

CLIMATE CHANGE AND MIGRATION: NEW CHALLENGES TO GLOBAL SOUTH

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Abstract

In 21st century, climate change has emerged as one of the major threats to mankind. Although climate change is a global phenomenon, but it's not affecting the world equally. The International Federation of Red Cross claims that in recent years—more than war and persecution—climate change disasters are a bigger cause of population displacement. This poses new challenges to the Global South. In the developing countries, it is not only climate change but other push factors which have compelled people to migrate internally or internationally. The study explores the causes of climate-induced migration and its impact on developing countries. The paper is based on qualitative research. To deal with climate-induced migration, the Global South requires a new framework for managing potential movements. It also need to collaborate and work on mitigation, adaptation, and risk reduction strategies at national and regional levels.

Keywords: *Climate-induced Displacement, Climate Refugee, Global South, Risk Reduction Strategies*

Introduction

Climate change has become one of the major drivers of human displacement in recent decades. The movement of people as a result of changes in environment is not a new phenomenon. For centuries, people have been moving seasonally, in response to climate change, as an adaptive strategy.¹ In 1985, United Nations Environmental Programme (UNEP) report described the environmentally conditioned migration. Professor Essan El-Hinnawi –author of the report – first used the term

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¹ Frank Laczko and Christine Aghazarm (ed.), *Migration, Environment and Climate Change: Assessing the Evidence* (Geneva: IOM, 2009).

environmental refugee as “those people who have been forced to leave their traditional habitat, temporarily or permanently, because of marked environmental disposition (natural and/ or triggered by people) that jeopardized their existence and/or seriously affected their life”.² Furthermore, International Organization for Migration (IOM) define ‘environmental migrants’ as “persons or groups of persons who, for compelling reasons of sudden or progressive change in the environment that adversely affect their lives or living condition, are obliged to leave their habitual homes, or chose to do so, either temporarily or permanently, and who move either within their country or abroad.”³ In 1990, Intergovernmental Panel on Climate Change (IPCC) warned about the risks of climate related disaster. It states that sudden and slow changes in climate can cause human displacement at regional and global level.⁴ Later, in 1992, UN Secretary General Boutros Ghali argued at Security Council that ‘drought and disease can decimate no less mercilessly than the weapons of war’.⁵

Traditionally, war and other human disasters are considered the push factors while better socio-economic opportunities act as pull factor. Migration, as a result of environmental degradation and rapid events related with climate change, has increased in the past few decades. Climate related migration has become a new frontier for research. The International Strategy Disaster Reduction report of 2009, clearly indicates increased events of natural calamities three fold in the past three decades. Furthermore, it also links migration with slow and rapid events of climate change.⁶

In 21 century, climate changes – rapid and slow together– have altered the physical environment. Across the globe there has been marked increase in natural disasters and gradual land degradation. Though climate change is a global phenomenon but its impact is not equal in every part of the world. Developing countries have to face more challenges than the

² Bogumil Terminski, *Development-Induced Displacement and Resettlement: Theoretical Framework and Current Challenges* (Geneva: 2013) <https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/8833>.

³ Susan Martin, “Climate Change, Migration and Governance,” *Global Governance* 16, no. 3 (2010): 397-414.

⁴ Laczko & Aghazarm (ed.), *Migration, Environment and Climate Change: Assessing the Evidence*.

⁵ Karen Elizabeth McNamara, “Conceptualizing Discourses on Environmental Refugees at the United Nations,” *Population and Environment* 29, no.1 (2007): 12-24.

⁶ United Nations, *International Strategy for Disaster Reduction* (New York: United Nations 2009).

developed one. Hallegatte et.al⁷ discussed five aspects of the poor people hit by natural disasters. Overexposure, higher vulnerability, less ability to cope and recover, permanent impacts on education and health, and, effects of risks on saving and investment behaviours are common factors for the developing countries – facing the challenges of natural disasters. Their ability to deal with catastrophic event is limited to capacity building. It is pertinent to mention that climate change is not the sole driver of migration. In the developing countries there are other push factors – for instance, poverty, fragile government, inequality, lesser economic opportunities, loss of arable land, ethnic conflicts, and depletion of natural resources etc., which compel people to migrate internally or internationally. Betts argues that environmental displacement is complex interaction of environment with other factors such as livelihoods and state fragility.⁸ Climate-induced migration can be temporary, as most of the migrants return home when conditions are favourable; or it can be permanent if migrants get better opportunities and refuse to return; thus exerting pressure in the areas of relocation. This situation can lead to conflict. The level of preparedness and capacity of resilience, of affected communities, determine their choices and actions of staying or moving to safe areas. The level of mobility can be reduced with climate change resilience projects.

Numerically and geographically, developing countries are more vulnerable to large -scale forced migration. Oxfam report of 2017, reveals that between 2008 and 2016, people in poor countries were around five times more than people of high income countries to be displaced by natural disasters.⁹ The Norwegian Refugee Council (NRC) also states that eight countries, out of ten, are at highest risk of internal migration as a result of climate related events.¹⁰

In past few decades, impact of climate change on society has become significant because of increased natural calamities. Mostly, researches focus on a particular area affected by the disaster. The aim of the research is to explore the challenges faced by the global South vis-a-viz climate induced displacement. The vulnerabilities of affected population are more or less similar in low- and middle-income countries. This paper attempts to address following research questions:

1. What are the causes of climate-induced migration?

⁷ Stephane Hallegatte, et.al, *Unbreakable: Building Resilience of the Poor in the Face of Natural Disasters* (Washington DC: The World Bank, 2017). <https://openknowledge.worldbank.org/bitstream/>.

⁸ Alexander Betts, "Survival Migration: A New Protection Framework," *Global Governance*, 16, no. 3 (2010): 361-82.

⁹ Oxfam, "Uprooted by Climate Change: Responding to the Growing Risk of Displacement," 2017, <https://www.oxfam.org/sites/www.oxfam.org/files/>

¹⁰ Norwegian Refugee Council, "Disaster will Displace 14 million People Every Year," 2017, <https://www.nrc.no/news/2017/october/>.

2. What are the implications of climate-induced migration on developing countries?
3. How can Global South encounter the challenges of climate related migration?

The conceptual framework of this study is mainly migration and secondly climate change and its impacts on societies. The uprooting of population from their land due to slow and abrupt climate changes, stages and type of migration, relocation and plight of refugees are discussed in paper.

Methodology

The study is qualitative where primary and secondary sources are explored. The sources include research papers published in scientific journals, books, periodicals, policy papers, thematic reports, NGOs reports, newspapers etc. Furthermore, institutional websites such as Oxfam, United Nations High Commissioner for Refugees (UNHCR), National Aeronautics and Space Administration (NASA), United Nations Framework Convention on Climate Change (UNFCCC) World Bank and Norwegian Refugee Council (NRC) have been reviewed for the latest updates. The collected data has been analysed to identify the common themes and issues of the developing countries pertaining to climate change and displacement. The literature review provided the insight information on challenges face by the developing countries in context of climate change and displacement.

Causes of Climate-Induced Migration

Climate-related migration is the result of slow-onset and sudden-onset changes in environment. The slow-onset changes in environment and climate include sea-level rise, land degradation, loss of arable land, drought, desertification etc. While, the sudden-onset changes are natural disasters such as floods, cyclones, intense heat wave etc. According to Susan Martin, environmental changes compel people to migrate internally or internationally because of:

- (a) the intensification of natural disaster
- (b) drought limiting the food production and access to clean water
- (c) increase in number of sinking islands due to rising sea level
- (d) competition over natural resource leading to conflict and in turn displacement.¹¹

After Copenhagen Conference in 2009, much attention was given to the gradual changes affecting the environment. In this context, the Cancun Agreement 2010 identified warming of earth due to rise in temperature, acidification of oceans, melting of glaciers and associated impact,

¹¹ Susan Martin, "Climate Change, Migration and Governance," 397-414.

degradation of land, deforestation, loss of biodiversity, desertification, and salinization as slow-onset events.¹² The Sub-Sahara African countries, South Asia, Middle East and parts of Latin America have experienced ill-effects of slow-onset changes in environment. Since last two decades they have been affected by the drought, desertification and water shortage resulting in decline of arable land, lesser food productivity and stress on remaining natural resources. UNHCR also affirms that human displacement is also related with decrease in natural resources, for instance, fresh water, food production, loss of arable land, fishing resources etc.¹³

In 2007, IPCC presented the projections for the twenty-first century, expecting increase in global warming, with estimates indicating a temperature increase of 3° C by 2100. The report predicted intensification of the hydrological cycle. Rainfall patterns are likely to change. Heavy and erratic rainfall in wet areas would turn them wetter, and lesser rainfall in arid and semi-arid zones will increase the dryness and aridity.¹⁴ Across the globe, developing countries are likely to be affected by the slow-onset climate changes. Crop productivity is projected to decrease at lower latitudes –Africa to be affected utmost – particularly in semi-arid and arid regions. Furthermore, salinization and desertification of agricultural land is expected in Latin America. With the loss of livelihood of agricultural communities, human movement from one degraded eco-zone to other zone is expected to increase in future.¹⁵ Along with slow-onset changes, rapid events – floods, erratic & heavy rainfall, cyclones, typhoons etc. – have emerged as the greater risks to the low-income countries.

The negative impacts of climate change on the eco-system have already caused severe damage to the land and people. In 1996, UNHCR's environmental guideline identifies six categories of environmental impact: natural resource degradation; irreversible impact on natural resources; impact on health; impact on social condition; social impacts on local population and economic impact.¹⁶ Local communities in the developing world stand testament to these impacts. In extreme cases, the degradation of livelihood of communities depending on natural resources compels people to migrate to the other areas.

¹² Denise Margaret Matias, "Slow-Onset Climate Change Impacts: Global Trends and the Role of Science Policy Partnerships," *Discussion Paper* (Bonn: German Development Institute, 2017)<https://www.die-gdi.de/uploads/>

¹³ UNHCR, "Climate, Natural Disasters and Human Displacement," *A UNHCR Perspective*, 2008,<http://www.unhcr.org/4901e81a4.pdf>.

¹⁴ United Nation Framework Convention on Climate Change, "Slow Onset Events," Technical Paper, 2012, <http://unfccc.int/resource/>

¹⁵ Ibid.

¹⁶ Adrian Martian, "Environmental Conflict between Refugee and Host Communities," *Journal of Peace Research* 42, no.3 (2005): 329-46.

Movement, as result of negative impacts of climate change on environment, is either internal or cross border. Migrants cautiously calculate levels of threats of staying in the hazardous zones with benefits of moving to safe places where they can find new opportunities before leaving a land.¹⁷ Migrants chose either to stay within their country or to cross the border, depending on their economic status and level of vulnerability. Climate-related displacement can be as follows in nature; internal / cross border migration, permanent/temporary, seasonal or circular. The pattern of internal migration can be rural-urban, rural-rural or urban- urban. Various studies suggest that climate related migration, in most of the cases, is internal. Further, McMichael et al argues that in developing countries, most of the rural-urban migration is circular. Displaced people have emotional and cultural attachment with their native land. They maintain their bond with their homeland and support their communities financially, too. For instance — research in Cote d'Ivoire indicates that people from Burkina Faso took great interest in development of basic facilities and agricultural modification of their villages by sending remittances to their hometown.¹⁸ Gioli et al endorsed the argument observing that in context of climate change it is often labour migration to benefit the areas via social and financial remittances.¹⁹ It is apparent from different climate- induced migration researches that in case of climate-induced migration people prefer to move internally. They avoid international migration because of its cost as moving from country of origin to country of destination is costly and people affected by disaster cannot afford it. Thereby, they want to stay close to their previous environment.²⁰

Circular migration is common in South Asia, too. Zaman's research (1989) explains the case of agricultural community of Bangladesh.²¹ After floods land was eroded and houses were destroyed, compelling families to migrate. People chose to stay within the two miles of their settlement.²² McAdam also agrees that most climate related movement will be internal rather than cross-border, particularly in the case of natural disasters. In

¹⁷ Celia McMichael, et.al, "Climate Change, Migration and Health," *Environmental Health Perspectives* 120, no. 5 (2012): 646-654.

¹⁸ Ibid.

¹⁹ Giovanna Gioli, Talimand Khan, Suman Bisht and Jurgen Scheffran, "Migration as an Adaptation Strategy and its Gendered Implications: A Case Study from the Upper Indus Basin," *Mountain Research and Development* 34, no.3 (2014): 255-65.

²⁰ Anthony Messina and Gallya Lahan (ed.), *The Migration: Exploring Politics and Policies* (New Delhi: Viva Books, 2006).

²¹ Mohammad Q. Zaman, "Vulnerability, Disaster, and Survival in Bangladesh: Three Case Studies 1," In *The Angry Earth* (Routledge, 2019) 162-177.

²² Laczko & Aghazarm (ed.), *Migration, Environment and Climate Change: Assessing the Evidence*.

Kiribati and Tuvalu, people living on the outer islands will initially move internally to the main Atoll not directly overseas.²³

Internal Displacement Migration Centre (2016) reveals that from the years 2008 and 2015, 21.5 million people, per year, were uprooted by rapid onset events—floods and storms. The majority of displaced people prefer to stay within their country.²⁴ The severity of issue can be confirmed as Norwegian Refugee Council also ratified that storms, floods and droughts displaced over twenty-four million people within their respective countries in 2016 alone.²⁵

The case of Somalia's communities is an example of cross border climate- induced migration. Slow-onset of changes causing drought has displaced many a poor communities in Somalia. In 2011, Somalia experienced severe drought. Pastoralists were compelled to migrate because of lack of rainfall and political turmoil. The drought worsened the turmoil leading to violence. It affected the livelihood of pastoralists. This resulted in internal and cross border migration. Many pastoralists' tribes migrated to Kenya and Ethiopia. In Somalia drought was not the single push factor; political turmoil and violence together with drought acted as push force for pastoralists to migrate internationally.²⁶

Implications and Challenges to Global South

Climate change is not affecting the world equally. Low-income²⁷ and middle-income²⁸ countries are more vulnerable to the negative impacts of climate change. It is recognized that the single most dominant factor, which determines vulnerability to climate change is poverty. World Bank report (2017) discloses that natural disasters increase global poverty. "Poverty is thus a factor in the vulnerability of disasters; similarly, disasters are a driver of poverty."²⁹

²³ Jane McAdam, "Conceptualizing Climate Change-Related Movement," Proceedings of the Annual Meeting, *American Society of International Law* 106, (2012): 433-36.

²⁴ Internal Displacement Monitoring Centre (IDMC), "Seizing the Momentum: Displacement on the Global Climate Change Agenda," 2016, Briefing Paper, <http://www.internal-displacement.org/assets/publications/2016/20161102-climate-change.pdf>.

²⁵ Norwegian Refugee Council, "Disaster will Displace 14 million People every Year."

²⁶ Shweta Jayawardhan, "Vulnerability and Climate Change Induce Human Displacement," *Consilience*, no.17 (2017): 103-42.

²⁷ According to World Bank, Low-income Economies are Those with a Gross National Income (GNI) per capita of \$1,045 or less in 2014.

²⁸ Lower middle income and upper middle-income economies are those with GNI per capita between \$1,046 to \$4,125 and \$4,126 to \$12,735 respectively.

²⁹ Stephane Hallegatte, et.al, *Unbreakable: Building Resilience of the Poor in the Face of Natural Disasters*.

Climate change impacts are felt differently (i.e. more strongly) to the vulnerable communities and nations. Not only communities and countries that are in areas where climate is altering rapidly and having negative impacts, but this is amplified for societies that are highly vulnerable to these impacts due to risk factors such as high poverty rate and inequalities. That is, climate change impact is exacerbated in societies that have fragile socio-economic situations.³⁰

IPCC had already warned about the repercussion of climate change on poor nations. It said 'it is low- income women and men within developing countries who are most at risk from climate change'.³¹

In developing countries, many urban communities are located in the areas where disaster risks are high. When people migrate to urban-poor settlements they will face ongoing threats associated with climate change, including shortage of water, flooding, sea-level rise, and extreme weather events.³² People migrating to Bangkok, Mumbai, Vietnam are not very safe from the risks of extreme events. In low and middle -income countries, the impact of climate change on ecosystem poses risks to the livelihood of the communities. Their well-being is threatened as they are dependent on natural resources. Alteration in ecosystem can compromise their livelihood. This can cause people to migrate as an adaptive strategy.³³ The 2017 report of Internal Displacement Monitoring Centre (IDMC) reveals the number of people displaced by natural disaster in 2016; the countries with largest number of displaced people include China, India, Philippine Myanmar, Bangladesh, Sri Lanka, Indonesia and Cuba.³⁴ The weaknesses of developing countries are evident from this report. Furthermore, South Asia appears to be more susceptible than any other part of the world.

Bardsley & Hugo's studies finds the susceptibility of highland region by emphasizing that extreme monsoon, floods and resultant landslides have acted as push factors for rural people in Nepal. Furthermore, poverty, food insecurity and lack of local development

³⁰ MDG Achievement Fund, "Environment and Climate Change: Review of MDG-F Joint Programmes Key Findings and Achievements," http://mdgfund.org/sites/default/files/Environment_Thematic%20Study_0.pdf.

³¹ Oxfam, "Bolivia: Climate Change, Poverty and Adaptation," 2009, <https://www.oxfam.org/sites/www.oxfam.org/files/>.

³² Celia McMichael, et.al, "Climate Change, Migration and Health."

³³ Ibid.

³⁴ IDMC & NRC, "Global Report on Internal Displacement," 2017, <https://www.internal-displacement.org/assets/publications/>.

opportunities compel rural population to give up cultivation on their land and move to urban centers.³⁵

Another example of South Asia's vulnerability to climate change is case of Bangladesh. Cyclone Aila, 25th May 2009, hit six districts of Bangladesh. There was loss of 190 lives and three million of population was affected.³⁶ The cyclone destroyed the agriculture and shrimp farming. The livelihood of rural people was jeopardized. The male members of family had no option left but to migrate. They moved to urban areas to earn money for their families. Their migration was in order to make their lives better as there was no feasible alternative left in their place of origin.³⁷

As per MIT Lincoln Laboratory research, Bangladesh, contributes less than one percent of carbon emissions but is a victim of climate change more than any other country. Rice cultivation has been badly compromised because of sea level rising in the coastal area of Southern Bangladesh. Ninety millions population is directly suffering from the rapid and slow events of climate change.³⁸

Across the world, some of the thickly populated regions are overexposed to negative impacts of climate change. For instance, Java in Indonesia, Mekong delta, Cho Phraya valley (Thailand), coastal areas of China, river valleys of Pakistan, India and Bangladesh are countries, where some communities are vulnerable due to lesser levels of preparedness and resilience. The Institute for Climate and Sustainable Cities' findings further recognized the negative impact of climate change on South Asia and South East Asia. The report states that agricultural productivity would be reduced to 50 percent in the next three decades and 'agriculture serving as the backbone of most economies in the region, such plunging yield would shake countries to the core'.³⁹ This will accelerate the process of migration internally and internationally. The migrants in Asia have to leave their origin place and settle in other risk prone areas. Bangkok has been identified as one of most vulnerable city to coastal inundation. Parida argues that 20 million people are annually migrating from Bangladesh to

³⁵ Douglas K. Bardsley & Graeme J. Hugo, "Migration and Climate Change: Examining Thresholds of Change to Guide Effective Adaptations Decision-making," *Population and Environment* 32, no.2/3 (2010): 238-62.

³⁶ International Federation of Red Cross and Red Crescent Societies (IFRC), Operation updated, October 8, 2009.

³⁷ Shweta Jayawardhan, "Vulnerability and Climate Change Induce Human Displacement."

³⁸ Kylie Foy, "Empowering People to Adapt on the Frontlines of Climate Change," *MIT News*, April 19, 2021, <https://news.mit.edu/2022/>

³⁹ Institute for Climate and Sustainable Cities, "Slow-Onset Climate Changes Impacts: What it is, Why should We Care, and What We can Do About It," 2014, http://icsc.ngo/sites/default/files/resources/Slow-Onset-Impacts-of-Climate-Change_iCSC.pdf.

India. He refers to Myers (2002) fear that climate refugee from Bangladesh alone might outnumber all current refugee worldwide.⁴⁰ Another study on migration regime highlights the Middle East's worsening situation. Koser⁴¹ explained that environmental degradation will reduce the fertile arable land in Middle East and North Africa. This will result in unemployment – youth would look for economic opportunities—forcing people to migrate.⁴² Many countries in Asia are dealing with post disaster plans. For instance, government of Philippine is working to permanently relocate a million people displaced by the Typhon Haiyan in 2013. They are utilizing their national resources along with international aid.⁴³

The African nations, too, have been experiencing slow-onset changes in environment since many decades. Drought, lack of rainfall, desertification have affected millions of Africans. With the increase in climate-related migration, the conflicts over natural resource have also intensified. Furthermore, the ruthless exploitation of natural resources by non-natives has accelerated the tension over the control of the resources. Sub-Saharan states are badly affected by poverty, political turmoil along with environmental degradation. The region comprises of 800 million people in 49 countries; its population for 2050 is projected to approach 1.5 billion people.⁴⁴ Another research by UN Environment Programme predicted that 'by 2060 there could be 50 million environment refugees in Africa alone'.⁴⁵ The vulnerability of Africa would further accelerate as there will be decrease in fresh water availability by 2020 in Africa eventually affecting between 75 and 250 million people.⁴⁶

Rachel Furlow traces the Darfur civil war with desertification and food insecurity. Population in Darfur relied on agriculture. Dry spell and high temperature resulted in drought, which negatively impacted the livelihood of those directly related with primary sector activities. Different groups migrated towards South Darfur increasing the social tension in the

⁴⁰ Architesh Parda, "Climate Refugee: Implications for India," *Economic and Political Weekly* 45, no.20 (2010): 76-79.

⁴¹ Khalid Koser, "Introduction: Internal Migration and Global Governance," *Global Governance* 16, no.3 (2010): 301-15.

⁴² Ibid.

⁴³ Elizabeth Ferris, "Disaster, Displacement and Climate Change: New Evidence and Common Challenges Facing the North and South," 2015, Brookings Institution, <https://www.brookings.edu/blog/planetpolicy/2015/07/27/>

⁴⁴ The World Bank, "4 Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case of Resilience," 2013, <http://www.worldbank.org/content/dam/Worldbank/document/>

⁴⁵ Petra Durkov, et al., "Climate Refugee in the 21st Century," 2012, Regional Academy on the United Nations, <https://fusiondotnet.files.wordpress.com/2015/02/climate-refugees-1.pdf>.

⁴⁶ Shweta Jayawardhan, "Vulnerability and Climate Change Induce Human Displacement."

area. The burden on natural resources multiplied with increased food insecurity, creating a low-intensity local conflict among the migrants and the host population. Khartoum's failure to address the challenge of climate-migration-conflict link, resulted in the civil war.⁴⁷

The highest cross border movement around the globe was witnessed in Eastern Horn of Africa. In 2020, the region hosted 6.5 million internally displaced persons due to climate related events. The uneven weather patterns were recorded earlier in 2018, with increase in hot and dry conditions, in Somalia, Eritrea and Djibouti. The risk of prolonged drought created fear in the communities directly linked with agriculture. The food insecurity impacted 12 million people of this region. Nonetheless, in coming years this region is more vulnerable to climate related events resulting in internal and circular migration.⁴⁸

African states are also working to eradicate different environmental crisis. The case of Mozambique is worth mentioning. In rural areas, authorities had focused on a resettlement process by providing basic infrastructure and locals were encouraged to produce solid houses. However, resettlement is causing additional problems as well. The affected population is still dependent on government and international aid and remain very vulnerable to future flooding.⁴⁹

In Latin America, floods, cyclones, heavy rainfall has created havoc in the last few years. Although desertification of the Amazon rainforest was globally discussed, but negative impacts of other slow-onset changes in agriculture countries were not highlighted in international media. Many Latin American countries are going through environmental and climate changes which is affecting the livelihood of poor pastoralist and agricultural communities. Oxfam highlighted the dilemma of this region. Bolivia, Peru, Colombia, Ecuador are vulnerable to climate change. They are least responsible for global warming but are paying the prices of massive industrialization in the developed world.⁵⁰ In this region migration trend is internal. People move within their country to avoid hardships of cross border migration. The Oxfam exclusive report on Bolivia exposed its vulnerability. Flooding, landslides, epidemic and drought affected thousands of Bolivians. Since the beginning of twenty-first century, the frequency of natural disaster has increased markedly.

⁴⁷ Rachel Furlow, "Addressing the Politics of the Climate-Migration-Conflict link," *Forced Migration Review*, Oxford Issue 69 (Mar 2022): 14-16.

⁴⁸ Eric Nelson and Saira Khan, "Climate and Migration in East and the Horn of Africa: Spatial Analysis of Migrants flow Data," IOM UN Migration and Harvard Humanitarian Institute, August 16, 2022, <https://dtm.iom.int/reports/climate-and-migration-east-and-horn-africa-spatial-analysis-migrants%E2%80%99-flows-data>

⁴⁹ Laczko & Aghazarm (ed.), *Migration, Environment and Climate Change: Assessing the Evidence*.

⁵⁰ Oxfam, "Bolivia: Climate Change, Poverty and Adaptation."

The period of 2001 to 2004, saw the highest number of declaration of emergency in the last seventy years'.⁵¹

It is likely that climate related migration would increase in food insecure areas where hunger is prevailing and large number of population is malnourished.⁵² It aggravates the insecurity of poor individuals or communities if they have been forced to leave their country of origin. Furthermore, the huge population settled in destination area would exert pressure on natural resources. It is likely that host community and refugees will compete for resources and end up in conflict. Nordqvist and Krampe highlighted the risks of conflict in host communities and migrants in case of interstate and intra-state migration.⁵³

Usually, the conflict between the locals (host communities) and outsiders (migrants) occurs over the resources of the area. The xenophobic attitude of the locals is unfavourable in places where socio-political stability is at a lower level. The influx of migrants is perceived as a burden on the local resources of the land and liability to the region. Regions experiencing environmental migration –with population stress – are expected to be in a worse scenario in future. Sinking small island states like Tuvalu and Maldives, flooding in deltaic plains – for instance, Mekong Delta, Inner Niger and Ganges Delta – drought affected and desertized regions like Sahel are prone to adverse climate change in coming years.⁵⁴ Presently, much attention has been giving to issues related with climate change and its impact on humans. Many developing states are trying to cope up with the negative impacts of changes caused by climate with various strategies. UNDP Project (2003) intended developing countries to take account of their own future. They suggested that countries of South cooperate and collaborate each other thus, enhancing the South-South cooperation.⁵⁵

Recommendations

The Global South can counter climate-related challenges, including displacement as following:

⁵¹ Ibid.

⁵² Celia McMichael, et.al, "Climate Change, Migration and Health."

⁵³ Pernilla Nordqvist and Florian Krampe, Climate Change and Violent Conflict: Sparse Evidence from South Asia and South East Asia," SIPRI Insights on Peace and Security No. 2018/4: September 2018.

⁵⁴ Laczko & Aghazarm (ed.), *Migration, Environment and Climate Change: Assessing the Evidence*.

⁵⁵ Arif Dirlik, "Global South: Predicament and Promise," *The Global South* 1, no.1 (Winter 2007): 12-23.

At Local Level

- Environmental consciousness must be inculcated in local people. Environmentally aware population can conserve and protect their natural resources passionately.
- Indigenous communities and their knowledge should be integrated in conservation and preservation strategies as these communities – particularly in Asia and Africa – has been the custodian of land and its resources.
- Introduction of policies securing the livelihood of communities depending on natural resources.
- Participatory approach should be encouraged. Bangladesh government had launched cyclone preparedness programme in which locals participated actively.
- To deal with the slow-onset changes, adaptation of sustainable agricultural practices, management of pastoral lands, construction of dykes, embankments and coastal barriers should be planned to reduce the pressure on fragile eco-system.

At National Level

- It is necessary to strengthen the institutions by adopting proactive policy to deal with the climate related issues.
- Integration of local and national strategies for effective capacity building.
- Formulation of environmental/climate change policy, clearly defining the hazards and risk zones in the country
- Early warning system should be highly vigilant in order to avoid extensive damages.
- Preparedness policy must cover both pre-disaster and post-disaster action plan.
- Well planned relocation policy for migrants. For instance, Vanuatu, in the Pacific Islands, has developed protective measures and operational procedures for resettlement.⁵⁶
- To address the land degradation issue, sustainable land management practices need to be introduced in country.
- Climate resilient, migrants friendly towns have been set up by Bangladesh. Such towns would not exert demographic pressure on the densely populated urban centers.

At Regional Level

- Collaboration with neighbouring countries, experiencing the similar threats, is recommended.

⁵⁶ International Organization for Migration (IOM) 2018, Vanuatu: National Policy on Climate Change and Disaster-Induced Displacement, https://www.iom.int/sites/g/files/tmzbd1486/files/press_release/

- Formulation of a regional environmental policy emphasizing on collaboration and common threat of climate change issues, sharing scientific and technical knowledge that can prepare the developing country to combat the aftermath of climate change.
- The role of regional organizations (SAARC, ECO, AU, ASEAN) needs to be enhanced to deal with environmental issues in twenty-first century.
- Relief-web and Oxfam are quite actively working for displaced people. Another notable organization, Relief International operates in sixteen states of Asia and Africa. Refugee International helps migrants, in Americas, Asia and Africa.
- It is necessary to check that host communities do not turn hostile towards migrants. Maintenance of peace in areas of disaster is necessary for implementation of policies
- Carrabin Movement Agreement on climate migration, is a good example of free movement between member states. In 2017 hurricane, governments soften border restrictions and allowed affected populations to move towards safe places on other islands.⁵⁷

At Global Level

- Global South needs to work with the developed countries in order to eradicate poverty, inequality which in turn enhances the vulnerabilities of poor nations to respond to climate change impacts. On the other hand, it is the responsibility of developed states to finance the adaptive strategies in the Global South which have become victim of Green House Gasses (GHG) emissions produced by the developed nation.
- Mitigation is a significant response to deal with the threat of global warming. Developed countries should reduce their GHG emissions to 2°C temperature in future
- The scope of refugee regime should be extended. The status of environmental/ climate refugees should be recognized by the International law.
- It is necessary to deal with the challenges of climate-related migration – by providing climate-migrants protection and humanitarian aid – especially in time of an increasing resentment towards migrants around the world.
- Increase in Climate Change Research Fund is highly recommended. To reduce risks, strategies for preparedness and mitigation planning is suggested.

⁵⁷ Ama Francis, *Free Movement Agreements & Climate-Induced Migration: A Caribbean Case Study* (New York: Columbia Law School, 2019)<https://disasterdisplacement.org/portfolio-item/fma-caribbean>

Conclusion

Global South constitutes of many developing states. Though there is diversity across the South – in terms of geography, culture, languages, developments etc., many factors are similar too. The comparable factors include poverty, dense population, unemployment, lack of education and health facilities, inequality, poor governance and in some cases colonial history, civil and human rights violations, abuse, war, hunger, disease etc. Now a days, climate change has emerged as one such threat. IPCC had warned the climate related disasters in 1990 and feared that such natural disasters can uproot the population which is vulnerable and exposed to natural disasters.

The impacts of climate change have been quite negative on the poor countries of the world. Climate induced migration is one of the negative effects of change in environment. With slow and rapid changes in environment, most of the poor communities in developing countries have lost their livelihood. Frequent natural disasters, drought, scarcity of water, increased vulnerability of islanders with exposure to rising sea level are major push factors of population displacement. Slow and sudden on-set changes in the middle and lower latitudes, have increased the climate related migration in Africa, Asia and Latin America. Slow onset changes, particularly, drought, scarcity of food and water have exerted undesirable pressure on livelihood of Sub-Sahara African, South Asian and South American countries. Communities, especially, dependent on agriculture, have no other option left but to migrate. Furthermore, sudden and rapid events for instance— flood, heavy rainfall, typhoon also pose greater threat to exposed population of developing countries having with zero or lesser resilience. From 2008 to 2015, floods and storms caused twenty-one and half million people, per year, to displace. At the initial and intermediate stages of slow onset climate change, the migration is often voluntarily opted by the affected population with meagre resources to move from one place to other. It is more of an adaptation strategy. The ongoing deterioration of eco-systems across the world is increasing the hardships of the poor communities dependent on natural resources, causing temporary and circular migration.

It is important to encounter the challenge of climate and relate it to issues including migration, collectively. First it is necessary to comprehend and recognize the seriousness of climate- related disaster on poor countries. Secondly, developing countries should put forth pressure on the developed states to cut down carbon emissions causing disasters in the developing countries that are not responsible for global warming. Developing countries contribute the least of global carbon emissions but are at greater risk of rapid and slow events of climate change. According to Global Climate Risk Index 2021, the most affected countries from 2000 to 2019 are Puerto Rico, Myanmar, Haiti, Philippines, Mozambique, the

Bahamas, Bangladesh, Pakistan, Thailand and Nepal. A developed and developing countries collaboration can benefit the global environment. Thirdly, developing countries themselves avoid environmental-hazards development projects. All projects whether in developed or in developing countries should be in line with an environmental protection policy.

A more holistic approach is needed to deal with all the issues pertaining to environmental changes. At national and regional level, it is necessary to prioritize policy for land and natural resources management. Slow-onset changes in environment should be managed with viable strategies, thus, securing the livelihood of communities dependent on natural resources. This will in turn, reduce the migration too. If migration is inevitable, then national policy should be integrated with regional policies to protect the climate refugee in the region.

