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THE TIPAIMUKH DAM PROJECT AND ENVIRONMENTAL SECURITY VULNERABILITY OF BANGLADESH: AN OVERVIEW ANALYSIS ON NON-TRADITIONAL SECURITY PERSPECTIVE

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Abstract: The historical truth is that Bangladesh and India both are geo-politically and geo-strategically crucial facts in South Asian politics. Bangladesh shares its border only with India and Myanmar while it is surrounded by India within its three sides. Bangladesh is historically a riverine country and it has a smart and well known riverine history from the ancient period to till present. Most of the rivers of Bangladesh have been flowed from India. Bangladesh has become the eye witness of riverine politics of India since India is a mid-riparian country and Bangladesh is a low riparian country. For protecting the national interest, India had constructed the Farakka Barrage in the river Ganga at West Bengal and also wants to construct the 'Tipaimukh Dam' in the river Barak at Manipur, India. Because of this dam, Bangladesh will have to face massive environmental security vulnerabilities¹. Actually Tipaimukh dam is a deadly trap for Bangladesh and it is a colossal obstacle for environmental sustainability of Bangladesh.

Keywords: *Tipaimukh Dam, Non-Traditional Security, Hydro-Politics, Environmental Security Vulnerabilities, Bangladesh, India.*

Introduction

Life and river are seen as one. Life on earth depends on water that maintains the links of the planet's ecosystems. Rivers are one of the main sources of water. Sometimes these rivers become river without water because of the selfish activities of human beings (Swain, 1996: 10). Though Bangladesh is a small and middle income country, India has no way to deny the geo-political

and geo-strategic potentialities of Bangladesh. However the important fact is that lower-riparian Bangladesh and upper-riparian India share 54 international rivers (Riaz, 2011: 106; Ahmed, 2012: 51; Haque, 2008; Afroz and Rahman, 2013: 100).

India has taken water diversion projects in more than 50 percent of these rivers. The largest one is upon the river Ganga commonly known as Farakka Barrage² which puts Bangladesh's ecosystem and environment at colossal vulnerabilities. Furthermore, Bangladesh river water is pumped stealthily from border-rivers by entities on the Indian side (Adel, 2012). Nevertheless, the debate with Farakka Barrage and the Gajoldoba Barrage³ on the river Teesta is conceived to be overshadowed by India's recent decision to build another dam, now at the Tipaimukh on the river Barak at Manipur. India's unilateral plan has prompted a wide range of debate and discussion on its merit in both India and Bangladesh (Mirza, 2009).

The experts are concerned and have voiced apprehensions that the proposed dam would cause colossal damage to Bangladesh's society, politics, economy and environment practically contributing to drying up two important rivers, the Surma (length: 350 km) and the Kushiara (length: 110 km) which provide water for most of the northeastern region of Bangladesh (Rahman, 2009; Mirza, 2009; Khan, 2009; Mastoor, 2011; Islam, 2013).

The Tipaimukh dam is an obstacle to sustainable environmental security of Bangladesh. However, the article tries to find out the environmental security vulnerabilities of Bangladesh because of the Tipaimukh dam project of India. It also tries to examine the different environmental security vulnerabilities in light of non-traditional security perspective to make sure sustainable water resource development and sustainable environmental security management of Bangladesh.

The Tipaimukh Dam Project of India: At a Glance

The Tipaimukh Hydroelectric Dam⁴ on the river Barak is just only 1 km north of Zakiganj at Sylhet in Bangladesh. This dam is placed from the flowing rivers of Barak and Tuivai and sited in the south-western corner at Manipur state of India. Its reservoir is about 15,900 million cubic meters with a maximum depth of 1725.5 meters (Islam 2013: 156). Most of the people

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¹ Bangladesh would have to face different environmental security vulnerabilities like 'scarcity of fresh water, ecological imbalance, morphological mismanagement, hydro-security vulnerabilities, floodplain-wetland ecosystem insecurity, drought, deforestation, low navigation, downturn of water level, species endangerment and extinction and increased migration or displacement' because of the Tipaimukh dam project of India.

² As a part of irrigation project, India in 1975 built Farraka Barrage on Ganga River. In 1985, India built Gajoldoba Barrage on Teesta River at Gajoldoba, Jalpaiguri, West Bengal that adversely affects the socio-political, environmental and economic security of Bangladesh. In response, Bangladesh in late 1990s, built Teesta Barrage on Teesta River at Duani, Hatibandha of Lalmonirhat district.

⁴ The Tipaimukh dam is located at South-Western Manipur bordering with Mizoram of India.

living here are Hmar tribe. The proposed Tipaimukh dam is to be located 500 meters downstream from the confluence of Barak and Tuivai rivers. It is a gigantic earth dam and it is considered that 1500 MW electricity will be produced from this dam (Palash, 2003: 89-90).

The proposal of Tipaimukh dam was unveiled by India in the first Joint River Commission meeting in 1972 when the primary purpose was envisaged as flood mitigation (Bisht, 2012). Later in 1978, in addition of hydro-power generation to the original flood control purpose the Tipaimukh dam entered the lexicon of the Joint River Commission and decision was taken to conduct joint study on engineering feasibility of the dam including the benefits. But the decisions were not translated into action (Titumir et al., 2012: 10).

The actual fact is that the Barak river flow has joined with the Surma and Kushiara river system which is considered to be the lifeline of Sylhet region in Bangladesh. The original consideration was to apprehend flood-water in the Cachar plains of the Indian state of Assam (D'Costa 2012: 153; Ahmed 2012: 52). The terrible matter is that it will affect the virgin haor ecosystem of Bangladesh (Adel 2012). Considering the perceived risks, Bangladesh has been asking India to share information on the project design. Bangladesh expressed deep concern on a number of issues related to the adverse downstream impact of the dam⁵ (Bisht, 2012).

Environmental Security Vulnerability in Light of Non-Traditional Security Perspective: At a Glance

Security is pursuit of freedom from threats. Security is about survival, it is when an issue presented as posing an essential threat to a designated referent object, justifies the use of extraordinary measures to handle them (Buzan, 1991: 18). Security study is the studies of the threat, use and control of military force (Buzan et al., 1998: 3). The concept of security could be used in this purpose a threat to security includes any action or sequence of events⁶ (Ullman, 1983; Brunnee&Toope, 1997).

During the cold war period security was defined in a narrow fashion. It was in essence about states and about the militarized nature of insecurity from one state to another state (Croft, 2008:501). Actually the traditional security deals with the military nature of security. The concept of security has changed for many reasons and its numerous interpretations have been created by

different historical, geographical and political situated actors (Fierke, 2007:42). Contemporary complexity is defined and legitimized by an evolutionary metaphor⁷. At the end of the Cold War, security went from simplicity to complexity. The complexity was located abroad and included independence movement in Bangladesh, wars in Yugoslavia, genocide in Rwanda, confrontations in the Persian-gulf and the nuclear weapons development in South Asia (Shailo, 2013: 83). In the post-cold war period with the 'Traditional Security' another branch of security was taken into international concern named 'Non-Traditional Security' that has become the burning issue in the 21st century. Scholars have sought to come to terms with the terrorist attack on New York city and Washington DC in September 2001 (Croft, 2008:501). The history of 21st century has become the history of non-traditional security threats such as religious extremism, resource politics, smuggling and drug trafficking, politics of identity, poverty, border killings, depletion of resources, environmental degradation, ethnic conflict, sub-nationalism and poor governance.

The important matter is that environmental security is a branch of non-traditional security. Most of the countries are very much concerned about environmental sustainability. Contemporary human security analysis does not oppose the trends of redefining security of mapping the environmental roots of violent conflict (Najam, 2003). Norman Myers also clinched extended definition of human security and supported that human security and environmental security are interrelated. It applies most at the level of the individual citizen. It tries to foster human well-beings not only protection from harm, injury and insecurity but also access to water, food, shelter, health, employment, and other basic requisites⁸ (Myers, 1993: 101-103). Many factors shape environmental security including the dynamics in the natural environment, population change and scope of access to the environmental resources and so on. Interaction between and among the determinants of environmental security sets the stage for addressing the environmental security challenges. Generally, environmental insecurity has two dimensions in spatial and causal senses, i.e. national and transnational (Farooque, 2004). The environmental security deals with sustainable water management, ecological security, morphological sustainability, hydro-security, climate change mitigation, floodplain-wetland ecosystem management, drought mitigation, afforestation, hygiene navigation, water

⁵ It was taken into consideration in the Joint River Commission Meeting held in September 2005 at Dhaka, Bangladesh.

⁶ That (i) threatens drastically over a relatively brief span of time to degrade the quality of life for the inhabitants of a state; (ii) threatens significantly to narrow the policy choices available to the government of a state or to private, non-governmental entities like persons, groups, corporations within the state (Ullman, 1983; Brunnee&Toope, 1997).

⁷ The present must be more complex than the past. Yet the flood of recent re-examinations of the cold war period by historians does not support such a recasting of it as a period of simplicity.

⁸ It is the collectivity of these citizen needs including overall safety and quality of life that should figure prominently in the nation's view of security.

levelmanagement, protection of species and decreased migration and other so on.

The Tipaimukh Dam Project and Environmental Security Vulnerability of Bangladesh: An Overview Analysis

Needless to say, historically shared rivers between India and Bangladesh are very important which play a vital role in many ways in people's lives such as in agriculture and fisheries, vegetation and greenery, urban and rural water supplies, navigation and communication. However, India has set up constructions for water diversion in more than 50 percent of these rivers. The debates have gradually transcended the realm of government officials and academics and also transformed into various modes of protests and resistance in India, Bangladesh and beyond (Islam and Islam, 2016: 01-02). The important matter is that Indo-Bangladesh relations have not been strained more by any issue other than that of water⁹ over the last few decades. Experienced by global climate change, India has planned to divert waters from the northeast of the country to its drought-prone west and south notably some fifty-four common rivers which flow from upstream India to downstream Bangladesh (Kazmi, 2009). Over the last several years, there have been intense debates among the academic circles, civil society, environmental groups, human rights organizations, media and overall intellectual activism¹⁰ in Bangladesh over the implications of Tipaimukh dam. This debate continued to get new impetus since the protest movement expanded to the transnational space (Rahman, 2009; Islam, 2013).

The environmentalists have apprehended that the Tipaimukh dam would cause severe environmental and social disasters to both Bangladesh and India. The effects of the dam are not only confined to Bangladesh as it also of serious consequences¹¹ to the people of the Indian states of Manipur and Nagaland as the Barak-Surma-Kushiara is an international river (Islam, 2013; Arora and Kipgen, 2012). They argue that the proposed dam site is located in Zone V of Seismic Zoning Map of India and during 1953 to 1992 this region had experienced twenty-one earthquakes of more than 6.5° on the Richter scale (Abbasi, 2009). Because of the Tipaimukh dam, Bangladesh

⁹ India practices unilateral control and manages most of the Indo-Bangladesh international rivers.

¹⁰ Intellectual activism is mainly a concept developed by sociologist Patricia Hill Collins (2013); see her book 'On Intellectual Activism' (Temple University Press, Philadelphia). Intellectual activism requires sharp thinking and research, honest and dispassionate analysis and also common sense grounded in experience and observation on a subject (Islam, 2016: 03).

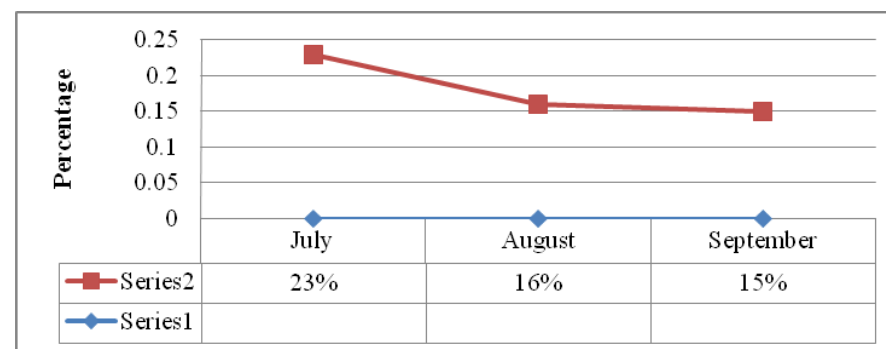
¹¹ Hydrology, flooding pattern and river floodplain-wetland ecosystem, morphology, water quality, dam collapse and other general impacts would be noticed in both India and Bangladesh (Khan et al., 2005).

would have to face 'scarcity of fresh water, ecological imbalance, morphological mismanagement, hydro-security vulnerabilities, floodplain-wetland ecosystem insecurity, drought, deforestation, low navigation, downturn of water level, species endangerment and extinction and increased migration or displacement'.

Scarcity of Fresh Water

The environmentalists apprehend that if the Tipaimukh dam is completed, Bangladesh will be deprived of its share of the international river.¹² The fear is that the dam would ultimately dry up the Meghna River in the greater Sylhet region and nearby districts and in the winter season Surma and Kushiara Rivers which provide water sufficiency in the north-eastern regions of Bangladesh. If India builds this dam the water flow of Meghna River will be decreased. Interference in the normal flow of water in the Barak would have an adverse effect on the Surma River in Bangladesh which in turn feeds the mighty Meghna River that flows through Bangladesh¹³. Roughly 7 to 8 percent of the total water of Bangladesh is obtained from the Barak River. Millions of people are dependent on this river (Biswas, 1999: 435). It is unanimous that any dam constructed across the river alters the usual water flow pattern¹⁴ of the river and it would happen for Tipaimukh dam Project also.

Chart 1: Reduced Water Flow of Barak River



Source: Khan, A. S., Masud. M. S. & Palash, W. (2005). *Hydrological Impact*

¹² The Barak River supplies waters to hundreds of water bodies in the Sylhet region of Bangladesh.

¹³ This dam would hamper the irrigation and cultivation and also increase poverty and fresh water insufficiency.

¹⁴ Generally in July, August and September flow would be reduced on a large scale. In respect of volume it would be on the average 23%, 16% and 15%, respectively.

Study of Tipaimukh Dam of India on Bangladesh, Institute of Water Modelling (IWM): Dhaka, p. 29.

The reason behind this is overtly related to the dam operation strategy where it has been opted that reservoir level in each monsoon month should be maintained at rule curve level. If the unregulated inflows in the reservoir exceed the minimum release for firm energy and other downstream water demands then the surplus inflows in the reservoir should be preserved (Khan et al., 2005: 29). Bangladesh is already battling water shortages due to climate change. The Tipaimukh dam would add to the environmental diluvium already predicted by environmentalists.

Ecological Imbalance

Unplanned man-made infrastructures are actually disastrous for ecological balance of a region. When an unplanned dam is made, the ecological balance is demolished¹⁵. The unplanned Tipaimukh dam in India could potentially cause destruction of a vast forestland and in Bangladesh it could potentially damage a vast natural wetland, known as Haor¹⁶. If these haors are dried because of this dam then the ecological balance will be fragile. The dam would severely affect agriculture and fisheries, vegetation and greenery including local flora and fauna and generate a massive destruction of livestock in Bangladesh (Arora and Kipgen, 2012). The dam site is a hazardous zone that entails the highest risk seismically. Inhabitants of Manipur too have felt that this dam could turn out to be a source of sustained dangers such as the potential loss of local bio-diversity including flora and fauna, endangered species including pythons, gibbons, herbal, medicinal plants and the threatening of tribal land ownership¹⁷ (Jahangir, 2009; Islam, 2013).

Morphological Mismanagement

The excessive erosion of downstream of Tipaimukh dam will keep impact on morphology. This excessive erosion in the first 100 or 150 km. of Barak River downstream of the dam would increase the overall deposition in the lower Barak River thereby in the Surma- Kushiya River system¹⁸. The probable deposition during late monsoon and post-monsoon season will raise the overall bed level of the rivers and for an extreme case it would block the mouth of certain tributaries originating from the Kushiya River. There would

¹⁵ In this particular case, there is a couple of major ecological balance shifting.

¹⁶ A haor is a wetland ecosystem in the north eastern region of Bangladesh which physically is a bowl or saucer shaped shallow depression, also known as backswamp.

¹⁷ It would cause inundation of as many as ninety villages within a 311-square-kilometre radius.

¹⁸ Low flow during late monsoon and post-monsoon will accelerate this deposition in the region.

be possibility of increasing erosion in the upper Kushiya River and this will cause more deposition in the downstream of Kushiya River and in Kalni River (Khan et al., 2005: 64). If Tipaimukh dam is built, the Surma and Kushiya in Bangladesh will be choked in a year. The Indian government is not considering the preservation of human livelihoods and ecology. It is instead considering the dam issue in light of cement-mafia, iron-mafia and turbine manufacturers (The Daily Star, 2006). Even though the Indian government is saying once the dam is constructed, electricity will be generated and Bangladesh will benefit by importing the electricity. It does not make sense to make a certain part of Bangladesh a desert area, solely for the purpose of importing electricity (The Dainik Destiny, 2009; Islam, 2013).

Hydro-Security Vulnerability

Hydrology has mainly two components¹⁹. Tipaimukh dam concerns about ground water hydrology. The IWM study estimates that because of the Tipaimukh dam the Surma-Kushiya-Meghna River's flow would be reduced just like that in July, August and September flow would be reduced as much as 27%, 16% and 14%, respectively, 4%, 2% and 2% higher than the volume reduction found for average monsoon year (Khan et al., 2005: 33). Water level would fall by more than 1 meter on average during the month July at Amalshid station on the Kushiya River while this would be around 0.25 meter, 0.15 meter and 0.1 meter at Fenchuganj, Sherpur and Markuli station. On the other hand, April and May water volume would increase by 28% and 10% for Kanairghat and 24% and 10% for Sylhet station on the Surma River. Average water level rise for Amalshid and Markuli would be around 0.74 meter and 0.28 meter for the month April. For the month May these would be around 0.73 meter and 0.22 meter, respectively (Khan et al., 2005: 35). The resourceful forested hills, mostly in Tamenglong and Churachandpur districts along with the richest areas in terms of flora, fauna, and aquatic systems will be submerged. Hydrology of the region will be affected (Islam and Islam, 2016: 5)

Detrimental Effects on Floodplain-Wetland Ecosystem

The Barak provides Bangladesh with 7 to 8 percent of its water, feeding hundreds of water bodies in the north-eastern region upon which millions of agricultural and fishing people are directly dependent. The collapse of the Dam would impound billions of cubic meters of water and cause devastating floods because of its gargantuan structure.²⁰ A study has shown the two flood

¹⁹ One is surface water hydrology and another is ground water hydrology.

²⁰ The dam collapse in different parts of the world for the last century has killed thousands of people, and understandably these people are essentially the inhabitants of the downstream region (Khan et al., 2005)

inundation maps of which one represents the pre-dam scenario and another represents the post-dam scenario²¹.

Table 01: Pre and Post-Dam Inundation Pattern of Sylhet District

Type	Depth	Pre-Dam	Post-Dam	Area Increased	Area Decreased	Percentage
Completely Dry Area	<= 0 m	218655	248868	30213		14
Inundated Area						
F0	0 - 0.3 m	6597	4113		2484	38
F1	0.3 - 0.9 m	40554	28098		12456	31
F2	0.9 - 1.8 m	39015	30069		8946	23
F3	1.8 - 3.6 m	27162	21852		5310	20
F4	> 3.6 m	3843	2826		1017	26
Total Inundated Area						
F0 – F4	> 0 m	117171	86958		30213	26

Source: Khan, A. S., Masud, M. S. and Palash, W. (2005). *Hydrological Impact Study of Tipaimukh Dam of India on Bangladesh*, Institute of Water Modelling (IWM): Dhaka, p. 44.

In fact, all the floodplain and the haor of these two districts influenced by the seasonal rise and fall of the Surma-Kushiyara River flow would be essentially affected by the low flow condition during the normal monsoon season in post-dam condition. On the other hand, the loss of wetland may not be realized by observing the total loss of inundation area only rather the shift from inundation area of greater depth to a shallow depth area is one of the key indicators to investigate this loss²². According to AinunNishat, the country director of the International Union for Conservation of Nature (IUCN), the dam would increase the risk of floods and the water bodies in Sylhet would be overflowing even during the winter season (Islam and Islam, 2016: 6).

Drought

This dam would lead to drought, one of the environmental impediments. It would cause the Surma and Kushiara to run dry during November to May

which would eventually hamper agriculture, irrigation and navigation and lead to a shortage of supply of drinking water and etc. The shortage of water in these few months would decrease ground water which over the years would lower the ground water level which in turn would affect all dug outs and shallow tube wells²³. The Tipaimukh dam will divert water to Bhagirarti–Hugli channel in India. But the flow of Barak cannot be diverted to any other areas than to the Meghna River in Bangladesh since it is an international river (Khan et al., 2005).

Experts fear that the Tipaimukh dam will choke up the Surma and Kushiara rivers during dry season and have a similar effect²⁴ on a vast area of Bangladesh as that of the Farakka Barrage. The dam would cause the Surma and Kushiara to run dry periodically that would eventually result in agricultural, irrigational, navigational, and potable water crises. More importantly, the average sea-water level would rise. Surface irrigation would be in danger and cultivation and livelihoods in the area would be adversely affected. If India made a barrage at Fulertal and procure water from the Barak, the Surma and the Kushiara would become virtually dry (Mahmood, 2009; Jahangir, 2009).

Low Navigation

Bangladesh is a riverine country. Though it is a riverine country its navigation has to face large problems. However, the situation becomes more complicated when the river courses change are attributed by human intervention. If one country builds flow diversion structures to protect a border town from erosion which in turn causes erosion of the opposite bank, the community living on the eroded side may interpret this as a deliberate act of territorial expansion of river bank erosion could be a by-product of flood or a natural phenomenon occurred when a river changes its course. Every year Bangladesh experiences riverbank erosion. India has built dam which causes bank erosion in Bangladesh side (Faisal, 2002). Here we can take the apprehensions of Farraka barrage of Ganga River, India. Because of the Farakka barrage, the navigation system of Padma River, Bangladesh has to suffer much. The experience apprehends that if the Tipaimukh dam is built in the Barak River, the navigation of Meghna River, Bangladesh will be just like the reiteration of history.

Deforestation

Water is very much important for afforestation. Without sufficient water, no living organism can survive in planets. Water scarcity is emerged because of

²¹ Comparison of those two flood maps of Sylhet and larger part of Moulvibazar district shows distinguished reduction in inundation area.

²² Agriculture, fisheries and wildlife will be threatened. There will be more floods in rainy season and less water in dry season (Crow, 1995: 10).

²³ Agriculture dependent on both surface as well as ground water would also be affected.

²⁴ Evidently, obstruction to the natural flow of Surma and Kushiara will seriously hamper hydrology and agriculture in at least seven adjoining districts that produce bulk of the country's rice crop.

different factors. Because of Tipaimukh dam the water shortage can be emerged in Bangladesh that impinges the forestation at Sylhet region in Bangladesh. In previous days we have experienced that because of the Farakka dam the forestation policy of Bangladesh was largely impinged. The increase in salinity and the encroachment of saline water have affected soil and plant nutrients in large scale dying of sundari trees (Islam, 1978). The indigenous Hmar and Zelinangrong Naga people's jhum lands, wet rice fields and forest and riverine habitat will be submerged and destroy their way of life (Islam and Islam, 2016: 5). The dam will submerge areas of about 311 sq. km covering 90 villages with 1310 families, including 27,242 hectares of forest and cultivable land and posing massive threat to biodiversity flora and fauna of the region (Cited in Arora and Kipgen, 2012: 121).

Downturn of Water Level

The availability of usable groundwater in the southwest region is 1,958 million cubic meters (mcm), which is only 4 percent of the national usable groundwater resources of 45,738 mcm (MPO, 1986; Mirza, 1996). Excessive ground water withdrawal through hand tubewells and deep tubewells is the primary cause of ground water table declination but surface and sub-surface flow reduction due to obstructions created by dams and barrages²⁵ slow down the ground water recharge process (Crow et al., 1995). The people of Bangladesh will have to suffer much because of the shortage of fresh water²⁶, irrigation and the agricultural production will have to suffer much in the nearest future. During this time, the ground water level would markedly fall which in turn would affect all dugouts and shallow tube-wells. Agriculture, which is dependent on both surface as well as groundwater, would embrace catastrophic effects: rice production, the main component of Bangladesh agriculture, would drastically fall, leading to an increase in poverty (Islam 2013).

Species Endangerment and Extinction

Extinction is the termination of a kind of organism or a group of kinds usually a species. The moment of extinction is generally considered to be the death of the last individual of the species. More than 99 percent of all species amounting to over five billion species that ever lived on earth are considered to have died out. The extinction is happened because of the ecological insecurity, climate change, changing condition and etc. The matter of concern is that if India builds Tipaimukh dam, different species will be

extinct in both India and Bangladesh²⁷. The Surma-Kusiara river of Bangladesh supports a large variety of fresh water fish and prawns. But due to reduced flow and stagnation of the water in the dry-seasons, aquatic organisms have been impeded and the increased water temperatures have resulted in shortage of oxygen creating unfavourable condition for the riverine fishery. It has also led changes in fish species, fish feed chains and fish feed habits (Rasheed, 1993).

Migration or Displacement

Involuntary or forced migration has received attention to the policy makers now-a-days with the changing climate. The more particularly high percentage of the population migration²⁸ from the Khulna-Sathkhira and Rajshahi regions due to flood, cyclones, salinity intrusion, river bank erosion led one to believe that hydro-meteorological events are more responsible for forced migration than economic or social factors. Swain (1996) made a link between the diversion of water at Farakka by India and forced migration of Bangladeshi citizens to other parts of the region, including India. The bitter experience of Farakka undoubtedly apprehends that because of the Tipaimukh dam the people of Sylhet, Moulvibazar, Sunamgong and Kishorgong will have to migrate from their own place to another. As a result, the internal migration will be increased in Bangladesh. Official statistics shows, 1461 families will be directly displaced (Islam and Islam, 2016: 5). Apart from northeast of India, the dam will be a death-trap for Bangladesh as about one-third of its population will be seriously affected. Sixteen districts of the Sylhet region will be directly and adversely affected (Arora and Kipgen 2012: 118–122).

Conclusion

Most of the rivers of Bangladesh are flowed from India since India is a mid-riparian country and Bangladesh is a low riparian country. India has constructed dams in most of the rivers and also wants to construct a new dam, named 'Tipaimukh Dam' at Manipur state, India to maximize its national interests. India's decisions to build diversion constructions in international rivers and the arbitrary control of transnational rivers' water leading Bangladesh social, political, economic and environmental insecurity have triggered unending debates and resistances over the years. The funny matter is that India displays liberalism but practices structural realism to its neighbors.

²⁵ The decline of groundwater become more evident at Chapai Nowabgonj, Rajshahi, Pabna, Kusthia, Rajbari, Jessore and also salinity is found at different parts of Khulna (Mirza, 2005; Swain, 1996).

²⁶ Because of the Tipaimukh dam the level of water of the Surma-Kusiara will be downturned. As a result, the underground water of Bangladesh will be downturned massively.

²⁷ The species will have to face and fight with the ecological insecurity, climate change and changing conditions in both India and Bangladesh and in the last these species will be extinct ultimately.

²⁸ While analyzing migration data of Rajshahi and Khulna regions, Ahmed (2009) indicates that there might have a strong correlation between migration and Farakka led water scarcity (Ahmed, 2009).

The projection of 'Tipaimukh Dam' project is just like the reflection of structural realist behaviour of India. If India installs the Tipaimukh dam project, Bangladesh would have to face gargantuan environmental vulnerabilities including 'scarcity of fresh water, ecological imbalance, morphological mismanagement, hydro-security vulnerabilities, floodplain-wetland ecosystem insecurity, drought, deforestation, low navigation, downturn of water level, species endangerment and extinction and also increased migration or displacement'.

The Tipaimukh Dam is a deadly trap for Bangladesh. The debates have gradually transcended the realm of government officials and academics and transformed into various modes of protests and resistance in India, Bangladesh, and beyond. The important matter is that Bangladesh should make sure international support and pragmatic policy responses like sustainable bargaining, debate-counter debates, seminars and conferences since Tipaimukh dam is a threat to environmental sustainability of Bangladesh. The ruling party, the main opposition party and the other oppositions should come into only one platform on the Tipaimukh dam issue to protect environmental sustainability of Bangladesh.

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