

Climate Justice for Displaced Persons in Bangladesh: A Review Paper

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Abstract— Climate change is a recent burning global phenomenon which is imposing significant threat through changing different components of environment all over the world and Bangladesh is one of the most vulnerable countries in the world. Climate justice is the suitable way to eradicate differences in equality for all people resulted by climate change and ensures the equal rights through confirming the implementation of necessary legal practices and protects climate changes to remove discrimination permanently and minimize the impact on economy. Several impacts of climate change such as increased temperature, drought and salinity intrusion etc. are imposing risks and damages on the economy sectors for example, rice and wheat production, fisheries, surface and groundwater resources, industry, marine resources, livelihoods, forestry, biodiversity of Bangladesh. Furthermore, it is predicted that, because of sea level rise, more than 30 million people of Bangladesh will migrate where climate change is main responsible for changing ecosystem services. Adaptation is the major mechanisms for displaced person to adjust at the place of origin and destination in the local and global level. Present status of climate justice in human rights for displaced in the perspective of adaptation and migration shows that, protecting self against arbitrarily displaced, inspiring adaptation including opportunities for development, equal rights for men and women, right to move freely, right to seek safety and asylum, right to protected against forcible return etc. are covered by legal practices; Other hand, climate justice in different aspects- protection of property left behind by internally displaced persons, right to know about missing relatives, fully support to sick people, involvement of affected people and other several issues which are not issued in legal practices in Bangladesh are presented in this paper highlighting the importance on implication of justice. The establishment of proper climate justice issue on human rights should be introduced in the legal practices to maintain sustainable migration and adaptation for displaced persons. This study will help policy makers, administration panel and others to think about climate justice on human rights in the perspective of migration and adaptation in the national and global level.

Index Terms— Climate Justice, Human Rights, Displaced Persons, Economy, Migration, Adaptation

INTRODUCTION

Climate change is an ethical issue and growing field of inquiry highlighting the concept of climate justice on human rights, collective rights, historical responsibility in relation to climate change in human communities and ecological systems indicating the reasons of climate change. Climate change is the biggest risk of the 21st century and it is mostly identified in the aspect of public welfare priority [45]. Climate justice is used with the reference to legal approach which can be achieved through implication and improvement of legal systems in the region of climate change.

From 1980s to 1990s, climate change was conceived as a scientific and environmental issue and in 1990s the potential impacts of climate change on migration of human were marked by the Intergovernmental Panel on Climate Change (IPCC) and it mentioned that millions of people would be displaced by shoreline erosion, flood in the coastal areas and disruption of agricultural sectors [17] and it is important to consider the migration and resettlement outside of the national boundaries [42]. In the time of 2000s, the social and humanitarian impacts of climate change started to be more highly identified [12].

Furthermore, because of severe climate change scenario, sea level rise poses significant threat that would inundate 18 percent of total land of Bangladesh including directly impact on 11 percent of the population. Other hand, salt water intrusion from sea level in low-lying agricultural land could decrease 40 percent in food grain production which would increase forced migration to the urban slum areas and 1 or 2 degree increase in temperature would force physical displacement of more than 35 million people in Bangladesh [18]. In Bangladesh, because of several types of disasters like cyclones, tidal surges and floods, total 56.52% households affected one time [4] and it is expected that to increase to about 41.8 million in 2015 and 57.9 million in 2050 [10].

It is predicted that because of climate change about 30 million people will be displaced from Bangladesh by 2050. Bangladesh is one of the most vulnerable countries in the world to climate change including sea level rise [2, 3, 17] and hydrologic changes are the most significant potential impacts of global climate change. It is proved that because of enhancing intensity of various extreme events such as, flood, land erosion, rain-fall, tornadoes, drought, storm surges, salinity intrusion etc. loss of livestock and pasturelands, fodder scarcity, shelters and production destruction etc. are increasing [14]. Due to increasing monsoon rains and flash floods including increasing level of precipitation, rainwater flooding is increasing. Furthermore, because of the effects of tectonic subsidence's, over the past century the sea level rise rate in Bangladesh is higher than average rate of global sea rise [30]. Sea level rise is also occurred due to increasing riverine flooding, because it

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causes more backing up of the Ganges-Brahmaputra-Meghna Rivers along the delta [1].

Climate change will promote drought in Bangladesh which is related to higher mean temperature and reduced precipitation in dry season while it was found that, from 1960 to 1991, total 19 droughts occurred in Bangladesh [1].

Climate justice is the movement that progress best uses of political economic and political ecological topics to struggle against the serious threat or risks related to humanity and risks of other species in the 21st century. Climate justice is the fair way to remove differences in equality for all people created by climate change and confirm the equal rights through establishing necessary policies and protect climate changes that eradicate discrimination differences permanently. Furthermore, climate justice is an issue that finalizes a decision through conducting discussion on various issues related to climate [43] while multiple meaning of climate justice presented at the Cancun COP16.

This study is conducted to realize the present condition of climate justice scenario in legal practices in the case of human rights of adaptation and migration of internally displaced person and impact of climate change on economy because of climate change effects in Bangladesh.

IMPACTS OF CLIMATE CHANGE

The subtropical monsoon climate of Bangladesh is increasing the vulnerability of economic sectors and climate change scenarios where this country is suffering with huge population, increasing rate of poverty, less developed institutional structures etc. [35]. The economy of Bangladesh is based on agriculture where two thirds of the population directly or indirectly engaged with agricultural activities, although industrialization is increasing day by day in this country. Agriculture is most sensitive to climate change [6]. During the time 1962-1988, about 0.5 million tonnes rice lost annually in Bangladesh because of floods, which accounts for nearly 30% of the country's average annual food grain imports [27]. Several impacts of climate change such as increased temperature, drought and salinity intrusion etc. are also reduced the yields rate of crops in Bangladesh. It was estimated from a study that, 4°C temperature increase would have a serious effect on food production in Bangladesh resulting in a 28 percent and 68 percent reduction for rice and wheat, respectively [30]. In the coastal areas of Bangladesh, salinity intrusion has a serious impact on the soil quality including the rice growing areas. Because of salinity intrusion, under a moderate climate situation crop yields decline could be 0.2 Mt, which increases to 0.56 Mt under severe scenarios [30].

Furthermore, increases in water stress have affected production of major crops and from a study it was found that, the production of rice and wheat could reduced by 8 percent and 32 percent, respectively by 2050 [17]. In Bangladesh, fisheries sector contributes to about 3.5 percent of the GDP and this sector will affect by climate change. Approximately 260 species of fish are sensitive to particular salt and freshwater conditions [22]. Intrusion of saline water in freshwater rivers, associated with climate change will effect on fish populations.

The impact of climate change will affect the food security of Bangladesh where by the year 2030 food grain requirement will be 41.6 million tonnes and to become self sufficient by this time, an additional 14.64 million tonnes will be required [31]. Irrigation water demand of rice will be affected by climate change through changing physiology and phenology of rice, soil water balances, evapotranspiration and effective precipitation [35].

In Bangladesh, climate change will impose adverse impacts on the surface and groundwater resources [17]. Salinity intrusion will affect the coastal areas and during the dry season almost 100 kilometers land already penetrated by saltwater and climate change will emphasize this [31].

Furthermore, low lying coastal cities are directly vulnerable to the risks of sea level rise and storms [19]. If sea level rises up to 1 meter within this century, 15 percent land will be lost and more than 30 million population of Bangladesh become climate refugees [13] and agriculture, industry, marine resources, livelihoods, forestry, biodiversity, human health and livelihoods will suffer which ultimately lead to a decline in GDP of between 27 and 57 percent [1]. Other hand, in Bangladesh climate change will impose a detrimental impact on all of the forest ecosystems and world heritage sight single largest mangrove forest Sundarban to be the worst affected [30].

In the case of impact of climate change on human health, through various extreme events directly impacts on human such as in 2004, 800 deaths were occurred because of floods [33]. Key sectors such as infrastructure, industry, trade, commerce etc. of low lying coastal cities will be affected by floods which will reduce the productivity and increase vulnerability of urban poor for which migration will be increased to urban areas to find opportunities of job and put pressure on scarce housing, water, sanitation and energy services [19]. A study found that at least one in thirteen people had been forced to change their profession in the time of flood in 1998 and after flood 27.4 percent people were unemployed [31]. The urban poor especially women are more vulnerable to chronic poverty because of gender inequalities in various social, economic and political institutions. In 1991 cyclone the death rate of women was almost five times higher than men in Bangladesh [31].

Most of the people in the coastal areas of Bangladesh are poor mostly living in marginalized lands where livelihood and income largely depends on natural resources. In future, temperature will rise in drought-prone areas decreasing the quantity of rainfall for which crop yields pattern will change which will hamper poor people's livelihoods, reduce availability and damage water quality for domestic uses, increase the infection of vector and water borne diseases, degrade availability of traditional medicines etc. [14]. Increasing of temperature from January to February reduced the revenue by BDT 18885 ha⁻¹ (USD 239.05) and BDT 9,603 ha⁻¹ (USD 121.56), respectively from wheat production where enhancing of temperature during December increased it by BDT 7,045 ha⁻¹ (USD 89.18). Other hand, during December and January increasing rainfall increases the net return by BDT 128 ha⁻¹ (USD 1.62) and BDT 543 ha⁻¹ (USD 6.87), respectively [20].

Because of heavy rains, over full river channels, sea surges

associated with cyclones, lands of Bangladesh are frequently flooded. Furthermore, a severe impact will affect on local economies and human welfare because of changing climate scenario [9]. Bangladesh is a most vulnerable country to climate change and numerous climates induced disastrous events such as, floods, cyclones, storm surges etc. would have decisive effects on human health [26] where women, children, elderly and disabled people are mostly vulnerable as they cannot easily adjust with the unfavorable environmental situation at time of disasters [11] Increasing trend in surface air temperature and temporal variation is most severe in Bangladesh and it is marked that highest mean sea level within the range of 0.4-0.65degree Celsius during the past 40 year period and climate change may affect irrigation patterns for all cropping seasons as Rabi, Kharif-I and Kharif-II [25]. Impacts of climate change on different sectors can be presented as figure 1.

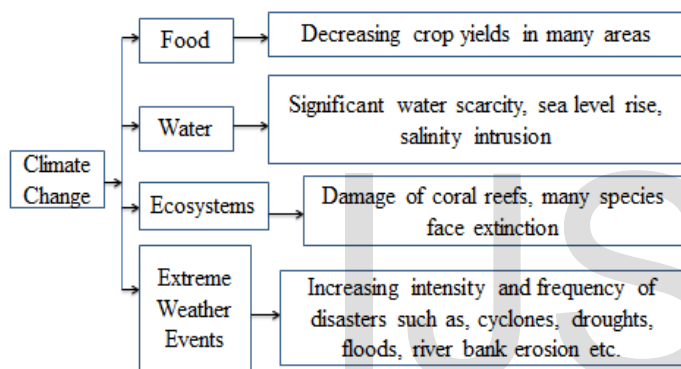


Figure 1: Predicted impacts of climate change

MIGRATION: A CONSEQUENCE OF CLIMATE CHANGE

Migration is a term containing broad aspects which can incorporate all types of movements of people from one place to another which may take place within particular geographical boundary of a country or outside of its boundaries. Because of changing climate, ecosystem services are altering including increasing risks and pressures which is one of the main causes of human migration [21] where future attitude of migratory can be estimated through realizing the effects of climate changing features on migration [5]. In the case of poorer countries, alteration of numerous number of capital for example, human, financial, physical, social and natural emphasizing the field of taking decision related to migration and consequences [7, 16]. Migration has played an important function in the improvement of economic aspect of Bangladesh where confirming a decision aspect also related to stresses, utility of locations, characteristics of destination [15].

ADAPTATION: A WAY TO ADJUECT AGAINST CLIMATE CHANGE

Adaptation is one of the major mechanisms at local and migration places to cope with the climate change effects. Furthermore, adaptation depicts to a process adjust in different systems for example ecological, social and economic against real or predicted impacts of climate change [47]. People’s adaptation and climate awareness against climate change is related with severalnnumbers of aspects where climate awareness is linked by their sphere of connectivity with climate scenarios[32]. The aim of adaptation is to adjust with the risks of climate change within a tolerable limit.The limits of adaptation are noticed when risks of climate become out of tolerable limit [8] where several strategies such as, sharing of losses, modifying risks, preventing impacts, alteration of uses and places etc. were recommended by Pender [28]. Adaptation helps people to reduce dependency on vulnerable process which can less the damaged by sudden events also [46].

GAPS TO ENSURE CLIMATE JUSTICE IN HUMAN RIGHTS FOR DISPLACED PERSON

Person who has been forced to leave his location of origin for natural or manmade reasons is known as displaced person. In case of protecting self as a human against arbitrarily displaced from his residence is covered by the constitution of People’s Republic of Bangladesh [37]Where matter of inspiring adaptation to climate change necessary measures will be included to strengthen local and national mechanisms for proper assessment, sharing of information etc. is issued by perspective plan of Bangladesh, 2010-2021 [29]. Opportunities for development should be improved through sharing of resources, social integrated program should be taken including protect traditional local culture for the disadvantaged rural community specially aged, destitute, disadvantaged, physically and mentally handicapped, orphaned and widow [23, 38]. Furthermore, for improvement of a particular area including socio-economic characters for example, barind tract, char areas, coastal areas, island and hill tracts etc. proper programs will be introduced [23]. Again, equal rights for men and women with respect to property ownership and treatment before law are confirmed in legal practices of state including ensuring equal scopes for all citizens [38].Furthermore, all citizens have the right to move freely throughout Bangladesh including to settle in any place therein and to leave and re-enter Bangladesh seems internally displaced persons have the right to seek safety in another part of the country, to seek asylum in another country and right to protected against forcible return to or resettlement in any place [37].

In the case of gap in the legal document about human right justice in legal practices, protection of property left behind by internally displaced persons, right to know about of missing relatives, fully support to wounded and sick internally displaced persons with medical care, matter to take decision by authority empowered by law to order measures during the emergency scenarios of disasters including adequate steps to disseminate full information, involvement of affected in plan-

ning, right to an effective remedy including psychological and social services, right to an effective remedy, require to issue displaced persons with all documents necessary for the enjoyment, to establish requirements permitting internally displaced persons to come back voluntarily in safe process with dignity to their location of origin etc. are not issued in legal practices in Bangladesh.

IMPLICATION OF JUSTICE: ADAPTATION VS LOSS AND DAMAGE

Adaptation depicts that a man or natural rule cope with changing conditions of environment and furthermore in the aspect of climate change, adaptation can not be conducted only for intense disastrous weather events but also due to slow onset climate events that hamper the functions of a system [36]. Adaptation and loss & damage refers that a system of human to manage with existing impacts of climate change. According to proposal of Warsaw International Mechanism (WIM), on the basis of numerous destinations which should be implied to adaptation and to loss and damage approaches, it is important to differentiate between adaptations, loss and damage [40]. Loss and damage related with adverse impacts of climate change can be minimized by adaptation [39] but some of the negative effects cannot be accompanied by adaptation measures [25, 41]. The step for both adaptation efforts and loss & damage measures is related to reduce risks including different kinds of risks. Measurement of loss & damage refers preparations of human systems to adjust against existing negative effects of loss & damage. Adaptation measures and loss & damage approaches also cover risk management. Risk reduction features is a approach is the stage which distinction among risk reduction, risk retention and risk transfer [44] where risk reduction helps to minimize the adverse impacts of climate change such as construction of dykes, implications of early warning systems; risk retention is related to build resilience and risk transfer includes transmitting of risks from individual level to the community level as a entire part.

CONCLUSION

The aim of this paper is to illustrate the present status of climate justice on human rights of displaced person in the perspective of migration and adaptation in Bangladesh. Climate change is an alarming issue including negative impacts among the world scale and Bangladesh is one of the most vulnerable countries in the world where it is predicted that more than 30 million people will be displaced because of climate change in Bangladesh. Various fields of economy of Bangladesh including surface and groundwater resources were affected by impacts of climate change at a large scale. Because of climate change, migration is increasing in the national and international level, for which number of internal displaced person is increasing. To adjust against risks of climate change, adaptation strategy is important and for this climate justice in human rights for displaced person in the perspective of migration and adaptation is mandatory highlighting implication of justice. In Bangladesh, climate justice on numerous numbers

of human rights issues related to displaced person in the aspect of adaptation and migration are covered by legal practices but several topics are not available in the legal practices. It is necessary to establish climate justice in the all necessary issues of human rights with proper implication for internal displaced person as well as displaced person in the global aspect to maintain sustainable adaptation against climate change migration.

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