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GLOBAL ENVIRONMENTAL EXIGENCY: AN OVERVIEW IN THE CONTEXT OF BANGLADESH AND INDIA

M Mostafizur Rahman, Ph.D.[*]
[*]*Assistant Professor, Department of Folklore Studies, Islamic University Bangladesh, Kushtia-Jhenaidah 7003.*

[*]***Corresponding Author:***
mostafizur@folklore.iu.ac.bd

Abstract:
The major goal of the article is to examine the nature, speed, susceptibility, and an effect of the environmental catastrophe in a global perspective. The study will concentrate on several climate change agendas. With a focus on the Indo-Bangla Diaspora, it seeks to examine numerous environmental crises and challenges relating to global warming. The environmental catastrophe, which is now the most urgent issue on the planet, is also a threat to human life. There is currently scientific agreement that if greenhouse gas emissions are not reduced, humanity will suffer serious effects. Millions of people in underdeveloped countries are expected to experience water shortages, food grain shortages, and increased health and life hazards. Most of the world's cities may flood because of climate change. This could force hundreds of millions of people to leave their homes. They have already started to suffer; there will be deaths, and the environment will collapse. The environmental catastrophe of today is more artificial than natural. Experts propose a worldwide political accord to address the growing issue. Through the worldwide platform of the climate change agenda and discussions throughout time, this article has acquired a thorough grasp of the problem and its potential solutions. The world urgently needs an effective environmental and climatic management policy, as human sensitivity to climatic calamity is growing every single day.

Keywords: *Global Warming, Climate Change, Environmental Crisis, Disaster.*

1. INTRODUCTION:

Climate change is now a reality rather than something that will only happen in the future. The grim truth of climate change has now been clearly demonstrated. One of the biggest problems the human race is currently experiencing is the adverse effects of the climatic transformation. Bangladesh is the most vulnerable nation for climatic disaster (German Watch 2009). It is generally accepted without debate that Bangladesh is one of the places on the planet Earth that will feel the effects of climate change the worst. The country is routinely ranked by the UNDP as the sixth-most prone to flooding and the nation most at risk from tropical cyclones in the world (IUCN Bangladesh 2011).Climate vulnerability is a serious issue that has been negatively influencing all areas of the economy for a very long time, including the health of men and women, children, and elders, residents of coastal and inland areas, as well as those living in hills and plains. In order to protect the future well-being of its citizens and prepare for the nefarious effects of climate change, Bangladesh urgently has to take these steps. In a way that is exceptional worldwide, Bangladesh and India share water. Water is, as we all know, a vital component of both countries' populations' means of subsistence. Climate change, along with its effects on this vital shared resource, has become a reality that both nations are now beginning to share. Stopping bad climate change is equally important for both Bangladesh and India. Because, the negative impact of this climatic disaster is wide spread and it could hamper production of crops and grains, water resources, and might hit environmental security along with biodiversity. With an average flow of 1,200 cubic kilometers, the Ganga, Brahmaputra, and Meghna rivers drain 1.75 million square kilometers of land. The GBM system provides assistance to more than 620 million individuals. Millions of people's futures rely on collaboration on cross-border rivers (IUCN Bangladesh, 2012). Most people agree that both countries would have trouble getting enough food if temperature extremes, water stress, drought, ocean warming, and rising sea levels got worse. This is a crucial backdrop for this article. The literature that is now available on Bangladesh's food security crisis, written by the government, academic think tanks, and private authors. However, in Bangladesh as well as, for that matter, in India, population growth and development will continue to be the key drivers of changes in the country's vegetative cover. Ecosystem changes will have an impact on basic services such as water supply, fuel availability, and general plant and animal species production. As a result of climate change, biodiversity losses will increase. It will be essential for every welfare country to preserve livelihoods in ecologically vulnerable areas. There is a dearth of literature on the state of protecting biodiversity and livelihoods and future requirements, but a primary review has produced concepts that might be explored further and given thought. Even though socioeconomic and cultural factors have an effect, this research looks in depth at a few areas, such as foodstuff and water productivity and biodiversity. This research has addressed the potential effects of all these on various socioeconomic categories. Following thorough assessments in this area, it is necessary to determine the necessity for more research. That being said, this is not a research paper. This paper's goal is to summarize the understanding of the environmental catastrophe in the framework of the social-economic system. It is believed that there are undoubtedly some more significant sources that can increase our knowledge and help us choose whether to do an additional study in this area.

2. Objective of the study:

i. To determine the causes of environmental deterioration in Bangladesh and India;
ii. To learn about the effects of environmental degradation in Bangladesh and India;
iii. To suggest feasible measures that interested parties could adopt.

3. Methods and materials:

This study used both content analysis and the historical method to gather data as part of its qualitative research. Secondary data predominated as the main source of information for this study's content analysis. To represent and compare the susceptible, dangerous, and difficult circumstances of numerous catastrophes in Bangladesh and India, historical technique was used as a method of data collecting. Information was gathered from pertinent books, journals, articles, newspaper articles, archive records, formal studies, reports, and other materials. The study also examined secondary sources of data from reputable national and international journals, periodicals, economic surveys, and internet searches on the topic. The study also takes into account potential solutions for dealing with or attenuating environmental crises, as well as the vulnerable or impoverished situations of unfortunate individuals or victims of different calamities.

4. Results and discussion:

4.1 Changing climate and global scenario:

Climate change is currently the main worldwide worry for society. It is a reality, not some hypothetical scientific prediction (Mall et al. 2006). Extreme weather phenomena have included extensive ice and snowmelt, the storm surges, coastal floods, fluctuations in the global mean air temperature, and the sea surface temperature (IPCC 2007). The main reasons for this rise in carbon dioxide are the use of fossil fuels and changes in how land is used. Ice core samples that go back thousands of years show that the amount of CO2, methane, and nitrous oxide in the atmosphere has increased dramatically since 1750 and now exceeds what was normal before the industrial revolution (IPCC, 2007). The burning of fossil fuels, the use of furnaces, and the breathing of living creatures all release significant quantities of carbon dioxide into the atmosphere. Only fossil fuels account for more than 2.5x1013 tonnes of the annual CO2 emissions into the atmosphere (Chhatwal 204).

Van Al Gore, a former contender for the US presidency, works to educate the public about the risks of global warming and urges swift action to halt its damaging impact on the environment. According to Al Gore's book An Inconvenient

Truth, the glacier pattern in Patagonia, South America's southernmost region, has changed significantly during the past 75 years. Similarly, during the past 30 years, Mount Kilimanjaro has had a significant impact. There won't be any Kilimanjaro snow within a decade. Actually, this is more of a moral issue than a political one.

A Swedish school girl (16) was nominated for the Nobel Peace Prize is transforming the globe through climate change campaign. She staged a lone demonstration in front of the Swedish parliament to start her protest. Along with her, 1.4 million children from other nations took to the streets. It is by far the biggest climate demonstration in world history. She began receiving messages from across the Atlantic. Greta Thunberg even states that she will not fly due to the environmental impact of doing so. According to her, the human race is currently at the crossroads and the world now must choose the course of actions (Greta Thunberg 2018).

In her United Nation's address on September 23, 2019 Thunberg said, You'll turn to us, young people, for encouragement. You're so brash! With your meaningless words, you robbed my youth and my hopes. However, I am among the fortunate. People are suffering, ecosystems are collapsing as a whole, and people are dying, and the mankind is in the early stage of the global extinction, and all we can discuss are stories of unending economic prosperity. You're so bold! Science has been making things more evident for over 30 years. She scolded world leaders harshly for their inaction in addressing climate change, saying, "How dare you continue to turn aside." The youth have begun to see your deception, and you are failing us. (Greta 2019) US President Donald Trump praised her for taking action on climate change in a tweet, writing, "She appears like a joyful little girl looking forward to a bright and glorious future. Wonderful to see!

4.2 Climate change impacts in Bangladesh:

The availability of fresh water in South Asia, which includes Bangladesh, is expected to decrease by the mid-2050s because of climate changes. The coastline of Bangladesh will be the most at risk from increased sea flooding. On the contrary, droughts, are anticipated to increase as a result of projected changes in the hydrological cycle (IPCC 2007). Rougher models back up these projections.

According to the government of Bangladesh, the following potential effects of climate change might be evident there:

i) Decreasing rainfall and rising unpredictable rainfall results increasing drought;
ii) A decrease in the supply of fresh water due to the sea level rise, which causes low-lying coastal regions to be submerged and salty water intrusion into groundwater aquifers and coastal rivers;
iii) increasing illness frequency and disease vectors due to warmer and more humid weather;
iv) Drinking water shortage is anticipated to worsen, especially in the coastal belts and drought-prone areas;
v) Coastal areas are projected to have increased river bank erosion and salty water intrusion, which would cause hundreds of thousands of people to relocate, frequently to slum areas in Dhaka or other major cities (MoEF 2009).

One of the most climate vulnerable nations is Bangladesh, the home to the biggest delta in the world. Between 1980 and 2008, Bangladesh faced 219 natural disasters that caused more than US$ 16 billion in damage (UNDP 2006). Climate change has made the country more susceptible to many calamities. Bangladesh is prone to many different types of natural disasters, such as fires, earthquakes, saline intrusions, cyclones, the storm surges, river bank erosion, floods, and cyclones. In particular, cyclones and floods caused a great deal of harm. Cyclones killed 364,000, 136,000, 3363, and 190 persons in 1970, 1991, 2007, and 2009, respectively (Rahman et al. 2017).

5. Impact of climate change in India

5.1 Greenhouse gas emissions:

India, which has 17% of the world's population, makes up just approximately 5% of the world's carbon dioxide emissions, compared to China, which produces 24% of them. India emits roughly 1.4 tons of CO2 per person per year, compared to 17 tons for the US and 5.3 tons for the whole globe. Even though India doesn't contribute much to global greenhouse gas emissions, the expected climate change will still have a big effect on the country because a big part of its economy and population depends on climate-sensitive areas like coastal areas, forests, fisheries, and agriculture. As a result, India stands to benefit greatly from scientific advancements and global debates of the subject of climate change. In India, there are some scientific predictions about climate change as follows:

5.1.1 Rainfall: Because warmer air carries more moisture, rain will fall more often as a result of rising temperatures (Mall et al. 2006).
5.1.2 Temperature: it might rise; according to the study, the main GBM region could see temperature increases of 2-3 degrees Celsius between 2070 and 2100. (Kumar et al. 2006).
5.1.3 Glaciers in the GBM area control water flows, often storing more water during hotter (drought) times and less during rainy (flood) periods (Mall et al., 2006).
5.1.4 80% of the GBM region is already prone to flooding, therefore a rise in floods will cause extra flooding (Shah 2001).
5.1.5 Reduced water quality: Sediments, salinity, and arsenic are the main pollutants predicted to rise as a result of climate change.

6. Climate change's negative effects on socioeconomic and political condition

The region's average per capita income is almost 30% less than India's average (INCAA 2010). The problems of a growing population, declining land productivity, a proportionally larger reliance on the base of natural resources, and a rising prevalence of poverty are added to this. Different climate change consequences are anticipated to worsen the situation in the area. There would be major socioeconomic effects from the increased frequency of extreme occurrences. Since economies rely on sectors including agriculture, water resources, fisheries, and biodiversity, the consequences of climate change in these sectors are likely to have an immediate impact on the economy and way of life. A severe agricultural drought affected the Assam Brahmaputra lowlands in 2006. Up to 75% of 26 million people in these areas who rely on agriculture for a living were affected. Das et al. (2009) say that the state lost more than RS 100 billion because crops failed and other things happened.

6.1 Populace:

The environment is worsening as the nation's population and economy increase more fast due to unchecked urban and industrial growth, expansion and intensification of agriculture, and degradation of natural ecosystems.

6.2 Indigence:

Poverty is detrimental to the environment. It is complicated how poverty and the environment are inextricably linked. The danger to sustainability posed by the poor is greater than that posed by the affluent since the poor depend more heavily on natural resources. Because they require assistance with other things, the poor deplete natural resources more quickly.

6.3 Political effects:

India's population and water use per person are both going up, as is its access to water. Competing claims to resources and escalating demand will fuel conflict, pitting expanding urban and industrial users against the country's present dominant consumer, and the rural peasants (Bandopadhyay 2006). It is projected that both the country's water use and energy consumption would have doubled by 2050. The quantity of drinking water each person uses is predicted to decrease from 600 liters per day to 300 liters per day by 2030 as a result of this rising demand (Lal 2005). 5 hundred million people would have migrated to India's cities, and as a result, a major portion of the country's growing domestic demand will come from urban regions, beginning a vicious cycle by 2060.

6.4 Degradation of the land:

Any unwanted alteration or disruption to the land is referred to as land degradation. Both man-made and natural events, such as floods and forest fires, have the potential to cause harm to land. It is conceivable that all of the agricultural land in the planet will have entirely deteriorated.

6.5 Impact on human health:

Homes are where environmental deterioration has its most severe consequences on people's health. Human health might be harmed by environmental deterioration. With dangerous air pollution, some areas might cause respiratory conditions, including pneumonia and asthma.

6.6 Decrease in biodiversity:

Biodiversity is essential for environmental balance because it protects against pollution, replenishes nutrients, protects water sources, and regulates climate. Deforestation, climate change, urbanization, and pollution are a few of the key causes of biodiversity loss. People have made a lot of changes to the ecosystem and land, like fishing and hunting, which hurts species directly. They have also changed the biogeochemical cycles and moved species from one place to another.

7. Mechanisms:

Governments utilize several means to carry out their environmental policies. Governments may employ a variety of tools. For example, people may be more likely to follow environmental rules if there are market-based tools and economic incentives like taxes, tax rebates, tradable licenses, and fees. Businesses do better when they manage the environment well and are open about their data and reports about the environment. Examples of voluntary environmental projects include business commitments that are not mandated by the government or agreements between the government and private businesses. Implementing greener public purchasing schemes is another tool.

8. Environmental laws in Bangladesh and India

8.1 Environmental laws in Bangladesh:

Environmental laws are enforceable safeguards for the preservation and protection of the natural world. These laws outline people's rights and obligations as well as those of governmental organizations in accordance with the worldwide need for a healthy environment. Although Bangladesh had environmental regulations as early as the 19th century, they were either not often enforced or required knowledge on the part of the individuals or organizations in charge. Traditional ways of life did not promote resource conservation or environmental preservation. Some laws are also no longer essential because the circumstances that required them no longer apply. In 1989, Bangladesh’s Ministry of Environment started operation. Some of the major laws which address environmental concerns in Bangladesh are:

i. Biodiversity Act 2017;
ii. Brick Manufacturing and Brick Kilns Establishment (Control) Act 2013;
iii. Environment Conservation Act 1995;
iv. Environment Court Act 2010;
v. Forest Act 1927;
vi. Wildlife (Conservation and Security) Act 2012

8.2 Indian environmental laws:
The Indian government has enacted several beneficial environmental regulations. These regulations provide guidelines for usage, treatment, and processing of harmful waste. The goals of these acts are to safeguard and enhance the country's environment. Laws related to environmental protection are:

8.2.1 Environment protection:
i. Environment Protection Act, 1986;
ii. The National Green Tribunal established under the National Green Tribunal Act of 2010;
iii. Water (Prevention and Control of Pollution) Act, 1974.

8.2.2 Air pollution:
i. Air (Prevention and Control of Pollution) Act, 1981;
ii. Air (Prevention and Control of Pollution) (Union Territories) Rules, 1983

8.2.3 Water pollution:
i. Water (Prevention and Control of Pollution) Cess Rules, 1978;
ii. The Ganga Action Plan, 1986;
iii. National Water Policy;
iv. Interstate River Water Disputes Act;
v. Water (Prevention and Control of Pollution) Act, 1974;
vi. Water (Prevention and Control of Pollution) The Cess Act, 1977

8.2.4 Waste management:
Batteries (Management and Handling) Rules, 2001
Recycled Plastics, Plastics Manufacture and Usage Rules, 1999
Hazardous Wastes (Management and Handling) Amendment Rules, 2003
Construction and Demolition Waste Management Rules, 2016

9. The joint environment research area of Bangladesh and India
i. Health Security;
ii. Livelihood Security;
iii. Trans boundary water availability;
10. Security measures for river banks and coastal areas;
11. Activities to increase awareness and capability;
12. Food security concerns;
13. Water security concerns;

10. Conclusion:
Renewable energy should be used in substitution for the huge consumption of fossil fuels. Reforestation efforts have to be made on a global scale. Agriculture emissions must also be reduced; there is no other option. Industrial processes must be drastically altered in addition to all of those endeavors. The positive aspect is that clean energy is readily available; all that is needed is to gather it. Many individuals believe that contemporary technology makes it possible for the world to run entirely on renewable energy. The bad news is that despite the availability, affordability, and efficiency of renewable energy structure, such as solar plates, wind mills, and different sources of energy storage, experts claim we are not implementing it rapidly enough to prevent catastrophic climate change. There are still challenges to be solved in terms of policy and funding. Replacing native tree species with non-native ones is a way to protect natural forests and fix up damaged areas. This takes the dedication and drive of those in power. This calls for good leadership, but many tropical countries are still in the early stages of development, with growing populations, a patchy legal system, and a widespread culture of cronyism and corruption in how land is used. To stop the loss of biodiversity from continuing, coordinated actions must be done. Uncertainty surrounds the issue of whether this will be accomplished fairly for all people on the planet. The World Bank claims that between 1990 and 2010, environmental issues were addressed and the environment in India and Bangladesh improved significantly. But India and Bangladesh still have a long way to go before they can say that their environment is as good as that of rich countries.

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