Environmental Security of Bangladesh: In the Case of Indo-Bangladesh Relations

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Abstract: Environmental security has been occurred a significant aspect in the context of world security studies since 80th and 90th decade in the last century. Today world is facing a serious environmental threat. Environmental threats are usually non-military character. Although environmental issues and forms of environmental concerns have long history though it was given and increasingly political character after the Second World War especially after the signed of Kioto-Protocol the environmental security has been developed as a non-military threat of inter-state relationship the security threat. The field of environmental security increasingly recognize for it's contributions to explaining and offering solutions to the regional conflicts that threaten international stability. In the context of indo-Bangladesh relations a number of irritating issues which are threaten the environmental security of Bangladesh such as water and boundary issues are the main issues

Key words: Indo-Bangladesh, relation, environmental security

INTRODUCTION

The cold war era is well past and today's international environment is characterized by regional conflict and economic competition. In this new milieu, the environmental variables, now broadly defined are creating political instability in regions that are strategically important to the security of the world community^[1]. In 1993, the US secretary of defense defined the four dangers that threaten international security as: regional dangers, nuclear dangers, dangers to democracy and economic dangers. Because the environment is the major variable in all of these dangers, it is now considered to be a relevant issue to those who craft international security policy. The field of environmental security increasingly recognized for its contributions to explaining and offering solutions to regional conflicts that threaten international stability^[2]. Although environmental issues and forms of environmental concern have a very long history, awareness of the environmental consequences of economic development was given and increasingly political character from the 1950s onwards^[3]. The 1970s and early 1980s constituted a period of intense academic and popular interest in processes of environmental degradation-global, regional and local. However, it soon became increasingly clear that reversing such degradation would not be a purely technical and managerial matter. All the technical knowledge in the world does not necessarily lead societies to change environmentally damaging behavior. Hence a critical understanding of socioeconomic, political and cultural processes and structures has become, it is acknowledged, of central importance in approaching environmental problems^[4].

Bangladesh is historically and geographically close

to its big neighbor India. For this reason India factor is an important and prime variable is the making of foreign policy and the security question of Bangladesh. India and Bangladesh always concern in this regard. Unfortunately, the history of Indo-Bangladesh relations since 1971 presents a dismal picture due to the security question. A number of issues have not only clouded their relationships but have also led to the exchange of fire between the two countries border security forces over disputed territory^[5]. Indo-Bangladesh relations have been complicated due to various reasons. There is a number of irritating bilateral issues which can be listed as: legacies of partition; such as water and boundary issues, economic and trade imbalance, persistent communal propaganda and India baiting in Bangladesh, alleged Bangladeshi involvement in the insurgencies in North-Eastern India, border crisis, Chhitmahal crisis, transit and transshipment facilities and illegal migration to India for Bangladesh^[6] Meanwhile, India has conceived a new 'River Networking Program recently, that will be a new non- military threat to the security of Bangladesh and it will destroy the environmental security of Bangladesh. In the present study an attempted has been made to delineate with the environmental security of Bangladesh in the case of Indo-Bangladesh relation. It also maps out the various problems of environmental degradation, their cause and effect which may lead to conflict and tension between the two countries.

Environmental security

A new dimension of security perspective: The term security is widespread and it has multilateral use. Usually beginning to the military threat security can be identified as political, economical, geographical, environmental and

ideological. Security is usually understood in spatial terms at a variety of scales[7]. Security implies safety and predictability for some humane group, organization or state^[8]. But by the security we mean the protection and preservation of the minimum core values of any nation: political independence and territorial integrity^[9]. Any kinds of threat that could be originated the security question due to one state to another. The term Environmental Security is relatively a new term in the current literature of security and the external relations. Not long before the huge despoliation of the planet earth and degradation of the environment causing a multiplicative non-military threats to the very existence of human and non-human living beings could become peremptorily a center piece overthrowing the traditional paradigms of politico-military understanding of security between and among states[10].

Since the end of the Cold War numerous discussions of the themes of the interrelationships of environment and political conflict have appeared in the academic and policy journals, as well as in think-tank publications and the popular press. It was also a theme at the Rio summit in 1992^[11], this discussion of environmental security, as the discourse is now often known, raises very many questions about how both security and environment are understood. These questions go to the heart of governance in the post-Cold War order. The possible answers point to many difficult and disturbing contradictions in contemporary political thinking.

Environmental Security: Conceptual Analysis: The meaning of environmental security differs between organizations and groups falling into issues related to physical damage of the environment by military forces and international environmental problems that can lead to political instability and regional conflict^[12]. There are those who believe, for instance, that the military itself, by its very function, degrades the environment and often perceive the military to be violators of environmental security. Thus, maneuver damage from heavy tanks and other military operations that cause erosion and pollute the soil or the production of weapons with the resultant discharge of effluent into water systems (Rocky Mountain Arsenal for example) typify the type of environmental security threat that is group of critics decry. Others approach environmental security from the perspective of its contribution to international conflict or political instability. This group concerns itself less with the military as an agent of environmental damage and more with the ramifications of widespread environmental degradation^[13]. However, the practitioners environmental security have moved forward with

workable definitions and have designed agenda to accomplish policy objectives. Sherri Wassermann Goodman, deliberated a widely accepted definition of environmental security when she defined DOD's role as, Ensuring responsible environmental performance in defense operations and assisting to deter or mitigate impacts of adverse environmental actions leading to international instability^[14].

Jessica Tuchman Matthews, in her article in Foreign Affairs pointed out that natural resource; demographics and environmental variables have a major impact upon economic permanence and therefore have the potential for creating political instability^[15]. Applying systems theory to studies of state politics helps to explain the dimension of environmental security. The system receives two types of input-demands and support. If the system is functioning in equilibrium, resources will be managed in such a manner that demands will be met and popular support for the system will be sustained[16]. If a system receives feedback on environmental conditions and demands, then it engenders appropriate responses to satisfy those demands and by so doing earns legitimacy from the members of the system. Thus, the physical resources necessary to sustain the political system are a critical system support. Equilibrium in the system is attained when the requisites or functions necessary for the system's survival are performed in an optimum manner. When the environmental problems erode this resource base, equilibrium is prevented and governmental legitimacy is threatened. Many others have found the system approach useful when analysing environmental security[17].

Norman Myers applied system theory to environmental issues in countries that are of strategic importance to the United States. He found a direct correlation between environmental degradation and retarded economic performance and adequate wave of stresses being placed on the state's political systems^[18] Richard Ullman^[19] in his study Redefining Security in International Security considered a threat to national security as any event with the potential to radically affect the quality of life for the population of a state or which might narrow the scope of policy options to the state's leadership.

Environmental security and threats: Indo-Bangladesh relations: Due to various human made factors of the national, regional and global level, the environment is a Space of lining and a Sink for waste and products of human activities has been degraded to such a magnitude in Bangladesh that its destabilizing effects on political-economic and social structure may come out in form of

intra or inter state conflicts^[20]. Hence, if we originate the question that how does environmental security is being threatened and confronted India and Bangladesh? And how does environment degradation lead to violent conflicts? We have already noted in the earlier on that there are a number of visible, irritating bilateral issues which can be condemned for the confliction scene over Indo-Bangladesh relations. Moreover, In the following lines the main causes and problems of environmental security can be identified.

Indo-Bangladesh water dispute and the environmental security of Bangladesh: Of all the natural resources available in the word, water is precious and a wonderful gift of the nature to mankind. Unless it is properly harnessed and managed, it may prove to be dangerous affecting human settlement and causing ecological hazards. In the modern times, there is increasing awareness among nations regarding the utilization of water resources. But problems have arisen in the case of sharing and division of river waters between various parts of the country as well as between the riparian states in the case of international rivers. It has led to water disputes between the riparian countries, there by adding a new dimension to inter-state relationship^[21].

Indo-Bangladesh water dispute and the sharing of the Ganga-waters is the central and the unfortunate part of Indo-Bangladesh relationship, that is causing the confrontation between two countries. For Bangladesh the Ganges is a lifeline. It provides water to nearly 37% of her total land area and about one-third of Bangladesh's population depends on the waters of the Ganges^[22]. But India is extracting the Ganges grand water by Farakka Barrage, which is a direct threat to the environmental security of Bangladesh. If we tress out the genesis of the dispute, then we can find out that the Farakka Barrage is an old issue inherited from Pakistan days. In 1947 while India and Pakistan emerged as two separate political entities, the river regimes of the sub-continent were the same. Hence one of the major contentious issues between the two countries became the sharing of river waters. The dispute over the Ganges began after India started preliminary planning for the Frakka Barrage in 1951^[23].

India started construction of the barrage in 1962 and a 75-foot high and 7000 foot long barrage was completed in 1970 at a cost of US \$ 208 million. The 26.5 mile long feeder canal into the Bhagirathi River, however took another four years to complete. The Barrage and the feeder canal were finally commissioned in 1975 following an interim agreement signed between India and Bangladesh on April 18, 1975^[24]. The purpose of the project is to stop the silting of the part of Calcutta by

erecting a Barrage at Farakka, 11 miles from the Bangladesh border on the river Ganges that flows down through Bangladesh and waters its most prosperous crop growing districts of the south-western part of Bangladesh^[25]. The Farakka Barrage is also designed to improve communication facilities drainage sanitation and water supplies in Calcutta, as well as inland transport throughout West Bengal, with a rail and road project over the Farakka^[26].

Since 1951 Pakistan had continuously objected to the project and on several occasions it was brought before the United Nations. Pakistan argued that under international law it was entirely illegal for India as the upper riparian state to divert the flow of an international river to the detriment of the interests of the lower riparian state. But India went ahead with its plans while continuing negotiations with Pakistan. These negotiations came to a halt prior to the India-Pakistan conflict of 1971, due to the Bangladesh Liberation War. After the emergence of Bangladesh it was expected that in the new friendly atmosphere between India and Bangladesh the issue could be resolved amicably.

But it never came true^[27]. From the Emergence of Bangladesh to present time agreement has been signed in several times (on April 18, 1975, November 1977, December 1996) due to the sharing of waters. But no reasonable solution has been yet possible. Moreover, The Indian Supreme Court has ordered the Indian government to consider linking Indian river within 10 years, advancing the government own dead-line. The river networking concept is said to have been necessitated by the paradoxical and perennial shortage of faced in some parts of India even as floods lash other regions. It is based on the theory of transfer of water from surplus to deficit basins. If India executes the new river network programmed then it will be a new environmental threat to the security of Bangladesh. However, we have no scope to analyse the history of the problem. It had better to analyse how does India affecting the environmental security of Bangladesh?

Extraction of ground water beyond its threshold by India has resulted in a number of ecological, social and economic effects, which is affecting the environmental security of Bangladesh. The effects are viz.

Desertification: Desertification is a natural process which has existed for thousands of years is reversible and has caused the world's deserts to expand and contract in the past. Most modern approaches, however recognize the combined impact of adverse climatic conditions and the stress created by human activities^[28]. The roots of vegetation are always adapted to a Particular level of

ground water. India's illegal unilateral withdrawal of ground water lowering down of the depth of the water level of Bangladesh. Because of the lowering down of the depth of the water level, the vegetation fails to adopt to the new down. The result in the top dying of the natural vegetation there^[29]. As a result the weather of Bangladesh has been changed and turned into desertion weather.

Salinization: As a result of the lowering down of the ground water level, the saline water enters inland in the coastal areas whereby the salinity intrudes into the main land. Besides reduction in ground water level, the reduction of surface water also responsible for salinity and desertification in coastal area of Bangladesh. The diversion of water through various flood control and irrigation projects for the drought prone areas of Bihar and Uttar Pradesh undertaken by the upper riparian state India is more due to salinization within the south western region of Bangladesh^[30].

Degradation of biodiversity: Due to reduced water flow and salinization, the mangrove forest in the coastal area face the problems of regeneration, along with the possible extinction of wild life, aquatic habitats and various species of plants and tress^[31]. Serious degradation has occurred in the Sundarbans which is recognized as a World Heritage Site by the UNESCO due to lack of sweet water.

Deforestation: Deforestation is an another consequences of environmental degradation. According to the data of Washington based 'World Watch Institute' about 20 lakhs hector forest has been reduced from 1980 to 1995^[32]. Forest is a Main natural element to protect the ecological balance. But what is the scene of Bangladesh? The total forested area, according to official figures are 7.7 percent at preset which is well below the universally accepted minimum of 25%^[33]. According to study of USAID and SIDA 50 per cent forested area has been reduced within last 20 years. At the same time serious degradation was occurred in the main mangrove forest sundarbans due to lack of sweet water. The sal forest has degraded to 405 ha with was over 8100 ha in 1970^[34]. Deforestation causes serious ecological effects. Such as:

- Soil erosion and silting up of river beds, lakes, etc.
- Soil erosion and decreasing soil fertility leading to deforestation.
- Decreased evaportan Spiration and decreased Cooling effect of the atmosphere, decreased rain fall.
- Increased intensity of cyclones and storm surges in the coastal areas due to loose of forest cover.
- Intrusion of saline water due to the loosing of soil in the mangrove areas causing further decline in the forest cover.

Flood: In recent years, flood has become not only a regular phenomena, but also increased in intensity and severity. Each year about 26,000 km² or 18% of the total land area of Bangladesh is flooded and during severe floods the affected area can be twice as much and nearly 60% of the net cultivable area^[35]. According to the government account at least 3 million 244 thousand 576 people were affected by this unexpected flood^[36]. Deforestation in the Himalayan region by India and Nepal, melting of Himalayan ice cap and other obstructions created within Bangladesh are the sole reasons for flooding the Farakka as well as other barrages. Join River Commission has identified the two cases for flood in Bangladesh. Such as:

- Releasing of water from the reservoirs in India.
- Upstream water enters Bangladesh crossing over the border.

River erosion: River erosion a quiet disaster takes place round the year. A majority number of people become homeless in Bangladesh due to river erosion. According to a report of River Research Institute in 2000, 1,35,632 families became homeless due to erosion of 12 rivers including the three major rivers, within the last five years^[37]. We have already noted on that deforestation with soil erosion, siltation, flood, the mendaring river courses and water withdrawal by the upper riparian state, India causing siltration and reduction in the river depth and deforestation in the Himalays causing flood by reducing sponge effect of soil, have all contributed to river bank erosion when heavy rainfall enters into the river^[38] The Padma, Meghna, Jamuna, Brahmaputra the four major river of the country and 16 river basins are the main cause of this river erosion (Table 1)

Table 1: Graph of river erosion (1994-2000)

Table 1. Oraph	A TIVE COSION (1777-2	.000)					
Division	Upazillas	1993-1994	1994-1995	1996-1997	1997-1998	1998-1999	1999-2000
Rajshahi	133	32	22	19	22	20	16
Chittagong	136	19	11	07	08	07	06
Barisal	45	12	13	08	14	10	10
Dhaka	70	25	15	12	18	15	12
Sylhet	50	12	10	11	17	15	12
Khulna	50	17	10	13	11	10	12
Total	484	117	81	60	90	77	68

Source: Bangladesh: Disaster Report 2000. pp:43

Table: 2

	Total length	Demarcated length over which pillars had been erected as in 1965	Demarcated length over which pillars had been erected as
Name of the sector	of the Boundary (Miles)	(Miles)	in 1968 (Miles)
Assam-East Pakistan	620	423	426
Tripura-East Pakistan	550	184	228
West Bengal-East Pakistan	1349	1079	1254
Total	2519 (4032 km)	1686 (2696 km)	1908 (3056 km)
Source ^[28]			

Economic Decline: Economic decline is the most important potential social effect of environmental degradation in Bangladesh. Agriculture which is one of the most important sectors of Bangladesh's economy contributes about 50% to its GDP and employs 60.3% of the total labor force^[39]. Flood damages agricultural production are vary severe every year. Farrakka Barage is the main cause colossal damage to the agriculture of Bangladesh's southern districts. Bangladesh is not gating much needed water in the dry season while causing floods in the rainy season through the silting of its rivers consequent upon this diversion. Moreover, as a result of the large scale withdrawal of water by India, the southern crop producing districts would became barren and unproductive within a few years.

Territorial Dispute and Conflict and the Environmental Security of Bangladesh: Territorial Dispute is one of the most important cause which is stimulating conflict and threats and also affecting the environmental security of Bangladesh. Bangladesh inherited this problem from Pakistan period. Some are created by Indian domination. We can identify the territorial dispute in three lines. Viz.

- Border conflict.
- Newly emerged island like Talpatti or Purbasha.
- Chhitmahal (Enclaves) crisis.

Border conflict: When Bangladesh emerged on the scene in 1971, a vary large portion of her boundary with India had already been demarcated (Table 2):

At the time of the emergence of Bangladesh, as is apparent from the above the entire boundary had not been demarcated. After almost three decades of the

Table3: Incidents from 1996-July 18, 2000					
Year	Firing	Death	Injury	Abduction	
1996	130	15	25	-	
1997	39	11	12	-	
1998	56	23	29	-	
1999	43	33	38	88	
Upto 18 July,2000	32	25	21	53	
Total	300	107	125	141	

Source: Bangladesh-Disaster Report 2000, P-164

sighing of Land Boundary Agreement, the process of demarcation has not been completed. For this reason, firing between the two countries border security force has been occurring.

Sources from BDR and Home Ministry states that from 1996 till July 18, 2000, BSF (India) has crossed into Bangladesh territory at least 2000 times. They opened fire more than 300 times injuring more than 200 persons and killing 117 Banglades his including BDR personnel. Unofficial sources quote the number or deaths as 130 (Table 3).

Incidents in 2000: Human rights organization Adhikar Published a report stating that in 2000, 56 (jawans of BDR included) persons died ,94 were abducted and 3 were raped by miscreants and BSF soldiers from across the border.

The reports in Bangladesh media alleged in July 2002 that the BSF had during the past 12 months killed 89 Bangladeshi and injured another 40. The reports quoted BDR statistics to say that the BSF killed 13 Bangladeshi in July, 3 in august, 12 in September, 9 in October, 5 in November, and 7 in December. It also said the BSF shot dead 3 in January, 11 in February, 5 in March, 4 in April 3 in May and 14 in June 2002. A human rights organization in Dhaka Odhikar Also accused to BSF of killing 217

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Table 4:					
Date	Place	Dead	Injured	Abduction	Rape
15 April	Bilonia border, Feni	2	10	-	-
19 April	Bholahat border, Chapai Nawabganj	1	-	-	-
8 May	Tetulbaria border, Meherpur	2	1	-	-
11-18 May	Chhit Mashaldanga, Kurigrm	-	-	20	2
20 May	Chandrapur border, Lalmonirhat	1	-	=	-
3 June	Chhir Karala, Kurigram	1	2	-	-
11 June	Doulatpur border,Kushtia	1	-	-	-
10 July	Jaintapur border, Sylhet	1	-	-	-
11 July	Fulpur (Kholishakotal) border, Kurigram	2	-	-	-
01 August	Dhamurhat border, Naogaon	-	-	1	-

Bangladeshis and injured 310 persons in different incidents in the last 29 month up to 2002. These border conflicts have a significant environmental effect to the Border people of Bangladesh. These conflicts create the uncertainty to the people of border area. The Belonia Border conflict started when Indian farmers, under the protection of the BSF, attented to harvest crops on nearly 50 acres of newly surfaced land on the river Muhuri on the Belonia sector, a border area between eastern Bangladesh and the northwestern Indian state Tripura^[40]. (Table 4).

Newly emerged island like talpatti or purbasha: A dispute which has arisen as a direct consequence of environmental degradation between India and Bangladesh concerns a land formation in the Bay of Bangal. This island dispute is about 24 by 12 kilometers and is situated in the mouth of the river Hariya Bhanga^[41]. The island was discovered in 1971 by India which laid claim to it and notified the British Admirality of its location. In 1979 India named it New Moore Island, while Bangladesh decided to call it South Talpatti Island by the May 1981. The dispute over this island still continues and it had become militarized^[42] .This dispute has serious security implication for both Bangladesh and India. It is a part of large conflict between India and Bangladesh regarding the delimitation of their maritime boundaries. Shifting of river courses due to erosion in the Bangladesh side as well as new land formation on the Indian side of the rivers has become a bone of contention between the two countries. This territorial dispute is a serious threat to the environmental security of Bangladesh.

Chhitmahal (Enclaves) crisis: Chhitmahal crisis is an another conflicting properties to the India and Bangladesh. It has a one kind of environmental threat to the security of Bangladesh. There are 119 exchangeable enclaves with an area of 17,15,772 acres in Bangladesh and 72 Bangladesh enclaves with an area of 7,16,085 acres in India. As stipulated in land boundary agreement, the enclaves were to be exchanged between the two countries without any claim of compensation. In the absence of non-implementation of the agreement either side has been able to exercise administrative control in their respective enclaves ever since 1947. Chhitmahal issue still remains unresolved. The innocent people living in the enclaves suffer as a consequence. Their inhabitants have no rights of citizenship of their country. Their freedom of movement is in hands of the border security forces. Human right is a misnomer to them. They as yet do not have the right to vote and are no different than imprisoned soldiers. Like man-made hindrances,

Chhitmahal people also face inimical behavior from the nature itself. Flood, drought, river erosion, tornado are their routine visitors. During disasters, rehabilitation activities are not held in these places. These are considered as carbuncle in the Indo-Bangladesh relationship. To resolve the miseries of the enclaves peoples a practical and long-term solution is necessary immediately so that the two border security forces do not confront each other.

CONCLUSIONS

Today's world is facing a serious environmental threats. Environmental threats are usually non-military character. But it is more affective than the military threats. Because the economic activities either on the part of human beings or states in the supposed mimetic western models development based on extraction of nonrenewable resources to the point of depletion and degradation of the renewable resources in the of pollutions, greenhouse effect, emission of CFC, CO2 and layer depletion and the inordinate and unsustainable overuse of renewable resources in the form of deforestation, desertification, soil erosion, siltation and salinization have all the underpinnings of a shift of focus and causal linkage between environment and security. In the coming decades both developed and developing countries will have to face a great non-military threat like environmental security. Professor James N. Rosenou noted that the causes that will warm the world politics in the next coming days environmental degradation, effect of modern technology is one of them.

Military threats are relatively easy to understand and very easy to mobilize populations against it. But environmental threats are usually less direct than traditional military treats. But the questions raised by discussions of environmental security that how can Bangladesh ensure this security? The answer of this question is very complex. Environmental security are now broadly defined and recognized for their importance to national security. In the perspective of European states, to resolve the environmental threats, NATO approach is more discussive. Already a number of writers have advocated converting the role of NATO to deal with a wide range of security threats including environmental threats.

The resolution of the crisis depends much on cooperation and negotiation between the two states. In the future scenario, this trend continuous, there wild be more disastrous environmental degradation, economic decline and environmental refugees involving people, groups and states in various types of conflict, threats, tension and insurgency. So, more cooperation among the SAARC countries is economic, environmental, intellectual and political field would be a best method of resolution of threats and conflicts. In this regard, India will have to play the decisive role to resolve the outstanding issues between the two countries. It is a fact that India has dominant position in south Asia. The Indo-centric nature of the region has created ambiguities in power relations between India and the smaller states. Until India aggress to a settlement there may not be any Permanent solution to their problems.

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