

A Critical Analysis on Environmental Challenges in Bangladesh from 1971 To 2020 and its Impact on Internal Migration.

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ABSTRACT

There are many environmental issues happened in Bangladesh from 1971 to 2020. The study rigorously examined these issues together with the significant impact on patterns of internal migration. The study clarified on complex relationship between environmental events and dynamics of internal migration through a nuanced lens and providing insight into environmental vulnerability and human mobility within the socio-economic context of Bangladesh.

Keywords: Environmental challenges, internal migration, socio-economic impact, urbanization, hazard.

INTRODUCTION

Bangladesh, one of the world's most climate-vulnerable nations, has experienced a variety of natural and man-made environmental problems over the last fifty years. Millions of people's livelihoods, especially those of marginalized populations, have been negatively impacted by frequent floods, cyclones, saline intrusion, and soil degradation. Internal migration has therefore become a crucial coping strategy. However, most of the current research treats environmental and migration concerns in a fragmented way, concentrating on short-term displacement or isolated incidents. The long-term, cumulative consequences of recurrent environmental risks on internal migration trends and the increasing vulnerability of metropolitan regions are still not well understood. The socioeconomic changes that migratory communities undergo have also received less attention, particularly in urban slums that are ecologically dangerous and where new kinds of risk and marginalization arise. The purpose of this study is to critically analyze how environmental issues have changed over time in Bangladesh and how they have affected internal migration and socioeconomic circumstances between 1971 and 2020.

It looks at the ways that manmade and natural environmental forces have upended lives and compelled people, especially the most vulnerable, to move in quest of safety and employment possibilities. Strong evidence indicates that environmental stressors serve as potent push factors impacting migratory patterns, as Roman Hoffmann pointed out in his paper "How Do Environmental Factors Influence migratory?" (Hoffmann, 2020) Building on this realization, the current work provides a comprehensive understanding of how environmental stresses, including saline intrusion in coastal areas, not only increase the probability of cyclonic storms but also cause intricate disturbances to livelihoods and seasonal migration patterns. Furthermore, when displaced people relocate to cities in search of better economic opportunities, the study offers evidence-based analysis of how environmental issues have fueled urbanization. Nonetheless, living in urban slums frequently exposes people to additional levels of vulnerability, such as subpar living circumstances, a lack of services, and ongoing exposure to environmental risks. All things considered, this study fills in the gaps by offering a comprehensive understanding of internal migration, environmental change, and the changing socioeconomic conditions of Bangladesh's displaced groups.

Research Objective:

The purpose of this study is to investigate how Bangladesh's environmental problems between 1971 and 2020 have affected internal migration trends, especially for vulnerable populations. It examines the connection between socioeconomic displacement and natural catastrophes including floods, cyclones, and salinity. It also

evaluates how urbanization brought on by such migration adds to the environmental dangers in slum regions. The goal of the study is to produce knowledge that will guide planning and policy for enhancing displaced persons' resilience.

Research Question:

1. Which significant environmental issues have impacted Bangladesh from 1971 to 2020, and how have their occurrence and severity evolved over time?
2. What role have these environmental issues—particularly salinity, cyclones, and floods—played in Bangladesh's internal migration trends?
3. What socioeconomic effects can migration bring on by the environment have, especially on underprivileged communities?
4. What new types of environmental hazards have emerged in urban slum areas because of internal migration-driven urbanization?

RESEARCH METHODOLOGY

The research focused on a descriptive and analytical framework targeting the exploration of the historical impact of environmental disasters on socio-economic and how it contributed to internal migration through analyzing existing available documents and statistical data. The data were sourced from different journals, reports of international organizations, government reports, public domain databases like Wikipedia, UN agency reports, and newspaper articles. The research sought environmental event data with a span of five decades and its impact on socio-economic conditions and tried to extract from these data sources to identify patterns and relationships with internal migration. A thematic content analysis technique has been used to identify natural disaster events, categorize them, and relate them to internal migration. A cross comparison was made between disaster events and internal migration to make a connection with push factors and migratory decisions. The study purely relied on available secondary data that are available on the different platforms.

LITERATURE REVIEW

Since 1971, Bangladesh has had recurring environmental problems such floods, cyclones, and saline intrusion, which has resulted in a large internal migration. Current research frequently concentrates on temporary displacement, ignoring the cumulative and long-term impacts of these risks on migration and socioeconomic circumstances.

Land loss, agricultural devastation, and poverty caused by major floods in 1974, 1988, 1998, and 2004 drastically impacted rural livelihoods and led to waves of rural-urban migration. Massive property destruction and fatalities were caused by cyclones like as Sidr (2007), Aila (2009), and Amphan (2020), while agricultural production and availability to safe water were further harmed by rising saline intrusion in coastal areas. (Shahriar, 2021)

Vulnerable groups have been driven toward metropolitan areas by this environmental stress, where migrants frequently reside in slums and encounter additional hazards like fires, unsanitary conditions, and precarious housing. The study emphasizes how metropolitan environments frequently replicate the natural threats that migrants are escaping, resulting in a vicious circle of vulnerability.

The study fills in the gaps left by previous research that concentrated only on immediate disaster responses by examining five decades of data to provide a comprehensive view of how environmental factors influence migratory trends and urban vulnerability. It highlights the necessity of comprehensive policy strategies that consider both urban adaptation and rural resilience.

Key Result

According to the study, during the previous 50 years, Bangladesh has seen an increase in the frequency and severity of environmental hazards such as floods, cyclones, and salinity intrusion. Particularly during the 1990s, the frequency of cyclones and the intensity of flooding have grown, indicating not only changes in the climate but also a lack of environmental control and readiness for disasters. A slow-onset danger, coastal salinity has long-term, cumulative implications for food security, freshwater availability, and land usage.

Many impacted individuals have moved from rural, disaster-prone areas to urban centers because of environmental calamities acting as persistent push factors that drive internal migration. Migration is sometimes characterized by a pattern of anticipatory relocation, progressive livelihood deterioration, or recurring displacement rather than being restricted to isolated incidents. Notably, the distribution of post-disaster migration is not uniform; wealthier households tend to stay rooted or migrate on more favorable conditions, whereas households with fewer coping mechanisms typically relocate in distress.

Post-migration socioeconomic vulnerabilities are often exacerbated for environmental migrants, particularly those from flood-prone northern districts and the southwestern coastal strip. Their chances of recovering are harmed by losing their assets, jobs, and land. After moving, migrants may face exclusion from state services, unstable housing, and informal work markets. Particularly for day laborers and landless farmers, the absence of focused policy support feeds poverty cycles.

According to the report, environmental hazards in urban slums have increased due to unplanned development that is driven by environmental migration. In addition to lacking essential services, communities in Dhaka, Chattogram, and Khulna are becoming more susceptible to waterlogging, poor waste management, and fires. The climate vulnerabilities that migrants first escaped are now exacerbated by these human-induced environmental dangers, re-exposing people to risk in new ways. As a result, internal migration in Bangladesh frequently causes vulnerabilities to move from rural to urban settings rather than ensuring increased resilience.

The results highlight how environmental and socioeconomic instability can both cause and be a symptom of internal migration. It is impossible to comprehend migration without considering the structural injustices, inadequate institutional responses, and subpar urban planning that influence people's mobility decisions and post-migration realities. Consequently, tackling environmental migration necessitates a multifaceted approach that takes into consideration both urban adaptation and rural resilience.

MAIN DISCUSSION

Bangladesh achieved the independence on 16 December 1971 from Pakistan after a nine-month bloody war where 3 million people sacrificed their lives. Since independence, the country has been known as a food deficit country. This situation further declined through man made and natural calamity and geographical position which has a long coastal belt near to the Bay of Bengal.

Bangladesh is low lying and riverine country where one third of the land is going under flood water during the rainy season. Natural calamities brought many misery conditions to the marginalized people. Bangladesh historically owned many environmental challenges due to have geographical condition. In addition, man-made environmental challenges brought many types of hazards which causes to people shifting to other places within the country. The stages of environmental challenges can be described in various stages after the independence of Bangladesh.

In March 1974, the great famine started in Bangladesh with sharply increased the different commodities prices. Rangpur district faced widespread starvation this month. (Alamgir, 1980) In addition, the flood occurred this year in that area which has intensified the famine. Three districts particularly affected which are Rangpur, Mymensingh and Sylhet and at least 40% of the country went underwater. It was the first major flood post-independence of Bangladesh. It was estimated that 1.5 million people died on that time through cholera, malaria, diarrhea, and starvation, though the government estimated around 27000 people. How many people had died during the famine that was a great debate. Because the government figures and international media figures are completely mismatched. However, the international media is more acceptable if we count the recent comment of Chief Adviser in a recent investment conference on 9 April 2025. He told in the conference that when we achieved independence at that time the total population was 6 crores. And then 1974 come with great famine. Around 1.5 million people died in this year. People have no alternative way as most of the people's main profession was agriculture. They depend on single cultivation round the year. Among these farmers, third fourth had no land. (Ittefaq, 8 April 2025)

A basic comparison can be drawn between 1974 famine in Bangladesh and 1943 famine in Bengal under British rule. 1943 famine is characterized as the huge scarcity of food. On the other hand, the 1974 famine is

characterized is man made because due to distribution failure. The rice production was high compared to 1973 as the famous economist Amartya Sen believed according to his theory food availability decline (FAD).

The impact of the flood added to great famine created poverty to the ultra-poor. Many laborers are gone to unemployment after flooding of the Aman crops (It is generally planted from July to August and harvested from November to December). and lost the buying capacity and afford the expensive crops. (Dewan, 2015) on that time , internal migration have seen in the affected area from 2% to 7%. (Habiba, 2014)

After that, the major flood occurred in three times in Bangladesh which brought devastating situation in 1988, 1991 and 1998. The three mighty river system located in this country and the flood causes to river erosion and washed away the piece of land. (Hagerly D. T., 2008) The flood brought environmental detrimental in terms of sedimentation in the river which deter the usual flow of river, degrade the water quality particularly in coastal belt area through salinity intrusion. Flood often leads social economic vulnerability in Bangladesh which contributes internal migration.

Briefly of Major floods in Bangladesh and economic impacts (1974-2014) (Nabi, 1992)

	Area inundated (square kilometers)	Proportion of total area (%)	Cost of damage (million Taka)	Population affected (million persons)	Deaths (number of persons)
1974	52,720	35	28,490	30	1,987
1984	28,314	19	4,500	20	553
1987	57,491	38	35,000	30	1,657
1988	89,970	62	> 100,000	47	2,379
1998	> 100,000	74	> 120,000	55	1,050
2004	> 58,000	40	> 200,000	36	750
2007	32,000	21	> 75,000	14	649

Details analysis of 2014 flood socio-economic impact and internal migration: (cluster, 2015)

	# of Household	Percent
Taking loans of high interest	85	26
Livelihood change	70	21,5
Support from relatives	48	15
Selling of advance labor	41	12,5
Spending savings	26	8
Selling household assets	16	5
Migrated to surrounding areas	9	3
Remittance from relatives	7	2
Making children work	5	2
Selling productive assets	4	1
Migration	4	1
Making other members work	3	1
Temporary work	3	1
Other	3	1
Total	324	100

A Factor of Rural-Urban Migration:

"While there is good data on initial displacement as a result of floods, there is less evidence on longer-term impacts of floods on migration decisions," said the International Organization for Migration (IOM). According to data from India, flood plains are associated with a range of migration behaviors, such as recurrent trips to higher ground for work and shelter as well as permanent migrations where the impact on people's livelihoods is greater. (Walsham, 2010) "Flood-migration nexus" has been identified in Bangladesh. For example, a 2007 survey showed that most migrants moved to urban regions from rural areas in northern Bangladesh hit by floods in 2005. Migration from rural to urban areas in this instance proved to be a useful coping mechanism, allowing "potentially vulnerable households to avoid a debt cycle." Similarly, there are more reports about the problem of "landless farmers" moving to urban centers. (Rahman, 2006) In these situations, the quality and production of the crop fields are decreased by annual floods. Farmers who are having financial difficulties selling their land and become "landless farmers." Many of these landless farmers permanently relocate to metropolitan areas in search of alternative income streams as their financial circumstances deteriorate. The poorest, and therefore most vulnerable, populations are frequently found in parts of Bangladesh that are particularly prone to flooding; in these locations, the "flood-migration nexus" is especially significant. It is crucial to stress that, given the strong interdependence of social, demographic, economic, and environmental factors, it is manifestly irrelevant to draw a distinction between rural-urban "environmental migrants" and rural-urban "economic migrants." It is evident that natural disasters, in addition to economic, social, and/or demographic considerations, foster the conditions necessary for migration to occur. (Hagerly D. , 2008)

Cyclone creates environmental challenges particularly in coastal belt areas. Cyclone brought a great disaster which impacted on socio economic condition of Bangladesh. After the independence of Bangladesh, The April 1991 cyclone was a strong and powerful cyclone particularly blown away through Chittagong. The cyclone took at least 138000 people's lives and created damage around 1.5 billion USD. In 1997, a cyclone hit the coastal belt area and took 155 people's lives. This cyclone's wind speed was 230 km per hour. Cyclone Sidr hit on coastal belt area in 2007 with approximate wind speed 223 km per hour. This cyclone took 3363 people to live. In 2009, cyclone Aila hit on southwestern area of Bangladesh which blown away through 15 districts with a great havoc. 200000 houses were damaged and 150 people died by this cyclone. In 2013, Cyclone mohasen hit on Chittagong and killed 17 people. In 2016, Cyclone Roanu hit on Chittagong and killed 26 people with damaging 40,000 households. In 2019, Cyclone fani damaged crops of 63,063 hectares of land. In 2019, again another cyclone bulbul hit on coastal areas of Bangladesh and damaged crops 22836 hectare of land. In 2020, Cyclone Amphan hit on 17 districts of coastal belt area of Bangladesh and killed at least 31 people with damaging 1,76,007 agricultural land. (Rehya, 2021)

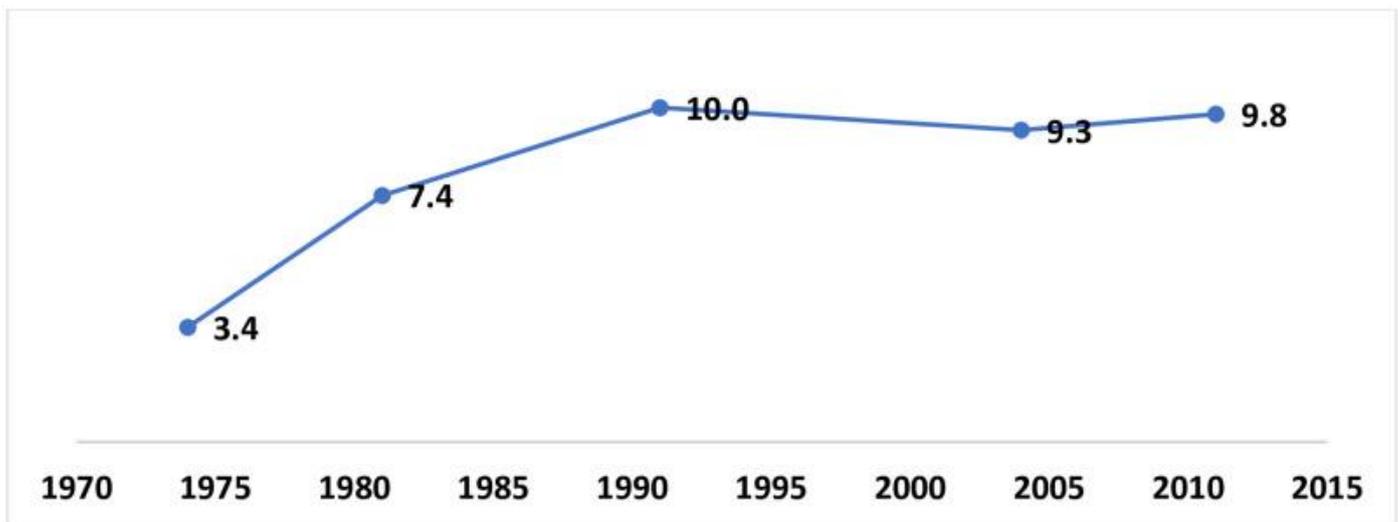
The cyclone data clearly stated that the coastal belt area is the most vulnerable area for cyclones. If we analyze the data between 2009 and 2020, then we will see the frequency of cyclones happening is higher than other previous decades. The data also showed many people lost their lives and property and crops. As a result, they have been much affected by cyclones in the socio-economic aspect. Cyclones create additional challenges to environment through saline water intrusion.

This is an in-depth discussion on how saline water creates more burden for environment and internal migration, particularly in coastal belt area. Water moves through a certain process of osmosis towards the plant roots which are controlled by the level of the salt in the soil water, as a result, plant root contains salt water. When water flow directed from root to soil then dehydration of the plant occurred and then plant grow is declined and causes to lead death. When it happens, it looks like deforestation is happening in surrounding area. Particularly in coastal belt area, when river water gets into the farmers field and even yield in the households then salinity creates big problems in terms of salinity intrusion. Ground water becomes saline water which is not drinking able and makes so many complexities to human health. (Government, 2023) Soil erosion and other problems related to soil deterioration are intimately associated with dryland salinity. Because salinity is often linked to extended wetness and a lack of surface cover, it makes soil more susceptible to erosion. Overly low water tables can make flooding more likely. Because of the low ability of the soils to absorb rainwater, runoff rates are significant. Wetlands, farms, roads, fences, and dams may sustain damage because of this. The longevity of road pavements is significantly reduced when groundwater levels increase to within two meters of the pavement surface, among other effects. Like earlier circumstances, capillary action will help bring the water containing salt to the surface. Additionally, the qualities of bitumen, concrete, and brick buildings are destroyed by salt corrosion. In many

cities and villages, there has been incredibly considerable damage to the infrastructure, which includes homes, roads, and sports fields. Additionally, buildings, agricultural tracks, and rural roadways have suffered from salinity damage. Due to the higher evaporation rates in drier areas, the difficulties resulting from this are most severe. Low rainfall areas have a lower likelihood of salt leaching from the soil, hence poor irrigation water with high salt content will affect the soil more. Water tables may rise because of irrigation systems applying too much water beyond the root zone. Water tables may rise because of irrigation canal leakage. Compared to calcium and magnesium salts, sodium salts are more prevalent in sodic irrigation water. It could cause soil dispersion, which would lead to poor seedbeds, poor water entry, crusting, sealing, and erosion of the soil surface. (Government, 2023)

A World Bank report 2000 states that most low-lying land would be underwater by 2050 due to sea level rise brought on by climate change. The average annual increase in salinity is 0.74%. (Shaheedur Rashid Md Anowar Hossain Md Nazrul Islam, 2010) For those who live by the coast, salt intrusion primarily takes two forms. 1) The impact of food insecurity on livelihood 2) The effects of unsafe drinking water on health. (Habiba, 2014) As a result, migration to metropolitan areas is extremely widespread in Bangladesh's southwest, especially in the coastal belt region. Most of the migrant population work as a day laborer, rickshaw puller, bricklayer, or textile worker. (Umma Rezoyana, 2023)

Urbanization creates a lot of environmental challenges through internal migration. Trends in lifetime internal migration in Bangladesh is provided in the graph. From 1974 to 1991, the rate of lifetime internal migration trended upward. In comparison, the rate decreased little in 2004 before beginning to rise once more in 2011. (Md. Zakiul Alam, 2022) Trends (%) in lifetime internal migration in Bangladesh, 1974–2011.



The trend of migration seems like that not new. It has been happening for a long time due to several reasons. The migration trends to urban areas and the environmental risk and hazard increasing both have a common inter linkage. Most of the migrated people took shelters in urban slum areas where fire, chemical splitting and unmanaged solid waste are widespread problem environmental aspect. Frequent bad incidents are common in that area where people lose their lives. Most of the people came here due to the deteriorating in their respected rural area that created negation of socio-economic problems. But the new lives and hopes could not flourish to migrated people in the urban slum area because of facing again with human-caused environmental onset. The data has given a clear picture that the migration trends increased right after independence of Bangladesh due to took place several natural calamities which created negative impact on food security, livelihood, socio economic status and life insecurity. But later, urbanization contributed a lot to internal migration which did not mitigate the environmental challenges and the risk of migrated people life. A DW report could be clear how environmental hazards took place in urban slum areas which are mostly migrated people. “The huge blaze razed around 2,000 tin shacks in a crowded Dhaka slum, making at least 3,000 people homeless. In the Bangladeshi capital, fires are frequent — and many a time deadly — due to lax safety measures.” (news, 2019) When the migrated people moved to urban areas then they mixed up with different cultures from different regions. So, the different types of socio-economic conditions build up among them.

It has provided evidence-based recommendations for increasing the resilience of marginalized communities by taking disaster preparedness, prevention, and response. This research contributes to holistic understanding of the interplay between environmental changes, migration, socio-economic development and paving the way for effective development in Bangladesh.

POLICY RECOMMENDATION

This study examined critically how Bangladesh's environmental problems, which lasted from 1971 to 2020, influenced internal migration trends, especially for disadvantaged groups. It emphasized that cyclones, floods, and salinity intrusion are examples of natural disasters that consistently cause displacement, particularly from coastal and rural areas. Numerous impacted people relocate to urban slums, where they encounter novel environmental risks and socioeconomic instability. The study also demonstrated that internal migration contributes to urban environmental degradation in addition to being a result of environmental shocks.

The following policy ideas are put out to address these interconnected challenges:

1. To lessen the immediate effects of environmental risks and safeguard communities that are at risk, invest in early warning systems and disaster-resilient infrastructure.
2. Boost migrant service delivery and governance in urban slums, including housing, safety standards, access to clean water, and sanitation.
3. Encourage climate-resilient livelihoods in coastal areas that are at risk by using sustainable farming methods, diversification, and skill development.
4. To guarantee focused and fact-based policy for disaster response and urban growth, include migration data into national adaptation planning.

In the face of environmental and climate risks, these steps can enhance long-term sustainable development, lessen the strain on urban surroundings, and increase the resilience of displaced populations.

CONCLUSION

The complicated relationship between environmental challenges and internal migration from 1971 to 2020 have been outlined in detail in multifaced narrative angle. The cyclone, flood and other natural and human-caused events not only created the negative impact on livelihood and socio-economic condition but also played a key driver of internal migration. The intersection of urbanization proliferates the environmental hazard but created a different type of employment opportunities that drives to internal migration. There has been created another form of socio-economic status among the migrated people.

BIBLIOGRAPHY

1. Alamgir, M. (1980). *Famine in South Asia: Political economy of mass starvation*. Oelgeschlager, Gunn & Hain.
2. cluster, F. s. (2015). Adapted from Bangladesh Food Security Cluster,. foodsecuritycluster.net. Retrieved from <http://foodsecuritycluster.net/document/food-security-nutrition-shelter-and-early-recovery-assessment-flood-affected-areas-north>, 2015.
3. Dewan, T. H. (2015). Societal impacts and vulnerability to floods in Bangladesh and Nepal. *Weather and Climate Extremes*, 7,.
4. Government, Q. (2023). Soil Salinity Impact. Retrieved from <https://www.qld.gov.au/environment/land/management/soil/salinity/impacts>,
5. Habiba, U. A. (2014). Salinity-Induced Livelihood Stress in Coastal Region of Bangladesh. In *Water Insecurity: A Social Dilemma*. Emerald Group Publishing Limited., 139-165. doi: [https://doi.org/10.1108/S2040-7262\(2013\)0000013013](https://doi.org/10.1108/S2040-7262(2013)0000013013),
6. Habiba, U. A. (2014). Salinity-induced livelihood stress in the coastal region of Bangladesh. In *Water Insecurity: A Social Dilemma*. Emerald Group Publishing Limited.
7. Hagerly, D. (2008). Bangladesh in 2007: Democracy interrupted, Political and Environmental challenges ahead. *Asian Survey*, Vol. 48, No. 1,, 177-183.

8. Hagerly, D. T. (2008). Bangladesh in 2007: Democracy interrupted, political and environmental challenges ahead. *Asian Survey*, 48(1), 177-183.
9. Hoffmann, R. (2020). How Do Environmental Factors Influence Migration? *Population Europe*. Retrieved from <https://population-europe.eu/research/policy-insights/how-do-environmental-factors-influence-migration>
10. Ittefaq. (8 April 2025). Chief Adviser cried to remember the great famine in 1974. *Ittefaq*. Retrieved from <http://www.ittefaq.com.bd/726668/>
11. Md. Zakiul Alam, A. A. (2022). Dynamics of internal migration in Bangladesh: Trends, patterns, determinants, and causes; fig2;. National Library of Medicine. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8843202/#pone.0263878.s001> doi: 10.1371/journal.pone.0263878
12. Nabi, A. K. (1992). Dynamics of internal migration in Bangladesh. *Canadian Studies in Population*, 19,, 81-86. doi: <https://doi.org/10.25336/p6b01g>
13. news, D. (2019). bangladesh-slum-fire-destroys-thousands-of-homes. *DW news*. Retrieved from <https://www.dw.com/en/bangladesh-slum-fire-destroys-thousands-of-homes/a-50068962>,
14. Rahman, M. a. (2006). Landlessness and its Impact on Economic Development: A Case Study on Bangladesh,. *Journal of Social Sciences*, Vol. 2, No. 2, 54-60.
15. Rehya. (2021). major-cyclones-in-the-history-of-bangladesh. Retrieved from <https://www.dhakatribune.com/bangladesh/247569/major-cyclones-in-the-history-of-bangladesh>,
16. Shaheedur Rashid Md Anowar Hossain Md Nazrul Islam, M. A. (2010). Saline Soils of Bangladesh Surveyed. Soil Resource Development Institute Soil Resource Development Institute SRMAF Project Ministry of Agriculture,.
17. Shahriar, S. (2021). Impacts of Floods and Riverbank Erosions on the Rural Lives and Livelihoods Strategies in Bangladesh: Evidence from Kurigram. *Researchgate*. Retrieved from https://www.researchgate.net/publication/353450374_Impacts_of_Floods_and_Riverbank_Erosions_on_the_Rural_Lives_and_Livelihoods_Strategies_in_Bangladesh_Evidence_from_Kurigram
18. Umma Rezoyana, M. K. (2023). Impact of Salinity: A Case Study in Saline Affected Satkhira District;. *Open journal of social science* , 303.
19. Walsham, M. (2010). Assessing the evidence: environment, climate change and migration in Bangladesh,. *IOM*.