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The Submergence of Indian Sundarban Archipelagos and Human Security: A Concern of non-Traditional Security Threat

Kamal Krishna Halder

Research Scholar, Department of International Relations, Jadavpur University, Kolkata, West Bengal, India

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Abstract:

Against the backdrop of growing interest in environmental degradation or climate change in and around the world, the local level impact factors are very important and interesting. This article basically explores two critical issues; they are as such; first the submergence of Indian Sundarban Islands due to climate change and secondly human security which is obviously a substantive question. The article shows that whether humans are safe or not in this region. In Indian Sundarban, non-traditional security threats are the cause of concern to all of us, because this region is one of the low lying areas amongst other low lying areas in India. So, in terms of security, there is prevailing risk and vulnerability in this region. This region is approaching various non traditional security threats like energy security, food security, health security, environmental migration, water security, terrorism, human security, social and economic security, etc. Here the present study is more concern about environmental security and human security. Examining the recent ups and downs of the harsh weather condition intersects the natural disaster with manmade disaster.

Keywords: Sundarban, Environment, Human Security, Non-Traditional Security Threat, Disaster.

Introduction: The Indian Sundarban is one of the great biodiversity areas where today indigenous flora and fauna are under threat of climate change. It has huge implication in our country because it is a place where urban-rural Continuum still prevailing. It is also a climate sensitive area. This area is not just eco-sensitive but also nationally and internationally important for many reasons. From this region, there are many activities are going on by various actors, like we have international businesses (import and export) with Bangladesh, internal security vis-a-vis external security, illegal intrusion, waterways problem, deep sea venture for fishing, contest over ocean areas and control over newly

islands in this region, etc. Sundarban is recognised by UNESCO as World Heritage site since 1987 in Indian side and from 1997 in Bangladesh side. The Sundarban mangrove ecosystem in the deltaic complex of the rivers Ganga, Brahmaputra and Meghna is shared between both the countries of Bangladesh and India and become the world's largest coastal wetland. The Bangladesh government possessed around 62 percentages of landmass where India's possession merely about 38 percentage. The total area of Indian Sundarban is about 9630 Square Km; out of which the reserved forest occupies nearly 4260 Square Km. At present there are 102 islands of the Indian Sundarban region, of them 54 are inhabited with a population of about 4.2 million according to 2011 census and rest of the 48 islands are reserved forest with mangrove vegetation. On the Indian side it extends over two districts as such: South 24 Parganas and North 24 Parganas. There are 13 blocks in South 24 Parganas and 6 blocks in North 24 Parganas. As we can see, there were many disasters occurred in between 2000 to 2022 and consequently loss of lives and livelihoods of these regions peoples. At the same time, floods are common in this region. Each year we can see there are/were loss of land mass due to flood inundation. Some of the islands like Lohachara and Suparibhanga already eroded and submerged before the year of 2000. Day by day water level is rising. On the other hand, day by day temperature is also rising. Side by side we can also observe that the salinity has been increasing. The Surface water temperature also increased around 1.5 degree centigrade. Therefore it is a cause of concern to all of us with this sort of alarming situation like flood inundation, temperature rising, including surface water's temperature, soil erosion, sea level rising, forest density also decreasing drastically and many intense vulnerable areas are also under threat of submergence. These are the few issues shall be discussed in the next three points.

Security and Environment: Today security is one of the most combustible issues in India and around the world. Every now and then it matters in our day to day life. Today security is a question to all of us. We all are natural in this world but there is also an unnatural thing that causing insecurity in this world which is obviously man made mostly. Before analysing the environmental security we will have to know the basic tenets on security. Generally security means safety of life, property, liberty etc. Earlier the concept of security was limited to territorial integrity, sovereignty, freedom of a nation but with the invention of modern technology, the definition of security overwhelmingly changed to soft security or non traditional security threat and hard security which is traditional security threat. Although security broadly divides into three categories as such: national security, collective security and human security. But security threats are of two types as such traditional security and non traditional security. The traditional security threat is direct threat like military action against a country to another country or countries, which is quite dependent on human intention whereas non traditional security threat has an indirect adverse impact that created mostly by human activities. The present study is more concerned about non traditional security threat. The non traditional security threats are sometimes transnational in nature and often identified in political and socio economic terms. Consequently today we can see resource scarcity, terrorism, disasters (like Sidr in November 2007, Aila in May

2009, Fani in May 2019, Bulbul in November 2019, Amphan in May 2020, Yaas in May 2021, Sitrang in October 2022 and of late Dana in October 2024 etc.), marine pollution, irregular migration, disease outbreak (COVID-19, different Flu), poverty, climate change, etc. The climate change is one of the most terrific threats in our times and continues to be so in the next one hundred thousand years. It is occurring mostly due to the anthropogenic activities like burning of fossil fuels like coal, oil and gas. It refers to long term shifts in temperatures and weather patterns. Burning fossil fuels generates greenhouse gases like CO₂ or carbon dioxide and methane that are causing climate change. That is why today we can see temperature is rising, Polar Region's iceberg is melting, water level is rising, many low lying regions are under threat of submergence like Lakshadweep, Andaman and Nicobar islands, Sundarban archipelagos etc.

The Threat of Human Security and Archipelagos: Today human security is one of the most burning issues in and around the world. We are already in the midst of great silent war, with human to other living creatures as well as with our environment too. So environmental degradation has become nowadays a lethal 'mix of conflict'. Climate change often intensifies the existential threats of entire animate world because it is unpredictable and uncertain. No one knows when to and how to disaster occur. It became a threat of multiplier and could jeopardise even socio-economic system and even existing natural phenomenon as well. The United Nations Organisation has given five ways of ideas, by which climate change is impacting human security. They are as such:

- 1) Climate change intensifies competition over land and water,
- 2) Climate change effects food production and drives of hunger,
- 3) Climate change forces people to move,
- 4) Climate change increases poverty and inequalities,
- 5) Climate change increases security risk for women and girls.

In this juncture, the Sundarban archipelagos are at risk. There already have few cases on the side of submergence in Indian Sundarban and consequently we have seen great geopolitical instability with Bangladesh. There were two islands viz. Lohachara 1996 and Suparibhanga (within the estuary) these two islands had already eroded and submerged and consequently thousands of people displaced. There are some intense vulnerable areas like Sagor, Namkhana, Patharpratima, Kakdweep that are on the way to submerge due to heavy erosion and every year flood inundation. These things have become a common phenomenon in Indian Sundarban. In each rainy season somewhere in between these places, there must be a flood inundation. Researches from the School of Oceanography Studies of Jadavpur University, estimated the annual rise in sea level to be 8 millimetres or 0.31 inches. The submerged area of forest is around 7500 hectares because of rising sea level all over the world. The surface water's temperature increased around 1.5 degree centigrade with it increased levels of salinity posed a serious survival problem of the indigenous flora and fauna. In this area almost half of the peoples are living below the poverty level. Most of the people's subsistence depends on agriculture as well as fishing and honey collection. Due to

adverse environmental condition these areas peoples are continuously migrating nearest city like Kolkata and other adjacent places in India.

Conclusion: As we are well aware that climate change is one of the present day's combustible issues. It is a challenge to all of us. But the impact of liberalisation and globalization both are really run us behind the accumulation of wealth and resources. We want more and more wealth and resources, which is detrimental for our society. Most of the developed, industrial countries are not in a position to reduce carbon emission, which is why today we have unequal balance of development. The politics of development has undergone massive change and consequently climate change is inevitable. To cope up with situation we will have to move consciously and take adequate measures to curb uneven development. There are various opinions and definitions given by environmentalists and activists but Anthony Giddens's given one of the most important perception on environment, is so-called 'Giddens's paradox'. It states that 'since the danger posed by global warming aren't tangible, immediate or visible in the course of day-to-day life, however awesome they appear, many will sit on their hands and do nothing of a concrete nature about them. Yet waiting until they become visible and acute before being stirred to serious action will, by definition, be too late'. That means if we do not take timely action we will have to face the disastrous consequences. In the 1960s, scholars like Rachel Carson had brought forth the anthropogenic environmental degradation to global attention. Since then, there have been many international conferences, programs and agreements but there were no comprehensive agreements among the nation-states. Hence there is no compulsion to CO₂ or Carbon dioxide emitter countries. They may abide by the international agreements or may deny it. It depends on their interests. As we have seen U.S. President Donald Trump's first term, where U.S. government denied the Paris climate agreement which is the pollution level decrease to 1.5° or pre industrial level. U.S. government had also denied providing aid to developing countries for the reduction of carbon emission which was previously presented 2100 billion dollars in 2009. Now the upcoming Baku climate conference will have to decide how much money to be spent for the developing countries by the developed countries. The Baku climate conference or COP29 will save the future climate finance. The 100 billion dollar is insufficient for so many countries. According to UN standing committee on finance estimated that the finance required for the climate action ranges between \$5.036 trillion to \$6.876 trillion. Since India is one of the major economies in the world, hence it has huge responsibility to save its own land from perpetual uncertainty. The situation has been day by day further deteriorating and as we have felt hot temperature this year highest in West Bengal 43 degree centigrade according to IMD record and in India it was 52.9° Centigrade that was unprecedented temperature. The overall condition is badly impacted in West Bengal Sundarban areas also. Here highest temperature also last time measured by Indian Metrological Department (IMD) at 43 °Centigrade. These conditions are terrific but can be solved by mitigation and adaptation and by agreeing Paris climate agreement, to stay below 1.5° centigrade of global warming; emissions also need to be cut roughly 50 percentages by 2030. But the implementation of this agreement is very difficult.

The ineptness of policy makers fine tunes are no longer solvent of these grave problems. As United Nations Secretary General Antonio Guterres said 'climate change is not the source of all ills, but it has a multiplayer effect and is an aggravating factor for instability, conflict and terrorism (December 9, 2021). There is no scope to handle this situation until and unless we will have to work on together to stop all sorts of abusive malpractice. We will have to stop it from the root or from the source of the aberration or deviation. But it is very difficult to make unanimous decision. Because each and every country wants to build up more and more their economy by compromising or at the cost of other's future. The Developed Countries no need to grow up again like the Developing or Under Developed countries; instead they want renewable energy and salubrious environment. Hence the developed countries are not in a position to go down their economic conditions and standard of life. It will be an expensive to bear the burden of other countries loss making. This is why developed countries have come forward but not unconditionally. They have stipulated lots of conditions which are unbearable to developing or under developed countries. The Developed countries pledge to spend their GDP's 4.5 percentage for the achievement of Developing or Under Developed countries infrastructure-related sustainable development goals and stay up to two degree centigrade limit of climate change. Although this dream is at bay because developed countries are not investing or spending the money for this purpose but they want to give loan from the back Channel. Thus Developing or Under Developed countries are falling into trap and their debt crisis never ends. They will be remain in debt crisis and their lenders are remain kept silent because there income and interest will go away. To think macro way, it is very difficult to solve the problem but if we think micro way that means we will have to work in unit level then it is possible to solve the disease called pollution. In Sundarban we can stop pollution by working from unit level to educate common peoples, to give them hygienic way of life, to educate sustainable way of subsistence etc. And we will have to widespread it according to the concern region's needs. Today not just mitigation and adaptation are the solution but social, political and economic consciousness also keeps it always with the mind of common peoples. Our system is to fool one side of the huge chunk of population and taking the advantage of other side by building their economy, education, social, political arenas intact. India's natural ecosystem degraded almost 30% according to the Indian Space Research Organization's (ISRO) Desertification and Land Degradation Atlas. It shows that around 97.85 million hectares viz. 29.7% of India's total land mass underwent land Degradation in 2018-19. It is a sharp increase than the 2003-05 where the figure was 94.53 million hectares. India must adopt bottom-up nature restoration approach where the goal must be restoring all ecosystems; it includes rivers to forests, many wetlands like Sundarbans and Chilka Lake, agricultural lands to urban green Spaces. We must bring the notion so-called sustainable environmental conditions. In 1960s, scholars' like Rachel Carson had brought forth the anthropogenic environmental degradation to global attention. Since then, there have been held many international conferences, programmes and agreements but were no comprehensive agreements among the Nation-states. Hence there is no compulsion to CO₂ emitter countries. They may abide by the international agreements or may deny it. It depends on

their interests. As we have seen in US President Donald Trump's first term, where US government denied the Paris climate agreement which is the pollution level decrease to 2° centigrade or pre-industrial level. US government had also denied providing aids to developing countries for the reduction of carbon emission which was previously presumed \$100 billion in 2009. Now the Baku climate conference has decided to spend \$300 billion for the developing countries by the developed countries, it is nothing but a betrayal with climate deal. The Baku climate conference or COP29 will shape the future climate finance. The \$100 billion is insufficient for so many countries. According to UN standing committee on finance estimated that the finance required for the climate action ranges between \$5.036 trillion to \$6.876 trillion. But the Baku conference has failed to meet such requirements. Hence it is another terrific stroke for Climatologists. Since India is one of the major economy in the world and it has huge responsibility to save its own land from perpetual uncertainty. So Government of India must take adequate measures to save its all low lying coastal areas including Sundarban.

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