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THE MARINE DIMENSION OF HUMAN SECURITY: IMPLICATIONS FOR BANGLADESH

Abstract

The paradigmatic shift in the concept of security now puts more stress on human security related to welfare of mankind in several ways. The concept of human security is a theme on which the research in an on-going process. Various political scientists, sociologists, economists, environmentalists, security and defense experts and the like are trying to study it from different angles, all with the purpose of better conceptualizing the concept and as well for finding out the means for making it more operational on ground. Interestingly, the concept is also being studied from a perspective that tries to link it with the other contemporary themes like globalization, human rights regime, environment regime, the phenomenon of collapsed state etc. In this respect, one notices very little efforts being expended to understand the concept from an oceanic perspective, notwithstanding the fact that the issues related to human security in the terrestrial environment find their relevance in the ocean medium too. However, such indifference to the marine dimension of human security cannot remain a long lasting phenomenon as the position of 'global oceans and seas' is currently in a state of crisis with impact on food security, health security, environmental security, personal security, community security of the individuals that depend on the ocean for their livelihood and sustenance. The management of oceanic affairs is a complicated task as ocean is a medium different from that of land. However, ocean governance is crafted in a manner that is capable

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of meeting many challenges that the oceans face at present. From human security perspective, meeting such challenges means prosperity and wellbeing of mankind. Bangladesh as a maritime nation also faces numerous critical human security problems in its maritime zone. It is, therefore, an imperative for the country to confront such challenges in line with the contemporary ocean governance.

Key Words: Human Security, Ocean Governance, Marine Environment, UNCLOS, Globalization

Introduction

In contemporary security discourse, the concept of human security[1] has emerged out of a paradigmatic shift from traditional security to a comprehensive one. While the former relates to an excessive state-centric notion of territorial security from military-defense angle, the latter includes within its fold a wide range of issues related to the well-being and safety of the people. Towards this end, human security, in comprehensive terms, includes protection of human being not only from traditional military threats but also from a variety of economic, social, ethnic, epidemiological and environmental threats.[2] It should be mentioned that the concept of human security is a theme on which the research is an on-going process. Various political scientists, sociologists, economists, environmentalists, security and defense experts and the like are trying to study it from different angles, all with the purpose of not only better conceptualizing the term, but as well for making it more operational and achievable on ground. Interestingly, the concept is also being studied from a perspective that tries to link it with the

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[1] For a comprehensive overview of the concept of human security, see S. Alkire, 'Conceptual Framework for Human Security', Background Document, Commission for Human Security, available online *http://www.humansecurity-chs.og/doc/frame.pdf*, accessed on 30 March 2003. Also see, the Commission for Human Security's documents and publications, available online *http://www.humansecurity-chs.org/doc/index.html,* accessed on 16 February 2003.

[2] Human Security, Center for Global Partnership, available online *http://www.cgp.org/cgplink.programs/security priorities.html,* accessed on 04 April 2002.

other contemporary themes like globalization, governance, human rights regime, terrorism, collapsed state etc. In this respect, one notices very little efforts being expended to understand the concept from an oceanic perspective, notwithstanding the fact that the issues that are related to human security in the terrestrial environment find their relevance in the ocean medium too. While, bits and pieces of works on sustainable development in the oceans, in particular, in the post-Rio period,[3] make allusion to human security in the oceans, a direct comprehensive work on the subject is still lacking.

Any indifference to the marine dimension of human security, however, cannot remain a long lasting phenomenon. This is because various human security issues as identified in the land like food security, health security, environmental security, security against violence, crimes, political disorder and instability etc. also find their presence in the oceanic domain. In this connection, a fresh reappraisal of the importance of oceans is to be made not only in view of its ability to support and sustain the earth life system by providing many vital resources like food, energy, commerce, medicines and recreation, but also in terms of its linkage with the world climate system, the increasing interdependence among the nations and the world security at large.[4] The reappraisal, at the same time, behooves one to take into due consideration several critical factors that are likely to affect the resource base and the carrying capacity of the oceans like the growth in the intensity of ocean activities, the competing and conflicting claims of several users over

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[3] It may be mentioned that the programme area of Chapter 17 of the Agenda 21 of the Rio Summit for the first time talks about integrated marine and coastal planning within a sustainable framework of development with emphasis on various human factors. See for details, Tullio Treves, 'The Protection of the Oceans in Agenda 21 and International Environmental Law', in Luigi Campiolio, Laura Pineschi, Domenico Siniscalo, Tullio Treves (ed), *The Environment After Rio : International Law and Economics*, Trotman/Martinus Nijhoff, London, 1994, pp. 161-171.

[4] It may be noted that in the US, one out of every six jobs is marine related, and one third of the country's GDP is produced in the coastal zone through fishing, transportation, recreation and other industries. The country's national security and foreign trade are also dependent on oceans. *National Ocean Conference*, Naval Post Graduate School, Monterrey, California, June 11-12, 2001.

the same ocean resources, the deterioration in ocean health as a consequence of pollution from different sources, the release or deliberate dumping of extremely hazardous wastes, the increasing pressure on the coastal areas due to increase in population, the possibility of extracting marine resources due to development in science and technology, and finally, the occurrence of various types of crimes in the oceans with adverse impacts on ocean order and stability.

In the light of the above, the relevant questions that may be raised are: Where lies the rationale for applying the human security concept in the ocean medium? What would be the most appropriate human security issues to be applied in the oceans? Does the concept, in the ocean domain, face the same dilemma as in the terrestrial domain with respect to its comprehensiveness? How does the ocean governance meet the challenges arising out of the various human security issues of marine nature? What implications does oceanic perspective of human security have for Bangladesh? An attempt to address these questions will be taken up in the four successive sections in the paper with a conclusion at the end.

Section I: Human Security from an Oceanic Perspective: Finding Out its Rationale

Human security in the oceans has as much relevance as in the terrestrial domain. In this connection, an attempt to transpose the land based human security issues in the oceans would not, probably, be without its rationale as it would reveal a similarity not only in the issues concerned, but as well in the challenges and problems in addressing them. Despite this, human security as an adjunct to the traditional state-centric military and territorial security within specific terrestrial socio-economic, political and cultural conditions has met with very little efforts by the security community in transposing it in the oceans and seas. The reasons for this are not far to seek. *Firstly*, the primary activities of humankind, i.e., political, geo-strategic, economic, social, cultural etc. are essentially land based where the ocean related issues weigh less, notwithstanding the fact that the oceans that cover three-fourth of the planet contribute significantly to the world's economy, determine its climate, and plays an important role in international security. While such

indifference to the oceans may be explained by mankind's basic preoccupation at land, the fact to explain it more concretely is the general tendency of the national states to keep their oceanic affairs at the periphery of their concerns. As Elisabeth Mann Borgese remarks, " (...) in the majority of countries ocean affairs does not represent a central concern but a matter subsidiary to other activities having higher priority. Thus, its political stature is generally low, which translates into the location of the activity at a low level within the governmental hierarchy as well as into certain patterns of resource allocation (limited personnel and low levels of funding)".[5] *Secondly*, the concept of security is basically linked with some of the attributes associated with nation-state i.e., sovereignty and territoriality.[6] As a result, each of the nation-states tends to look at its security issues and interests within a well defined geographical space so as to identify, if possible quantify, the magnitude of threats to its security and the means needed to deter it. Thus, an extended version of security to encompass so many issues and problems as well need a spatial demarcation, which in the ocean arena, faces difficulties due to the absence of attributes as understood in Westphalian sense. *Thirdly,* in the oceanic domain, the prevailing concept of maritime security is very traditional in nature and overlooks the fact that various low intensity conflicts can directly or indirectly affect the life and wellbeing of the people. *Lastly*, there is the absence of human factor in the management of marine and coastal resources. This is because the managers and policy fail to incorporate social, economic and political imperatives of the people in their development package. This is explained by no other fact other than their dependence on biological and physical sciences coupled with interest/greed in/for resource only.

The indifference to the marine dimension of human security could not remain a long lasting phenomenon in view of the importance that the oceans and seas bear for mankind. However, in

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[5] Elisabeth Mann Borgese, *Ocean Governance and the United Nations*, Centre for Foreign Policy Studies, Dalhousie University, Halifax, Nova Scotia, Canada, 1996, p. 152.
[6] See for details, 'Ocean Perspectives: Legal', in Elisabeth Mann Borgese, *The Ocean Circle: Governing the Seas as a Global Resource,* UN University Press, New York, 1998, pp.109-131.

the space of only a few decades, the world oceans and seas have become the site for an expanding list of problems. For example, the world fisheries on which about a billion people mainly in developing countries depend for their major source of food, income and livelihood are now in crisis leading to serious adverse conditions for those who depend on it directly or indirectly. [7] Similarly, the contamination of sea water by different pollutants has, in recent years, precipitated a crisis in ocean health with massive global implications.[8] The marine environment is now in crisis with serious threats to its bio-diversity and eco-systems. Also, in recent years, various types of maritime crimes have attained their intensity due partly to modern information technology and other sophisticated means. While these and other issues may have connection to oceans and implications for human security, one needs to take cognizance of certain developments at the operational and institutional level to transpose the concept of human security in the marine domain.

At the operational and institutional level, it is the UNCLOS (1982) that as a constitution of the world's oceans and seas draws out several parameters for preservation and conservation of marine resources, prevention of marine degradation, undertaking scientific and technical research, peaceful use of the oceans etc. From human security perspective, the Convention's greatest contribution is, perhaps, the incorporation of 'Common Heritage of Mankind' as an embodiment of new social, political, economic and philosophical

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[7] The last decade has seen the end of 40 year fishing boom. The worldwide catch increased more than four times over between 1950 and 1989, but has since stayed at around the same level. In 1997, 86 million tones of fish were caught at sea. Then, there was a sudden boom in 2000. According to FAO Report, about 95 million metric tons of fish were caught in 2000. This would be about the same as filling 37,000 Olympic sized swimming pools with fish (Ocean News, Issue 6: Sustainable Fisheries, A Newsletter from the Public Education Program of the Bamfield Marine Center). The boom ended because it went too far. The leveling off is mainly the result of over-fishing resulting therefore in fish crisis.

[8] Crisis in ocean health refers to the disturbance in the normal physical and-biological composition of the oceans and seas needed for sustaining a wide variety of oceanic resources, both living and non-living.

ideas for mankind's welfare.[9] As Elisabeth Mann Borgese remarks, "As a philosophy, it is indeed ancient and universal. It creates a synthesis between individual and community rights and obligations conceiving human not as 'owner' but as 'steward of earthly goods which he/she has the right and the duty to manage in accordance with commonly agreed standards and with due consideration of the interests of the community as a whole, and, in particular the poorer members of the community".[10] It is relevant to mention some of the dimensions that make the 'Common Heritage of Mankind' more comprehensive or more human security oriented in nature. *First*, the system of governance and management for the oceans must display a special sensitivity to the needs and requirements of groups and individuals who are disadvantaged by geography, by economic and social circumstances, and by their adherence to traditional methods of resource exploitation. *Secondly*, the oceans should be seen as a domain where institutions and arrangements should contribute to accelerating the pace of social and economic development in the developing countries, including those which are still without the capacity to use and benefit from the resources of the sea and those which do not have access to it by reasons of their geography. And, *thirdly*, systems of governance and management must recognize the legitimate interests of future generations, providing for arrangements through which the interests of the unborn can be articulated and safeguarded. All such dimensions lead to a new approach towards the oceans where the principle of equity with its unique humanistic dimension gained prominence.[11]

However, in the face of dominant ideology that stresses the importance of markets and short-term gains over the longer-term rewards, the philosophical and idealistic viewpoints as enshrined in the UNCLOS needed more practical manifestation to demonstrate

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[9] See Section 2 of Part XI of the UNCLOS (Articles 136 to 148). UNCLOS, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, UN, New York, 1997.

[10] Elisabeth Mann Borgese, *Ocean Governance and the United Nations*, *op.cit.*, p. 172.

[11] *The Ocean Our Future*, The Report of the Independent World Commission on the Oceans, Chaired by Mario Soares, Cambridge University Press, 1998, p. 55.

people's interests towards the oceans and seas. It is nearly after ten years that the United Nations Conference on Environment and Development (UNCED) that took place in 1992 and is popularly known as the 'Earth Summit', quite manifestly attached importance to the world's oceans in few of its Conventions and agendas. Two of the Conventions that were adopted at the summit like the Convention on Climate Change and the Convention on Biological Diversity[12] reinforced many of the provisions of the UNCLOS with respect to the linkage of oceans with climate and bio-diversity, and all these for the welfare of people inhabiting the planet. Needless to mention, the Biodiversity Convention has an important ocean component. The larger part of species live in the sea, not on land. Similarly, the Climate Convention can not be implemented without dealing with the ocean/atmosphere interface which largely determines the climate. However, it is Chapter 17 of Agenda 21 of the Rio summit that is specifically devoted to oceans and the seas. The Chapter identifies few major programme areas with a number of objectives like integrated management and sustainable development of coastal areas, marine environmental protection, sustainable use and conservation of marine living resources of the oceans etc.[13] In all such programmes, there is the clear reflection of the global interest in oceans for improving the people's conditions of life. In brief, at the Rio Summit, a bridge was made between the UNCLOS and the UNCED processes leading in the direction of many human security issues linked directly or indirectly with the global oceans and seas. All such developments point towards a new political, social, and economic order of the 21st century where ocean would be of significant importance for the entire mankind.

In the post Rio period, the law of the Sea and various international/regional institutions and arrangements act as mechanisms to regulate the oceanic affairs for welfare of the people depending directly or indirectly on the world's oceans and seas. In particular, in Agenda 21 of the Rio Summit, one finds an enmeshing of concerns, both terrestrial and oceanic in nature. In this sense, the problems of ocean and land space are considered to be closely interrelated and need to be considered as a whole. This creates a

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[12] See for details, *Ibid*. pp.55-58.
[13] *Ibid*. pp. 58-63.

sound rationale for extending the concept of human security to marine domain as many issues of human welfare are linked up with activities that are both terrestrial and oceanic in nature. Also from a theoretical angle, if the enlarged version of human security is invested with the characteristics like: it is universal, its components are interdependent, it is best ensured through prevention, it is people-centered etc., then all such elements would find their bearing in the ocean medium as well. What then are the critical human security issues in the oceanic matrix? The succeeding section addresses the question.

Section II: Identifying the Human Security Issues in the Oceans and Seas

Like in the terrestrial domain where the issues that create fear and want to undermine human security, in the ocean domain too, the factors generating both are present quite transparently. This is because there has been a shift in the basic condition of the oceans from one of apparent abundance to one of growing scarcity and from one of accommodation to one of conflict. Scarcity has been caused due to the growth in the intensity of ocean use and in the number and magnitude of activities that impinge on the carrying capacity of the oceans and on levels of sustainable use. Needless to state, the planet at present is in the midst of marine crisis. Earth's coastal and marine resources and the eco-systems upon which they depend are showing signs of collapse as a result of increasing exploitation of fisheries and habitat degradation.[14] To this is added the phenomenon of wastage through by-catch[15]. Equally gloomy is the marine environment that is being polluted by intense human activities both in the land and seas.[16] Conflicts also abound in the oceans due to increasing

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[14] People, Communities and the Coastal Environment: The 2000-2003 Global Strategy of the World Resource Institute.

[15] Much of what is caught- whether fish, shellfish or other marine life – is thrown away. Every year it is estimated that by-catch of unwanted fish including those thrown back into the sea amounts to 27 million tones world wide.

[16] For details on Marine Pollution, see, 'The State of the Waters', UNEP, available at *http://gesamp.imo.org/np 10,* accessed on 27 August 2002.

competition and conflict over scarce resources.[17] Finally, peace and stability in the oceans is at stake due to the presence of a number of maritime crimes.[18] Non-resolution of a number of maritime disputes, in particular with respect to the delimitation of maritime boundaries also keeps the ocean area charged with tension and misapprehension. All such issues have direct implications for human security when considered from the viewpoint of 'want and fear', and can only be addressed once policy planners recognize that the underlying causes of such problems are not mere biological and physical in nature, but are social, economic, cultural, political and institutional in nature.

It should be mentioned that none of the issues that exist in the human security catalogue is irrelevant in case of the oceans and seas. For example, take the case of 'community security' as envisaged in famous UNDP definition of human security. One would probably notice that the communities in the coastal zones in many parts of the world with their economic, social, cultural and philosophical values linked to the oceans are now under threat due to the massive migration into and new economic activities in the coastal zones – a phenomenon explained by increasing human dependence on marine resources and global increase in population, poverty and hunger.[19] The displaced persons with their historical linkage with the oceans, thus, are deprived not only of their socio-cultural values, but as well

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[17] Conflicts among multiple users of the ocean and coastal areas as well as among government agencies that govern marine resources are one of the problems most often cited by marine managers, user groups and academic observers around the globe. See for details, Biliana Cicin-Sain, 'Multiple Use Conflicts and Their Resolution: Towards a Comparative Research Agenda', in Paolo Fabbri (ed.), *op.cit.*, pp. 280-370.

[18] The Ocean Our Future, *op.cit.* p. 39.

[19] Due to numerous advantages offered by the coastal and near-shore areas, they have since antiquity been among the most intensively used and abused parts of our globe. About one half of today's population lives on the sea shores or in their immediate proximity; a variety of industries have developed on a large scale along the coast; the coastal zones are a major recreational area and the basis for expanding tourism, harbors etc. See for details, Stjepan Keckes, 'Protection and Development of the Marine Environment: 'UNEP's Oceans and Coastal Areas Programs' in Paolo Fabbri (ed.), *Ocean Management in Global Change*, Elsevier Applied Science, London and New York, 1992, pp. 344-360.

of their functional link with the ocean medium in terms of livelihood. This is somewhat tantamount to the dislocation of an ethnic minority from its ancestral land, and hence a gross violation of human rights and an encroachment on community security. Also coming to the minutest point of personal security as envisaged in the UNDP, it would be found that it is equally applicable in case of the oceans. The idea of risk management which is now being floated in the context of integrated coastal management is basically an endeavor to ensure personal security.[20] While space limitation would not permit an elaborate discussion on the relevant human security issues pertaining to the oceans, two most serious ones, marine environmental degradation and political disorder in the oceans will be taken up for detailed discussion below in two sub-sections. The raison d'être for the selection is their direct relevance to Bangladesh as would be discussed in Section 4.

Marine Environmental Degradation

In contemporary world, degradation of marine environment has become an issue of serious concern in virtually all the oceans and seas of the world. While in most generic sense, marine pollution is believed to be caused by plastic litter, other litter such as glass bottles and cans, oil and chemical spills or polluted storm-water drains and rivers flowing into the sea, a very approximate estimate of the relative contribution of all potential pollutants from various human activities entering the sea could be summarized as below. This demonstrates that human beings themselves are responsible for diminution of their welfare to be derived from the world oceans.

Source	% Contribution
Off-shore production	1
Maritime transportation	12
Dumping	10
Sub-total ocean based sources	23
Run-off and land based discharges	44
Atmosphere	33

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[20] Management of an individual's vulnerability to natural hazards and risks economically, socially and environmentally.

Sub-total land based sources   77

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Total All Sources   **100**

The relative contributions from each source are different in different sea areas, as these contributions depend on the degree of industrialization, the density of population, the extent of off-shore activities and other factors. What is, however, important to note is that the oceans can no longer be considered to be existing in isolation from the land. The health of the ocean has deteriorated significantly as a consequence of the pollution caused by land-based activity which is carried to the sea not only by rivers but also by the atmosphere. Of the many thousands of chemicals that are used for different purposes, most end up in the oceans, and overall, around 77% of marine pollution is estimated to have its origins on land, indicating that oceans and lands are closely interlinked. In addition to this traditional way of polluting the marine environment, the oceans are threatened by the release of deliberate dumping of extremely hazardous wasters, such as pesticides, heavy metals and radioactive residues, by risks associated with the carriage of plutonium and dangerous chemicals, and by the possibility of accidents involving nuclear warheads or nuclear powered vessels. All such activities are now being considered as falling within the category of 'eco-terrorism', and are considered not only as crimes against ecology but also against humanity. Many have also termed it as a 'low intensity conflict' in the oceans.

Deterioration in ocean health due to marine pollution has negative impacts in the form of ecological damage, destruction and alteration of marine habitants, loss of fisheries, increasing eutrophication[21] and changes to hydrology and the flow of sediments. Various pollutants decrease the carrying capacity of the oceans and inhibit sustainable use of the oceans. Many fishing grounds that were formerly very productive have now become seriously depleted and

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[21] Eutrophication is the phenomenon observed in the bodies of water that receive large influxes of nutrients due to agricultural runoff or urban waste disposal. It is characterized by blooms of either green or blue-green algae (often noxious smelling) and by a drastic reduction in dissolved oxygen which makes impossible for many species of fish and marine life to live in water.

some habitats have been irreversibly destroyed. Globally, over one billion people rely on fish and other seafood as their main source of animal proteins, and with the growth of world population and the resulting pressure on sea fishes and marine resources in the coming decades, the coastal states are likely to fall in a 'vicious circle of scarcity' causing a decline in human security of those that depend on the seas directly or indirectly. The coastal communities, in particular will be the most vulnerable victims of such scarcity.[22] Needless to state, many such communities that have, for generations, been dependent upon the sea have not only lost their sources of livelihood, but also the meaning to their lives. Doubt and suspicion loom large as to what extent the current trends towards globalization, unfettered liberalization, open markets, consumption pattern *à l'occidentale* etc. would address this problem of true scarcity of resources. More dismaying is the fact that the current world-wide structure of property rights, taxes and subsidies has encouraged overuse of coastal and marine resources thereby placing resources and people under intolerable stress.[23]

From the perspective of human security, it is essential to know that since 71% of the Earth's surface is covered by the oceans and that approximately 60% of the human population lives on or near the coast, ocean health and human health are inextricably related. 'Recently, however, these linkages have become more conspicuous to scientists with the precipitous decline in the health of the ocean themselves'.[24] While the links between human and ocean health often draw the public attention via local events such as beach closures and seafood contamination from sewage, but the geographic

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[22] With the increase in world population, world economy and world trade, there has been a corresponding increase in the demand for marine and coastal resources. According to the World Resources Institute, at least two thirds of the planet's human population lives close to the coastline, the number is expected to reach three quarters by 2025. See for details, John Temple Swing, 'What Future for the Oceans?', *Foreign Affairs*, Volume 82, No. 5, September/October 2003, pp. 139-152.

[23] Abul Kalam Azad, 'Degradation of Marine Environment in Southeast Asia: A Study of Conflict and Cooperation and Lessons for South Asia', *BIISS Journal*, Volume 27, No. 2, 2006, p. 118.

[24] 'Ocean Health and Human Health', Guest Editorial, *Environmental Health Perspective*, Volume 112, Number 5, April 2004, pp. 1-2.

scale of the ocean health on human health is global, reaching even remote human populations. This is due to direct consumption of fish and seafood contaminated by various effluents mentioned above. Dependence on a seafood diet is particularly higher in coastal than in inland areas. The consumption of large quantities of fish raises the issue of potential exposure to harmful natural and anthropogenic contaminant in sea food. These toxicants in the aquatic food chain are threatening all fishing communities that still rely on seafood for their subsistence. Therefore, the choice for those people who regularly consume sea food is increasingly a balance between the nutritional versus detrimental aspects of seafood. All around the world, it is estimated that marine contamination related diseases from bathing and seafood consumption are responsible for more than 3 million disability-adjusted years (based on premature death and years of loss of health) per year, with an estimated economic impact of US$ 13 billion.[25] Some of the diseases caused by intake of contaminated sea food are skin disease, nausea, respiratory problems, memory loss, with fatality rates exceeding 10% in some cases. In the warmer oceans, there is the risk of cholera from consumption of contaminated fishes and other seafood. It is quite ironical that while alarms have been sounding about the health of the oceans for some time, most of the discussions have been limited to marine organisms themselves, as if people were somehow divorced from the ecosystems upon which they depend for their health and well-being.

Disorder and Lawlessness in the Oceans

At present, most of the world's oceans and seas are experiencing political insecurity with disorder and lawlessness being the order of the day in marine domain with serious consequences for human security. From a logical standpoint, political security in the oceans is an established fact in so far as oceans are meant to be used for peaceful purposes so as to guarantee an equitable public order for governing all human activity in the oceans. Towards this end, the 'peaceful use of the oceans' as an universal idea got its first eloquent

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[25] *Human Health and the Oceans*, A Report by FAO-FI.

expression in the very concept of 'Common Heritage',[26] that later on was incorporated in the very Preamble to the UNCLOS in the following words, 'promoted by the desire to settle, in spirit of mutual understanding and cooperation, all issues relating to the law of the sea and aware of the historic significance of this Convention as an important contribution to the maintenance of peace, justice and progress for all peoples of the world'.[27] However, in a Hobbesian world of conflict that embraces the oceans too, translating the peace, order and stability, as envisaged in the UNCLOS, into a reality has been a daunting task. The great maritime powers had the *carte blanche* in their hands to define their specific security interests in the seas on such grounds as historical claims, geo-strategic interests, commercial interests etc. In the process, maritime security was manipulated by few as being strictly state-centric in nature, and in the circumstances, other aspects of security were more or less neglected. However, a complex set of factors soon caused a change in the traditional outlook towards maritime security. Not only that the concept was more broadened but that concern towards it became more intense.

Thanks to UNCLOS, a significant number of maritime states, even small ones have acquired large adjoining maritime areas as zones of their responsibility.[28] The Convention conferred rights and

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[26] Arvid Prado's Common Heritage concept put the entire oceanic perspective in a newer form in so far as it introduced the principles of equity and non-property in the oceanic domain. He revolutionalized the thinking of politicians, jurists, scientists alike when Seabed and the Ocean floor were declared as Common Heritage to be used and exploited for peaceful purposes and for the exclusive benefit of mankind as whole. Part XI of the UNCLOS entitled 'Area' deals with various aspects of Common Heritage in articles 136, 137, 138, 140, 141, 142 complemented by other articles of the Convention.

[27] Elisabeth Mann Borgese, *Ocean Governance and the United Nations*, *op.cit.*, p.182.

[28] Increase in the number of coastal states with maritime interests and the capacity to participate in the international   legislative process led both to extension and refinement of coastal state jurisdiction over adjacent seas at the Third UN Conference on the Law of the Sea, a delicate balance being struck among the interests of naval powers, of coastal states, of neighboring states whether landlocked or coastal, and of the international community as

jurisdiction on coastal states for the purpose of managing marine resources in prescribed adjacent maritime zones, and for related economic purposes, and provided for international cooperation in managing marine resources beyond such zones. As a result, keeping the zone free from threats became their new preoccupation that in substance could not be at par with the principle and practices of the great powers. The new jurisdiction over the extended maritime zones also created functional responsibility with due attention to conservation and exploitation of marine resources. The result being that conflicts over resources among multiple ocean users became a new source to threaten ocean political stability. Also, the extension of maritime zones opened up the scope of disputes with respect to delimitation of maritime boundaries. The end of the Cold War also fundamentally altered the context in which the quest for peace and security on the oceans was to take place. As indicated earlier, Chapter 17 of the Agenda 21 of Rio Summit, the UN Secretary General's Agenda of Peace, the Social Summit of 1995 etc. had their respective contribution towards the evolution of new peace concept in the ocean. Perhaps, an important development that most of the states began to witness beginning from the mid-eighties is the new types of threats to political order in the oceans caused mainly by non-state actors.

The above discussion, al least, confirms the broader dimension of maritime security and its shift from the exclusive preserve of few to a vast majority of coastal states. In this context, a new evaluation of the issues affecting political security in the oceans was needed and as well as reconsideration of measures to address them. The relevant questions now are: (i) What then are the destabilizing issues in the oceans?(ii) How to identify them? and (iii) What are their implications for human security?

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a whole, in matters of security, use of the seas for transport and communications for purposes of trade, and marine resources exploitation. See for details, Christopher Pinto, 'Maritime Security and the 1982 United Nations Convention on the Law of the Sea' in *Maritime Security: The Building of Confidence*, UNIDIR, 1992, p.10.

It would be relevant to take into consideration the classification of low intensity conflicts as provided by K.R. Singh.[29] The first is the exploitation of natural resources by unauthorized persons. In this connection, illegal fishing is considered as an act ominous enough to disturb order in the seas. A pointer to the case may be cited by referring to frequent occurrences of illegal fishing in the Bay of Bengal shore of Bangladesh by trawlers from Myanmar. This has not only caused deterioration in the relations between the two states, but in the process caused loss of human lives and property. In effect, illegal fishing is simply one of the facets of illegal exploitation of marine resources. Today, the world's oceans are an open frontier, with everything up for grab by those who possess the biggest and best technologies to extract not only fish, seals or whales, but to exploit oil, energy and other minerals. Such pillage to many critiques is another form of piracy euphemistically terms as post-modern piracy.[30] This has far reaching implications for political security, and hence for human security in the oceans. Pertinent to this, one should take note that since science and technology have largely facilitated the utilization of oceanic resources, the benefits derived from the use of the oceans and from the exploitation of marine resources accrue mainly to nations with the required scientific, technological and financial capacity. This, from a strict human security perspective, raised the issue of equity and highlighted the need for mechanisms that ensure that all nations are able to share in the benefits from the use and exploitation of the oceans for the welfare of their people.

The second form of low-intensity conflict is the deliberate pollution of marine environment, thereby leading to its ecological damage and loss of habitat with serious impact on the ocean health and resources. This has been taken up for discussion in the preceding section. While the two categories of conflicts, as mentioned, may find their occurrence in any segment of ocean starting from territorial sea to the high seas, it is to be noted that even within the territorial

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[29] K R Singh, 'Regional Cooperation in the Bay of Bengal: Non-Conventional Threats - Maritime Dimension', *Journal of Indian Ocean Studies*, March 2000. pp. 1-14.

[30] How a Few Good Pirates can Save the Oceans? available at *http://www.wholeearthmag.com/ArtileBin/175.html accessed* on 25 April 2002.

jurisdiction of a state, conflicts may emerge in the oceanic domain due to quarrel and dispute over numerous resources. In particular, the potential for conflict in the marine environment is more in the limited coastal space due to high population density, diverse marine and terrestrial habitats in close proximity and differing economic and social interests. For example, in many Southeast Asian countries, the rapid introduction of sophisticated fishing technology by private or state controlled companies has seriously disrupted the traditional organizations of small scale fishermen. The over-exploitation of fish stocks by the former has threatened the very survival of the latter as they have lost their traditional fishing jobs and opportunities. Conflict is, therefore, very conspicuous between the two.

The third category is the direct threat to the life and property on board ship or platform or structure in the continental shelf or near the shore. The category has a wide spectrum ranging from ordinary theft to armed robbery, all of which are now placed under the common rubric 'piracy'. While there are several definitions of piracy, it is relevant to look at the concept in the light of article 101 of the UNCLOS and the definition furnished by the International Maritime Bureau (IMB.[31]). It should be mentioned that piracy and armed

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[31] The article defines piracy as consisting of any of the following acts: any illegal acts of violence or detention or any act of depredation committed for private ends by the crew of the passengers of a private ship or a private aircraft and directed. i. on the high seas against another ship or aircraft or against persons or property on board such ship or aircraft, ii. against a ship, aircraft, persons or property in a place outside the jurisdiction of any state, b. any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft. c. any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b). The IMB has adopted the following definition, 'Piracy is an act of boarding of any vessel with the intent to commit theft pr any other crime and with the intent or capability to use force in the furtherance of that act'. See for details, Jayant Anhyankar, 'Piracy Today – An Overview', *Journal of Indian Ocean Studies*, Volume 7, Nos. 2 & 3, March 2000, pp. 140-153. Also see, 'Piracy and Armed Robbery at Sea: The New International Maritime Security Order', Background Paper on Technology Cooperation and Transfer and Piracy and Armed Robbery at Sea, *International Ocean Institute*, Prepared for delivery to UN Opened Ended Informal Consultative Process on Oceans and the Law of the Sea, New York, 7-11 May 2001.

robbery at sea are now new phenomena. What probably makes them dreadful phenomena at present are few of its new elements with serious impacts on human security. *First*, modern piracy is violent, bloody and ruthless. Today, as compared to the days of the sail, it is all the more fearsome because almost invariably its victims are defenseless and far from the protection of the law. *Second*, it is the increasing rate at which such incidents are taking place in the oceans. A quick review of current statistics indicates that piracy has risen 57% between 1999 and 2000, and acts of violence resulting in injury and death have risen, in the same period, from 24 to 99 and 3 to 72 respectively. *Third*, incidents of piracy are increasingly efficient at targeting high value cargo and sometimes vanish with entire vessels. *Fourth*, current acts of piracy leave behind a bounded and gagged captain and crew in the vessel that continues navigating unattended. *Finally*, it is important to note that modern piracy is carried on by organized crime groups. This trend reveals a 'new level of globalization' in the piracy industry as groups increasingly cooperate with each other on all geographic scales and combine various aspects of their activities, including drug trafficking and the smuggling of humans and small arms, in order to rationalize their *modus operandi* as well as penetrate and develop illicit markets.

The fourth category is the direct threat to national peace and security and may include such activities as illegal traffic in arms, ammunitions, explosives and prohibited drugs with direct or indirect potentialities to foster terrorism in the oceans.[32] What can probably be more ominous is the fact that the oceans and seas are also being used for an illegal trade in ozone-depleting chlorofluorocarbons (CFCs) which in some countries are more profitable than trade in heroine or cocaine.[33] The traffic of arms and ammunitions across oceanic waters finds its destination in those areas where insurgency or separatist movements are alive and are in need of arsenals to sustain the movements. These vents, although episodic in nature, have the potentialities to destabilize oceanic peace and order. This is corroborated by events like the insurgency movements in the Filipino island of Mindanao where the separatist movement under the aegis of Moro Islamic Liberation Front (MLF), Autonomous Region of

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[32] K R Singh, *op.cit.*
[33] The Ocean Our Future*, op.cit*. p. 39.

Muslim Mindanao (ARMM) and the Abu Sayyaf are being continually armed from sources, presumably the Middle East, to fight against the regular army of the government.[34] A case further to support this trend is with respect to the Tamil crisis in Sri Lanka where the sources of illegal trafficking of arms and ammunitions was beyond the control of the Sri Lankan government to identify. It is assumed that the Tamil insurgents succeeded in maintaining a formidable oceanic network in different parts of the Indian Ocean for arming their separatist movement. Interestingly, this network was funded by many international terrorist organizations for reasons, more economic than political in nature. The good order in the ocean is also at peril when mercenaries are sent across the ocean waters to destabilize a regime.[35] Regional conflicts do also have negative impacts on oceanic order if such conflicts find their extension from land to sea. The two Gulf Wars (between Iran and Iraq and between Iraq and the Multinational Force) had serious repercussion on oceanic peace and stability when the Persian Gulf in the Indian Ocean became virtually militarized with the potentialities to turn the entire region into a war zone. Maritime disputes can also jeopardize the peace and stability in the region as it leads to many regional and sub-regional disputes over sovereignty claim.[36] The political order in the ocean also implies safety of the asylum seekers, maintaining aboriginal rights in the oceans etc. Lastly, after the 9/11 incident, the concept of maritime terrorism has gained wider currency.[37]

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[34] *Asia Times*, South East Asia, June 10, 2000.

[35] This is particularly true in case of far-flung small islands. This is perhaps better exemplified by the case of Maldives when in 1988, a band of mercenaries was transported to the island to support a *coup d'etat* against the government of President Gayoom staged by few local dissidents.

[36] Numerous regional and sub-regional disputes exist over sovereignty claims. Many involve islands that possess either a symbolic or an economic value. While some have been the subject of disputes for more than a century and others are the legacy of the Cold War, the Law of the Sea Convention provisions for extended coastal state jurisdiction have created a situation leading to conflicts in many cases, which is left to fester would heighten tension in the ocean in future. The Ocean Our Future, *op.cit.*, p.46.

[37] The term has mostly been popularized by the US Security Circle implying formidable threat to US naval ships and the civilians and military personnel working in such vessels deployed in different areas of the world's oceans and seas. The threat is compounded by the use of maritime vessels and

Section III: Ocean Governance *vis-à-vis* Human Security Issues in the Ocean

The above discussion clearly reveals that ocean based illicit activities such as piracy and armed robbery, trafficking of human beings, drugs, illegal arms etc, threat to physical security of humans, ships and marine activities, degradation of marine environment in an unbridled manner by different agents etc. have important implications not only for a state's security but as well for all components of human security. The relevant question now is: how to face the challenges of various human security issues in the ocean medium? In this respect, like in the terrestrial domain where good governance is taken to be a convenient approach for resolving multifold human security issues, in the oceanic domain too, the ocean governance is accorded similar importance to deal with all the human security issues like food, health, environment, political security, community security etc

At the outset, it should be mentioned that governance, in contemporary world, is not limited to its mere political meaning of running the state by public institutions in a transparent, accountable and responsive manner. It is more that that. As Elisabeth Mann Borgese remarks, "It includes the ways families are organized, or business or schools or churches are run. It includes traditions and cultures. It is rooted in a philosophy, and in the last analysis, depends on the vision we have of the nature of human beings, which determine the relationships they will have with one another and with the rest of nature'.[38] No where other than in the ocean domain that such a broad perspective of governance finds more of its applicability. Given the fact that marine related human security issues fall within the wide spectrum of maritime activities, it is ocean governance that can probably provide more purposeful and responsive policies and programmes for addressing those issues. Without going deep into a detailed discussion on the model

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shipping lanes by criminals who are often in league with terrorists including the group of Al-Qaeda. See for details, *Energy Security*, Prepared by the Institute for the Analysis of Global Security, January 24, 2005, pp.1-9.

[38] Elisabeth Mann Borgese, 'The Philosophy of Ocean Governance, Reading for the Course', *Politics of the Sea*, Dalhousie University, Halifax, Nova Scotia, Canada, 2001.

framework of ocean governance put forward by many experts in the ocean affairs, suffice it to highlight, for the purpose of the paper, its meaning and few cardinal elements. Ocean governance, in its most generic sense, implies "the way ocean affairs are governed, not only by governments, but also by local communities, industries, and all other concerned parties or stakeholders, the concept also includes national and international law, public and private law, as well as custom, tradition, and culture and the institutions and processes created by them[39] A close scrutiny of the definition would bring certain elements crucial to ocean governance. *First*, the Common Heritage of Mankind' that brought about a fundamental shift from unrestrictive use of the oceans to people's restrictive management of marine affairs, in effect, constitutes the theoretical basis of ocean governance. *Second*, ocean governance advocates for a holistic approach to the solution of any marine related problem, be it environmental, coastal development, maintaining law and order in the oceans and seas, This is a recognition of the principle as mentioned in the Preamble of UNCLOS that 'problems of the ocean space are closely interrelated and need to be considered as a whole'. This at the operational level implies that activities in the ocean should not be considered separately or sector by sector, but rather in a 'trans-sectoral or multi-disciplinary fashion. *Third*, ocean governance provides for actions at the levels national, regional and international, especially in the management of human activities that directly and indirectly have lasting negative impacts on the resources, health, peace, stability and security of the oceans. *Fourth*, ocean governance seeks to bring all marine related problems and their solutions within a legal and institutional framework and suggests tools for implementation. *Finally*, ocean governance has as its components the following principles like peaceful use of the oceans, sustainable development of oceanic resources, appropriate application of ocean science and technology, adherence to the principle of equity, the precautionary principle, and risk management etc.

It should be noted that the Common Heritage is a concept that seeks to restore the regenerative power of the oceans in perpetuity,

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[39] Elisabeth Mann Borgese, *Ocean Governance and the United Nations*, op.cit., p. 18

and hence it is a normative guideline for dealing with marine pollution, exhaustion of marine resources and degradation of coastal environments etc. that influence human welfare in several ways. Towards this end, some of its guiding principles are to be clearly understood: i. the problems of ocean space are clearly inter-related and need to be considered as a whole; ii. the ocean is an indispensable component of our life support system; iii. the ocean is the common heritage of mankind; iv. the ocean should be exploited only after due consideration of the global environment and in a sustainable manner.[40]

The holistic way in which the Common Heritage views ocean governance basically links it with the Law of the Sea Convention, notwithstanding the fact that many provisions of the latter, due to political compromise, contradict the former. For the purpose of the paper, it is relevant to bear in mind that at the heart of ocean governance is the concept of sustainable development which can be understood as 'a set of development programs that meets the targets of human needs satisfaction without violating long-term natural resource capacities and standards of environmental quality and social security. [41] In the ocean domain, this recognizes the need for integration of social, economic and environmental aspects of decision making, all for the purpose of meeting the human security issues.

Compared to governance in the terrestrial domain, which remains subject to the independent policies and strategies of governments within their respective national states, and for which there is no appropriate model, ocean governance is free from such geographical inhibition. It is also global in nature drawing its guideline mostly from the international law as envisaged in the UNCLOS and in other soft law arrangements to complement it. More important, it takes into account the appropriate levels at which the policies and strategies *vis-à-vis* the ocean medium need to be implemented. Thus, at the local level, the co-management is being advocated as a management framework for using of local

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[40] Elisabeth Mann Borgese, 'Ocean Perspectives: Legal', The *Oceanic Circle: Governing the Seas as a Global Resource, op.cit.,* pp. 109-131.

[41] G. Kullenberg, 'Integrating Sustainable Development and Security' (Draft), Paper presented at IOI Headquarters, Malta, February 2002.

knowledge, blending of indigenous and new technologies, and introduction of economic incentives etc. At the national level, awareness programme, linkage between people and the oceans, a horizontal and vertical integration between the various ocean related agencies is needed for an *integrated approach* towards ocean management. At the regional level, emphasis is being placed in view of the fact that many ocean resources and uses are inherently trans-boundary in nature, and that not all of these are functionally manageable at a global level. Regional level is preferred also in view of the fact that there are the limitations at the national level in tackling the multifarious ocean related problems.[42] Finally, at the global level, there is the need for support for combating such problems as illegal fishing, unregulated and unreported fishing, assessing economic and social impact of pollution from land-based activities etc.[43]

For meeting the political security challenges, ocean governance is well equipped with legal framework, institutional framework and various tools for implementation.[44] The legal framework which is based on the UNCLOS provides the means for resolving many oceanic conflicts. The Convention includes the requirement of coastal states to promote and cooperate in the establishment, operation and maintenance of an adequate and effective search and rescue service by way of mutual regional arrangements. The institutional framework also helps restore political order and stability in the oceans which include the functions of the International Seabed Authority, the Commission on the Limits of the Continental Shelf, the International Tribunal for the Law of the Sea, with associated arrangements permitting conciliation commissions, arbitral tribunals and the meeting of State Parties. All these bodies are increasingly concerned with the increase in oceanic crimes and they are putting emphasis on more effective implementation, compliance,

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[42] See for details, Abul Kalam Azad, 'Maritime Regional Cooperation in South Asia: Opportunities and Challenges' in Aldo Chircop and Moira McConnell (ed.), *Ocean Year Book 18,* (Elisabeth Mann Borgese Commemorative Volume), University of Chicago Press, 2004, pp. 512-545.

[43] *Ibid.*

[44] *Ibid*.

enforcement including joint regional enforcement and surveillance mechanisms to curb piracy, armed robbery and other crimes in the oceans.[45]

With respect to several conflicts in the extended maritime zones, a great part of resolutions depend on resource management and conservation. While hundreds of provisions of the UNCLOS provide a legal framework for such efforts, the formidable tasks lies in implementing them through competent international organizations such as IMO, UNEP, and IAEA etc. through global and regional cooperation. Also with respect to the delimitation of maritime boundary, instead of keeping the tension and mistrust alive, the parties to the dispute can go for a joint management of resources-both living and non-living.

However, the comprehensive framework that the UNCLOS provides for dealing with various maritime issues is not always effective due to lack of effective measures on the part of the littoral countries. For example, for fighting illegal fishing, there is the need for guarding, patrolling and surveillance in the exclusive economic zones, territorial sea, high seas with powerful coast guards. However, except a handful of well-to-do countries, most of the developing countries, in particular, in the Indian Ocean (viewed sometimes as Third World Ocean), are incapable of carrying out fully adequate policing. This, despite the fact that under UNCLOS all coastal states have been given ample legal power not only to exploit living and non-living resources in their respective EEZ and the continental-shelf, but also necessary power to use force if necessary to check illegal activities.[46] Interestingly, many such countries do not even undertake efforts to institute cooperative arrangements with their neighbours. If a survey is taken, it would not probably be surprising that most of these countries are bogged down in problems of various natures between and among themselves. Similarly, cooperative arrangement can as well be effective for combating eco-terrorism- a new threat to oceanic political stability and order.

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[45] Abul Kalam Azad, 'Maritime Security of Bangladesh' in Mufleh R Osmany and Muzaffer Ahmad (ed.), *Security in the Twenty First Century: A Bangladesh Perspective*, Academic Press and Publishers Limited, Dhaka, 2003, p. 227.
[46] K. R. Singh, *op.cit.*

It is more pertinent to look into the challenges posed by terrorism as it directly affects the life and property of ordinary citizens, and hence the human security. It is important to note that there is no single comprehensive widely accepted definition of the term 'terrorism' due to two main reason: i. the term is used to describe a wide variety of acts, and, ii. States have different perceptions of what constitute terrorism.[47] This holds true in case of the oceans too. The result being that there has never been reports on terrorism at sea as such, but instead they refer to piracy and armed robbery. All such criminal acts are sometimes legitimized as politically motivated and hence not criminal. Despite the fact that several international conventions (UN Hostage Convention of 1979) have declared all such acts prejudicial to personal security of life and property, till to date no acceptable method has yet been evolved to contain the armed action of the terrorists either through national legislation or through any arrangement at the regional level. In addition to the financial and technological constraints that, as mentioned earlier, a majority of states face in managing their maritime zones, there are as well inherent inadequacies in the provisions of the UNCLOS dealing with such crimes as piracy and hot pursuit.[48] There is the confusion in jurisdiction where UNCLOS, Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA) or its Protocol have not been ratified or are otherwise inapplicable. Conflict also arises due to the absence of any provision on national legislation on the coastal, flag, port or home State on terrorism. Similarly, while UNCLOS is explicit in defining the rights and obligations of the coastal state, it is unclear on many points on the question of enforcement. The question of enforcement is closely related to the right of visit and of hot pursuit and the grey areas in this respect are not yet identified, let along the question of meeting deficiencies in the field.

The socio-economic perspective of oceanic political security should not overlook one's attention. In this connection, an important factor to consider in ocean political security is the linkage between

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[47]   Natalino Ronzitti, 'The Law of the Sea and the Use of Force Against Terrorist Activities' in Natalino Ronzitti (ed.), *Maritime Terrorism and International Law*, Martinus Nijhof Publishers, London, 1990, p.5.

[48]   K R Singh, *op.cit.*

the ocean criminals and their socio-economic and political conditions. While it is difficult to identity with exactitude the pirates that originate from several quarters in the oceans, at best, the geographical area of their activities does enable one to understand their social-cultural and political milieu. As the current evidences suggest, the occurrence of piracy in South East Asian waters may be viewed to be an indirect spill-over effect of the political happenings in the neighbourhood. Most of the states in the region seem to remain embroiled in internal feuds and rival claims over territory both terrestrial and maritime. Also, the insurgency in the Filipino island of Mindanao is attributed to the economic malaise of the region. As one analyst noted, 'you can not convince the rebels to give up fighting unless they see economic development on the ground. If the rebels remain hungry, they will continue to fight, but if they are satisfied they would never carry a gum'.[49] This probably points to no other aspect other than human development for ensuing human security.

In brief, it can be said that the international community is yet to develop a major institutional capacity for promoting and regulating peace and security in the oceans despite the legal, institutional and financial arrangements at several levels. This is because 'institutional mechanisms for coordination and joint programming at the international level are notoriously weak and sometimes more symbolic than operational in nature'.[50] The reasons for this are not far to seek. International law are not yet clear on the question of responsibility and liability for harm to the marine environment, most of the laws are soft laws that need to be transformed into treaties to become legally binding, standards and recommended practices are not well formulated, and finally, many states are yet to give effect, through law and practice at the national level, to commitments they have already entered into. Thus what is needed is a new perception towards the oceans whereby the oceans are to be viewed as a public trust.[51] Once this is done, management and conservation of marine resources, containment of all prevailing crimes, fighting pollution,

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[49] *Asian Times*, South East Asia, June 10, 2000.

[50] *The Ocean Our Future*, *op.cit.*, p. 147.

[51] Trusteeship is a well established common law concept. It has historical parallels in a number of legal systems. See, *The Ocean Our Future*, *op.cit.*, p. 45.

halting illegal fishing etc. all that affect human security in the oceans would automatically be guaranteed as public trust does no stand for the benefit of an individual but for all. And in the oceanic context, the trust is universal in nature.

Section IV: Bangladesh: An Appraisal of its Marine Related Human Security Issues

In Bangladesh where human security discourse remains at the apex of the current national security debate, any attempt to de-link it from the ocean or, in other words, any rejection of its marine dimension would bear serious consequences for its people already groaning under several critical human security issues like abysmal poverty, malnutrition and deterioration in health, environmental degradation, soaring unemployment, lack of entitlements, political insecurity, fear of violence and crimes and the like. While this is a reality in the land, the marine matrix of the country is as well not immune from it. Three of the oceanic zones of Bangladesh represent different types of problems, all of which need special attention from the human security perspective. The chapter attempts to highlight these problems with few relevant suggestions in the light of ocean governance.

The first is the coastal zone of Bangladesh which in general sense is identified as a 710 km long stretch of land connected to the Indian Ocean via the Bay of Bengal The region, therefore, remains under the salinity and tidal effects of the Bay – two important criteria to delineate the region.[52] From the human security perspective, this zone is the most affected one for reasons like fragmented social structure, economic threat, widespread poverty, perennial vulnerability to natural hazards, threatened coastal ecosystem, coastal pollution, multiple and conflicting demands on the coastal resources, absence of political organizations. Each of the points needs little elaboration. While the coastal people have been

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[52] Dr. Monowar Hossain, 'The Greenhouse Effect and the Coastal Area of Bangladesh: Its People and Economy', in Jasha J. Maudud, Harun Er Ershad, Dr. A Atiq Rahman and Dr. Monowar Hossain (ed.), *The Greenhouse Effect and the Coastal Area of Bangladesh,* Proceedings of an International Conference held in Dhaka, Bangladesh, 05 March, 1989, p. 60.

maintaining a harmonious relationship and bondage among themselves since long, a fragmentation is now being created in their society by the intrusion of outsiders who for economic reasons use the innocent and docile coastal people as pawns in their hands. For possession of accreted lands, acquisition of agricultural land for shrimp culture and grabbing of forest resources, the outside agents resort to a policy that divides the society into two – their supporters or non-supporters. In particular, the introduction of shrimp culture in the coastal zone by the outsiders has led to the creation of a group of local touts (called *Mastaans* in Bengali) who are trying to take all possible advantage in the region through unscrupulous means. Many of them remain under political patronage and claim themselves to be a stakeholder in the region's resources by force. The vulnerability of the coastal population vis-à-vis the outsiders is explained by poverty, illiteracy, debt burden, remote habitat, absence of political participation and support from the authority etc. The threat as felt by coastal community is in the form of an encroachment upon their traditional means of livelihood and acquisition of wealth from their local resources by force and coercion. [53]

At the economic front, the threats are multifold. The practice of shrimp culture, although is helping the country to earn foreign exchange, the local population has not been benefited by it. There are indications of resource flight and resource degeneration in the coastal area of the country due to the expansion of shrimp culture with irreversible socio-economic and environmental losses for the region. Some of these are : (i) survival of the traditional farmers, artisanal fishermen, salt producers, landless and marginal populations under threat; (ii) losses of common property resources, i.e., mangrove forest resources, grazing land/pasture, salt fields, open water capture fish etc; (iii) loss of a range of bio-diversity and (iv) unjust distribution of wealth earned from the local resources. In brief, the increased pressure on the existing resources is causing a decline in key common property resources such as marine fisheries, mangrove and fish water resources. In the ultimate analysis, the coastal community will remain to be the worst sufferers economically. They

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[53] See for details, Abul Kalam Azad, 'Integrated Coastal Zone Management in Bangladesh: A Case for People's Management', *BIISS Papers* 20, 2003, pp. 46-49.

as well remain uncertain about any future prospect of income from the exploitation of local resources by government or private agencies. Then comes the issue of poverty which finds its manifestation in the coastal zone in more severest forms for the reasons like : (i) poor level of services and poorly developed infrastructure thereby increasing their isolation from the rest of the country; (ii) changes in land use pattern and poor regulation for land distribution and resettlement; (iii) poor access to technologies; (iv) poorly recognized gender sensitivity; (v) exploitation by the outsiders, both government and private; (vi) poor resource management and finally (vii) marginalization of the poor. Some of the appalling manifestations of poverty in the coastal area are hunger and malnutrition, ill health, unemployment, lack of access to safe drinking water, low access to education and other public services and resources, exclusion, lack of participation, violence etc. In effect, the deplorable economic conditions of the coastal people create an atmosphere of insecurity and uncertainty thereby keeping the population in constant fear and want.

Then comes the factor of perennial vulnerability of the coastal people to natural hazards. This is explained by certain facts: (i) the continuous threat of cyclones and storm surges; (ii) the ongoing process of land erosion and accretion, affecting many people's property and livelihood. The poor are the victims of erosion, whereas the accreted land is grabbed by the people with local influence; (iii) sever water congestion on old accreted land and associated drainage problem; (iv) salinity intrusion and (v) the climate change induced impacts as sea level rise, change in storm surges frequencies and changes in rainfall patterns in the river basin upstream. People's vulnerability to all such hazards is accepted almost as a *fait accompli* as no concrete measures of permanent nature have yet been taken to mitigate them except to respond to episodic crisis. Multiple and conflicting demands on the coastal resources is another serious problem in the coastal zone of Bangladesh. Human population increase coupled with demand for outputs and services and the need for economic development has led to multiple and conflicting demands on the coastal area stemming from both within and outside. For example, land use in the coastal zone is found to be ad-hoc unmanaged which results in misuse in some places and undue exposure of people to cyclone threats in others. In many Thanas,

there are conflicts over land use between sectors as well as between people, e.g., aquaculture use versus mangrove shelter belts and agriculture versus shrimp cultivation. Also confrontations between forestry, livestock, aquaculture and other interests over future uses of newly accreted land are not uncommon. Too often, these conflicts are stirred up by unilateral action of central agencies and local communities end up as helpless victims. Finally, coastal pollution and threatened coastal ecosystems bear immense human security implications for the people of the area.[54]

Next to coastal zone, it is the zone that consists of small off-shore islands (more stable) and chars land masses (less consolidated and hydro morphologically dynamic). These areas are subject to strong wind and tidal interactions throughout the year and are inhabited by a large number of people. For majority of the people, fishing is the main source of livelihood. Being remote from the mainland, development activities go at a slow pace in such areas thereby resulting in perennial problems of unemployment and poverty. Like the inshore coastal zone, this group of off-shore islands remains vulnerable to various natural hazards of oceanic origin. Cyclones which sometimes are accompanied by storm and tidal surges, pose multiple threats to human society with erosion of soils and sea coasts. They destroy property and disrupt normal economic activities of the islanders leading to food shortage and famine. While poverty, malnutrition and health hazards, unemployment and the like mark the daily life of majority of the people inhabiting several off-shore islands in Bangladesh, it is the constant violence that probably is the most serious threat to human security in such remote areas. In effect, chars and off-shore islands are the theatres of various crimes. 'Char land related crime and violence mostly occurs in Barisal, Patuakhali, Noakhali, Bhola and Lakshmipur. Grabbing crops, land grabbing, loot and robbery are main types of crime. Sporadic and autonomous settlements in newly accreted land often lead to factionalism and skirmish. In land disputes and conflicts, many people are harassed, kidnapped, evicted and killed. Reasons are unsettled district boundary dispute, isolation and vested interests of the power brokers. In recent months, Boyer char (Noakhali) hit the

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[54] *Ibid.*

news headline with incidents of rape, looting. house burning and killing'.[55]

Discrimination against women is a common phenomenon in chars and off-shore islands. Harsh nature of oceanic environment prefers masculinity. As a result, violence against women is the order of day in such areas. Violence includes domestic violence, trafficking, rape and sexual abuse , acid throwing etc. 'Family and land disputes, refusal of marriage proposals, rejection of sexual advances, political vengeance, and unmet dowry demand are some of the reasons behind violence against women.[56].

Next zone is the maritime zone of Bangladesh which as per the UNCLOS endows Bangladesh with 12 nautical miles of Territorial Sea and 200 nautical miles of Exclusive Economic Zone from the seashore. This is a zone infested with crimes of various types which from human security perspective impinge on people's life, means of livelihood, personal security etc. In the trajectory of crimes, piracy takes its place first, and it is on an ascending scale with no sign in its decrease.[57] As a result, nearly 200 coastal ships, 70 fishing trawlers, and over 2000 cargo boats and 6000 fishing boats that ply through the EEZ and the territorial waters remain perennially vulnerable to various forms of piracy acts. It is important to take into account few ominous features that mark the current piracy in Bangladesh's oceanic space with implications for human security like : (i) high degree of violence demonstrated by heavily armed criminals; (ii) money, property of the crew, negotiable goods, cargo and ship's equipments are generally the target items; (iii) targeting ships while at anchor at the ports of Chittagong and Mongla respectively; (iv) most incidents of piracy are reported in the territorial waters of the country. In 2000, out of 90 piracy attacks, 61% (55 attacks) took place in the territorial waters of Bangladesh.[58] (v) attack by pirates

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[55] *State of the Coast, 2006*, Published by Integrated Coastal Zone Management Program, Bangladesh, p. 120.
[56] *Ibid*.
[57] National News – News from Bangladesh, available online *http://bangladesh-web.com/news/jan/01/n01012003.htm*, accessed on 02 April 2003.
[58] Star Magazine, available online *file://c:My* documents/maritimeissues/maritime2.htm, accessed on 15 March 2004.

from neighboring countries is common; (iv) the unarmed coastal fishermen are the common victims

The next crime in the maritime zone of Bangladesh with serious human security considerations is illegal fishing and poaching. Next to agriculture, marine fishery is an important occupation of the coastal people and the sector plays a significant role in the economy by providing 6% of GDP, 9.30% of export earnings, 12% of employment and 80% of animal protein consumption.[59] About 10 to 12 million people are employed in fish marketing and processing, while 1.2 million full time and 10 million part time workers are engaged in fishing in Bangladesh.[60] This sector is, however, under threat due to the intrusion of foreign fishermen into Bangladesh territorial waters mostly from countries like India, Myanmar and Sri Lanka to catch fish with mechanized trawlers and boats.[61] While fish in the Bay of Bengal already stay away from Bangladesh shore due to extreme marine pollution caused by dumping of industrial effluents and waste, oil spillage etc., the frequent stealing of marine fishes has caused a decline in the country's fish stock, both pelagic and demersal, with serious consequences for the nation. Another serious crime in Bangladesh's maritime zone with implications for

[59] Momtaz Uddin Ahmed, the principal scientific officer of the government's Marine Fishing Department remarked, 'if this menace of pollution and indiscriminate fishing cannot be stopped, the water within our exclusive economic zone in the Bay of Bengal might be left without any fish'. National News-News from Bangladesh, *op.cit.* A survey by the UNDP transmits another alarming signal. The estimated annual sustainable yield (demersal and pelagic fish and shrimp) from the shore to the outer limit of the EEZ is about 3, 89,000 metric tons, out of which about 1, 18,000 metric tons are harvested annually. The loss of the remaining 2, 71,000 metric tons is due to natural mortality and unauthorized exploitation. However, most of the loss as the survey suggests, is due to unauthorized exploitation and poaching by foreign fishing trawlers 'Dipak Kamal, 'Bio-diversity Conservation in the Coastal Zone of Bangladesh', Paper submitted in partial fulfillment of the requirements for the Degree of Master in Marine Management at Dalhousie University, Halifax, Nova Scotia, Canada, 1999, p. 31.
[60] Captain M Farid Habib, 'The Non-Conventional Aspects of Maritime Security: A Bangladesh Perspective, (Individual Research Paper at National Defence College, 2006), p. 22.
[61] National News – News from Bangladesh, *op.cit*.

human security is the trafficking of small arms, drugs, humans, contraband goods etc. In Bangladesh, trafficking of small arms considered to be a non-conventional threat to its security is no longer confined to air and land routes as sea routes are at present being conveniently used for the purpose. Arms originating from Afghanistan, passing through Pakistan mostly enter the country through Cox's Bazar, Chittagong port, and some of the off-shore areas. The same entry points are used when arms come from Southeast Asia via Thailand. The seizure of a large consignment of sophisticated arms at Cox's Bazar in 1997 bears this out'. [62] The country's two important sea ports, Chittagong and Chalna are the most convenient transit points from which the illegal arms find their way either to the local market or to any other place. [63] The Sundarbans forest zone in the south is also used as a transit area for illegal arms from different international sources. Simultaneously, there takes place the traffic in contraband items like prohibited drugs, liquors etc. across the marine waters of Bangladesh. Frequent smuggling of goods like timber, rice, salt, luxury items, diesel etc. in and out of the country is a regular phenomenon in the area.[64] In a gruesome manner, slavery also takes place along the Bangladeshi maritime waters. In this respect, various areas in the coastal zone including few chars (off-shore islands) act as the transit points from where women and children are transported out of the country for destinations like India, Pakistan and the Middle East for employment in various inhumane and immoral activities.[65]

Lastly, a crime of serious magnitude in Bangladesh waters is the pollution of marine environment being caused by national, regional and international sources. At the national level, the causes of pollution are the same as discussed in section II like pollutants washed down directly from land and dumping. In addition, a large number of up-stream rivers and waters that have their origin in the

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[62] The report published in the *Daily Star* of 01 November 1997, and cited by Neila Husain in her article titled, 'Problems of Proliferation of Small Arms in Bangladesh', in Dipankar Banarjee (ed.), *South Asia at Gunpoint*, Regional Center for Strategic Studies, Colombo, 2000, p. 8.

[63] *The Daily Star,* 12 December 2002.

[64] *The Bangladesh Observer,* 13 December 2002.

[65] *Dainik Ittefaq*, 25 November 2002.

countries like India, Nepal, Bhutan and China ultimately empty into the Bay of Bengal with a colossal discharge of pollutants from different sources.[66] Many sector activities like industries, fisheries, transport etc. have their deleterious effects on the coastal and marine environment of Bangladesh. The pollution sources also include oil discharge from ships and mechanized vessels, ship breaking and repairing activities, ballast and bilge water discharge, refinery waste products, handling loss and accidental discharge.[67] There is also huge discharge of sewage from ships in the coastal areas of the country. In addition, rotten food grains, cement dust, fertilizer, torn bags, mats and broken dungarees are frequently dumped into the marine water near the port areas of the country. While the mentioned causes of marine pollution are internal in nature, there are as well the external sources of pollution to further aggravate the problem. Both land-based and coastal activities of the littoral countries contribute to marine pollution for reasons like dumping of solid waste, discharge of chemicals used in agriculture, drainage from port areas, deposit of domestic and industrial effluents, coastal construction and tourism activities etc. Also discharges through out-falls and various contaminants from ships, sea based activities, in marine transportation, off-shore mineral exploration and production activities, and accidental oil spills further exacerbate pollution in the oceanic area of Bangladesh.[68] In this respect, it is relevant here to mention that because of the open nature of the ocean and continuous flow of currents, all the countries of the region feel the effects of pollution. As a result, the common interest in combating pollution should at least be guided by their concern for fisheries and other marine habitat.

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[66] Md. Yousuf Mehedi, 'Controlling Pollution in the Coastal and Marine Zone of Bangladesh: Developing a Management Approach', Paper submitted in partial fulfillment of requirement for the Degree of Master of Marine Management at Dalhousie University, Halifax, Nova Scotia, Canada, 2001, p. 23

[67] *Ibid*. p. 24

[68] ESCAP Report, 1998.

On the basis of above discussion, the following table shows the marine areas of Bangladesh, the human security problems therein and their impacts.

Zones	Human Security Issues	Impacts
Coastal Zone	Threat to traditional means of livelihood, abysmal poverty, poor level of services and poorly developed infrastructures, coastal pollution, natural disasters (cyclones, storm surges, coastal erosion), absence of political organizations, ineffective law enforcing agencies.	Loss of agricultural production (due to shrimp cultivation), perennial unemployment, conflict over scarce resources, loss of human lives and property, damage to health, displacement and sufferings of human population, loss of marine bio-diversity, over exploitation of coastal resources, threats to the poor by the outsiders (investors in shrimp cultivation, private agencies), absence of law and order
Offshore Islands and Chars	Natural hazards of oceanic origin, lack of employment opportunities, various crimes, discrimination against women, ineffective law enforcing agencies	Loss of life and property, sea erosion, abysmal poverty, kidnapping, killing, domestic violence, trafficking, rape and sexual abuse, absence of law and order
Maritime Zones	Piracy, illegal fishing and poaching, smuggling, pollution	Loss of life and property at ships, loss of fishermen lives, looting, loss of fish stocks, increase in poverty of the fishermen, threat to physical security, deterioration in law and order situation, degradation of marine eco and bi-diversity system

What could be the possible measures to address the critical human security issues as identified in three distinct maritime zones of Bangladesh? In consonance with the basic principles of contemporary ocean governance, these problems are to be analyzed at three distinct levels, i.e., national, regional and international.

National Level: Against the background of numerous threats to the coastal zone and the opportunities lying therein, no other approach other than integrated coastal zone management (ICZM) would be the most appropriate and rational one to address the current problems of multifarious nature as being faced by the region. Needless to mention, ICZM is now recognized as an important component of contemporary ocean governance that seeks to improve traditional forms of development planning in four distinct ways, i.e., (i) furtherance of a thorough understanding of the natural resources system which are unique to the coastal areas and their sustainability within the context of a wide variety of human activities; (ii) optimization of the multiple use of the coastal resource system through the integration of ecological, social and economic information; (iii) promotion of interdisciplinary approaches and inter-sectoral cooperation and coordination to address complex development issues and formulate integrated strategies for the expansion and diversification of economic activities and (v) assistance to government to improve the efficiency of capital investment and natural and human resources in achieving economic, social and environmental objectives as well as in meeting international obligations concerning the coastal and marine environment.[69]

With the above objectives in mind, the overall goal of ICZM in Bangladesh should be to create conditions for reducing poverty, developing sustainable livelihood and guaranteeing the physical safety of the people. The rationale behind is rooted in the fact that a large number of people, particularly the poor depend directly or indirectly on natural resources such as land and water for their livelihood. This implies sustainable use of the existing resources and their management for present and future generations. As coastal

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[69] See for details, 'Future Challenges in Ocean Management: Towards Integrated Ocean Policy' in *Ocean Management in Global Change, op. cit.*, p. 598.

zones offer physical and biological opportunities for increasing human use, it is the objective of ICZM to find the optimum balance between these uses based on a given set of objectives. In this respect, based on the above goals, the three cardinal objectives, i.e., conservation, protection and development that figure in the ICZM continuum in generally are equally relevant in case of Bangladesh excepting the fact that they have different interpretations in view of the issues that are specific and peculiar to the country. While this may be the scientific approach towards ocean management at the national level, there are other needs like awareness raising among the general people about ocean and its use, augmentation of the navy and other maritime enforcement agencies, strong political will etc.

Regional Level: As indicated, many of the problems in the maritime zone of Bangladesh like piracy, illegal fishing, trafficking in small arms, drugs, human etc. have regional links. As a result, regional cooperation is an essential component of the emerging system of ocean governance. Regional level is the optimum level for the solution of many problems which transcend the limits of national jurisdiction but are not necessarily global in scope. Many aspects of pollution, fisheries management, protection and preservation of the marine environment, marine scientific research, marine safety, enforcement responsibilities, disaster management etc. can be solved through cooperation between and among the littoral states. In this regard, it is relevant to mention that various articles of UNCLOS such as 74, 83, 122, 123, 197, 199, 200, 207, 208, 210,212, 276 and 277 deal with maritime cooperation in several dimensions.

New ways of enhancing technology development and transfer or integrating sustainable development and human security – essential for the effective implementation of all the UNCLOS/UNCED generated Conventions, Agreements and Programs – can most suitably be introduced at the regional level. It should be borne in mind that in South Asia, regional cooperation on oceanic issues has not made any headway till now due to political tension and mistrust in the region. Thus, few regional organizations like Regional Seas Program under the aegis of UNEP (United Nations Environment Program), FAO initiated Bay of Bengal Program (mostly for fisheries), Indian Ocean Initiative are credited with very little success in their respective areas of operation. For better management of its

marine resources and protection of maritime environment, Bangladesh can go for Joint Management, Joint Surveillance, and Joint Disaster Management Program with her littoral neighbors. This could minimize loss to human life and property and restore peace and order in the ocean for the welfare of the country and its people.

International Level: In contemporary ocean governance, global level is of crucial importance as the entire local, national and regional systems tapers to an apex at this level. At the international level, it is UNCLOS that has set the central regime for ocean governance through a system of treaty and few sub-regimes. The most important of these is the International Maritime Organization (IMO) which based on a number of UNCLOS articles is taking the lead at the global level in formulating and coordinating the fight against piracy and armed robbery at sea. It is important to take note of IMO's efforts in coordinating its activities with the United Nations International Drug Control Program (UNDCP) and the Global Program against Trafficking in Human Beings in combating crimes of such nature, both regional and national. Also at the global level, the Food and Agricultural Organization (FAO), Intergovernmental Oceanographic Commission (IOC) of UNESCO, International Hydrographic Organization (HO), and United Nations Environment Program (UNEP) discharge functions related to the oceans and seas for preserving the ocean's environment, its source of food, regulating its climatic conditions etc. Similarly, Chapter 17 of Agenda 21 provides certain mechanisms for sustainable management of the oceans, protection of its environment and guaranteeing oceanic peace and stability. Few mechanisms of Chapter 17 also work as watch-dogs that nothing wrong goes in the oceans like the International Sea-bed Authority, the Commission on the Limits of the Continental Shelf, the International Tribunal for the Law of the Sea with associated arrangements permitting conciliation commissions, arbitral tribunals and finally the meeting of state parties.

Conclusion

The foregoing discussion clearly reveals that the prospect for imposing human security in the oceanic domain no longer remains in the imagination of the security community. It is now a reality despite a host of problems and challenges on the way. In the final analysis, it

should be borne in mind that effective ocean governance requires expertise, epistemic community, institutional arrangements, legal structures, finance etc. However, given the international dimension of ocean governance, and in particular, the growing human consciousness *vis-à-vis* the oceans, a global perspective in ocean resource development is on the offing. Towards this end, the prospect for meeting many human security issues in the oceans is as bright as in the terrestrial domain. Perhaps, the exceptionality of ocean governance is that it provides solutions to few critical oceanic issues in multi-layered level. If efforts at the national level are insufficient, then the gap can be filled up by regional means. In order to bridge the two, there is the possibility of help and assistance from international level as well. Bangladesh, with its limited capacity, should try to implement the international programmes related to the oceans. The country should take advantage of international assistance in promoting its ocean regime through constructive and effective governmental policies. The expected dividends- economic, political, social, human, psychological etc. of all cooperative endeavors under the guidance as provided by ocean governance would be promising for both the current and future generations of Bangladesh.