many fundamental national and international problems. The world is still unable of eradicating the basic causes of tension and instability. The security of nations will be defined increasingly in economic terms. In a world becoming more interdependent at every turn, economic competition may well set to replace ideological differences in leading to conflict.[49] With the depletion of resources on land, access to offshore resources may prove a significant source for such conflict. In recent conferences, experts worldwide have generally come to a consensus that threats to peace and stability could emanate from two main sources. Firstly, those deriving from open military duels in disputed maritime territory, secondly, the rise in the so called "threats to common security". In the form of transnational

49. Adm Tan Sri Shariff. "The Modernisation of Malaysia's Maritime Defence", address as Chief Guest at the Malaysian Institute of Naval Affairs 5 April. 1994.

criminal related activities such as acts of terrorism, piracy, smuggling and pollution. In maritime terms, there is a real and close threat which we must be prepared to deal with. One being the territorial dispute in the resources rich seas, issues of territorial disputes could be used as a facade for the pursuance of regional powers role by those harbouring hegemonic ambition. It would be too naive for us to disregard the worst that could evolve from these developments. On the seaborne threats to common security, the politico-economic importance of our maritime areas along with the region's fragile and sensitive socio-political setting could be easily exploited by potential terrorists. The targets could be the numerous gas platforms or ships transiting through the areas. Piracy is another serious threat to the region. Though we are comparatively late in coming to realize the importance of our maritime heritage when compared to our neighbours, we should waste no time to rebuild ourselves. However, as maritime matters involve no less than six ministries, trying to sort ourselves out is an enormous undertaking. The building up of our maritime security mechanism essentially involves two levels of protection, that is, passive and active. The passive one could be in the form of coastal radar/SIGINT stations and base infrastructures. The active ones involve the acquisition of patrol crafts and warship as well as Helicopters including MPA.

Maritime Consciousness: There is a pressing need to inculcate within our policy planners and our public an awareness of the significance and extent of the maritime trail of our country. Perhaps because the land was the place where they spilled their first blood, sea component where we derived a significant portion of our wealth and prosperity is blissfully ignored. To create this awareness and to develop the national

sensitivity to our maritime dependence, Bangladesh Navy with the cooperation of relevant ministries should actively promote sea-related activities such as sea cadet, corps, sea scouts, sea sports and the maritime adventure. In this way we hope to create a national appreciation of our maritime geo-political reality. Most important of all to inculcate seafaring culture into our youth so that we do not have to depend so much on expatriates to run our merchant as well as fishing fleets. Besides that, the Bangladesh Navy on its part also places a strong obligation towards assisting in the development of an indigenous defence industry as, indigenous technology is one of the main component of a maritime power. However, this has to be a gradual effort because though it is beneficial in the long run, the initial capital outlay could be exorbitant. There was some merit in this logic but by the same token, people living in coastal areas of Bangladesh exhibit the same ease and familiarity and lack of fear of water. What is more is that sailors who hail from distant states like Northern part of Bangladesh, and who have never seen the sea before, adapt themselves equally well and make outstanding seamen. Therefore, psychologically, the oceans cannot prevent us from pursuing an active maritime policy provided other material and organizational problems are solved to provide optimal solutions.

Merchant Marine/Fishing Fleet: An important and integral part of sea commerce is the equipment and personnel which make possible the practical utilization of the oceans and seas as transport routes connecting continents, countries, and peoples. For this it is essential to have a merchant marine, a network of ports and services supporting its operation, and a developed shipbuilding and ship repair industry. Sea is only

harbours, if strategically located, will certainly enhance the effectiveness of a nation's maritime activity. Existing facilities both at Chittagong and Mongla Port need to be upgraded with more jetty facilities. Bangladesh should also consider building deep water ports near Moheskhali and even one Sibsa river. Other harbours like Teknaf, St Martins, Cox's Bazar, Kutubdia, Sandwip, Patharghata, Sarankhola, Dublarchar and Hiron Point should also be developed with all facilities specially for our fishing fleet/cargo boats. We must encourage development of coastal/river transportation as this is not only cheapest by any standard but also does not contribute in road congestion, accident, pollution and save import of fuel and spares.

Maritime Organisation, Infrastructure and Safety: The operation of merchant shipping/fishing fleet is indeed a complex undertaking which involves shipping authorities, ship owners, ship builders, repairers, insurance agencies, port authorities, industries and also rivers, rail and road transport and a host of supporting infrastructure. The organizations and the technological infrastructure must, therefore, be upgraded and made adequately available within the coastal belt to satisfy those requirements. Bangladesh must take effective measures to develop Khulna Shipyard, Dockyard Engineering Works, Chittagong Dry-dock, Marine Academy, Fisheries Academy, Seaman & Deck Personnel Training Centre, BIWTA, frozen fish processing plants and associated industries. The broadest prospects are opening up in the creation of equipment for extracting mineral resources from the sea bottom and from beneath it. Marine Search and Rescue (SAR) systems for rescue of survivors, ship reporting, safety communications, and satellite aided tracking system are

also required and yet to be designated. Efforts should be made to develop marine environmental protection, marine science and technology and meteorology and oceanography. A population of sea farers, shipbuilders and sea traders with an aptitude and penchant for adventure and commercial pursuit has been a distinguishing feature of Bangladesh upon the high seas. The seafaring attitude of the people must be fostered if it is to maintain its greatness as a maritime nation. Education on maritime issues are necessary to create and develop awareness of maritime matters. Bangladesh Navy at the moment is exclusively working for SAR in the area and also providing assistance during cyclone and flood.

Making of an Effective Navy: Commercial trading by sea has led to the development of the navy for the protection of trade. In time, the navy has involved to fulfill others national requirements. The navy, infact, is the defensive element of the national seapower. Bangladesh will not be able to bring conventional military force to bear on a large scale at sea, and it has to use its navy. It is a lack of clarity in our strategy at the higher levels that has, in my view, been the cause of many of our naval problems concerning the shape and size of the Fleet. For the Fleet is the physical expression of a sequence of strategic ideas. We have not been clear in our interpretation of sea resources protection power in the modern context. We have been unable convincingly to answer the question 'What is a navy for?' We have been unable to persuade others of the utility of navies in peace and war and unable to demonstrate that a navy is a useful tool of a modern society and that it is not just an expensive insurance policy to be tucked away in a bottom drawer and only to be brought out when disaster has

meaningful to a maritime nation if it possesses a sizable merchant marine commensurate with its requirement. The sea, being a great and natural highway for international commerce, can be a great obstacle to Bangladesh without a merchant marine. As neutral shipping can not be relied upon in times of crisis and hostilities, the development of a viable merchant marine should be part of the overall national maritime strategy. The next component of sea commerce is the vessels, technical equipment, and personnel needed for the practical exploitation and utilization of the resources of the sea, i.e., the fishing fleet. Today our country has a very modest fishing fleet at its disposal. The sea and ocean fishing industry need to be developed even further, will exploit new areas, and will expand the assortment of products of the sea being caught. At the same our fishing fleet must be increased at any cost alongwith dedicated fishing harbours all along our coasts with improved repair/fish processing facility.

Ports, Harbours and Waterways: A merchant marine/navy/ fishing fleet etc. will not be very effective over a wide ocean without, harbours or ports for them to call at. Neither can they flourish without the waterways. However, ports and struck. Some people see the task of maritime policy and good order in the Exclusive Economic Zone as diverting resources from other important ones. However, the type, size and number of ships, submarines and aircraft in every navy is a function to the size of the country, its coastline and vulnerability its ports and coastal/economic assets, the size of the merchant marine, its island territories, its off shore assets and budgetary constraints. Unlike the army and the air force whose size and firepower have to be related to that of the potential adversaries, the size of the navy is determined by the quantum of maritime assets and interests that you have to

safeguard. For example, the armies of our potential adversaries can pose no threat to Bhola without first traversing and occupying vast stretches of the our land. On the other hand, even a tiny naval force like a missile armed patrol ship can pose a real threat to Bhola in time of hostilities. The good old saying "there are no permanent friends, only permanent interests" is relevant here. Navies take decades to build and the lead time for a warship from design board to delivery is more than five years. To have a ship within, say, six hours steaming of any incident within Bangladesh's 200 nm territorial water/EEZ, might require more than 75 ships, each being responsible for some 1,000 square miles (off the cuff estimate considering operational availability, maintenance, speed, rough sea conditions and various coast guard roles). The gas field areas would require some form of underwater patrolling craft/surveillance capability. A combination of frigate type ship with missile armed corvettes, large patrol craft/Offshore Patrol Vessel (OPV), together with Maritime Patrol Aircraft (MPA) and rotary wing aircraft are required to provide protection to our merchant ships/fishing fleet/ commerce protection on the high sea. To safeguard our ports, harbours, waterways, coastal installations, offshore gas risk and island territories, Bangladesh navy needs missile fitted Fast Attack Crafts (FACs), Patrol craft, minesweepers, suitable logistic ships and effective and responsive intelligence gathering/SIGINT and disseminating organization. Instead of going for submarine right now resources should be allotted for building a brown water navy. To maintain the present and future strength of the fleet, two ships per year need to be built or acquired assuming a 20- year economical life. Since this is a continuous requirement, it may be economically and logically advisable to build these ships in Bangladesh. This would on

the one hand save substantial amount of foreign exchange and on the other would provide employment for the local people, and also help nationally in achieving technological and industrial self reliance.

Conclusion

The prospects for conflict and/or co-operation in the Indian Ocean are affected by multi dimensional factors. These prospects, however, have an immediate and direct influence on relationship with the security environment of the Bay of Bengal. The area is witnessing an ever increasing level of tensions and instability specially after nuclearisation of the area. Some of the littoral countries have tried to defuse these tensions, reduce dissonance and improve the security environment through propagation of regional co-operation and adherence to the UN Charter. Success has eluded these attempts so far; and as time goes by, the security environment may be expected to deteriorate, transforming the area, not as expected, into a zone of peace and co-operation, but inexorably driving it instead into a zone of conflict in the years ahead; a scenario hardly likely to leave any of the littoral countries unaffected or unscared. A carefully conceived and imaginatively implemented maritime strategy will have far reaching effects on the fortunes of Bangladesh in the new Millennium - both from the economic prosperity viewpoint and the standing of Bangladesh in its ability to contribute meaningfully for the her sea commerce/activities. It is generally accepted that, whatever strategy is considered, the point of emphasis is that political aims must remain supreme. The main elements required for maritime strategy are merchant fleet, a fishing fleet, inland coasters/tankers/barges, ports and

harbours, a naval fleet, the shore support - such as shipbuilding and shipping management, maritime infrastructure, seaman to man the ships and the learning institutions to train the manpower etc. These elements, placed correctly in apportioned units, will allow unhindered access to the sea for the successful commercial, scientific and industrial exploitation of the ocean resources and their continued development. Assuming that Bangladesh wishes to use its navy in the commerce protection role, care must, therefore, be taken to ensure that the capability does not to some extent go by default through the building of high quality ships but to it is an emphasis on quantity. In terms of the quality/quantity equation, the concept is that with limited resources you can have either quantity or quality but probably not both. It may be possible to ease this difficulty by retaining/purchasing old ships although in some circumstances this could be counter productive. We can also look towards putting technology to work on the quantity side of the equation. Security considerations and self reliance for Bangladesh in this scenario can only come about by internal strength and stability, economic development and self reliance and a naval strategy to provide active and credible sea power to defend and safeguard national interests. At present, the only approach to improve the security environment of this region and reverse the trend towards it turning into a zone of conflict must have its roots in the SARRC Charter and seek to restrict and finally remove unilateral assumption of police man roles by any regional power. Our capability for safeguarding our maritime interests and playing a constructive role in the region will be directly proportional to our maritime strength and diplomacy.