



## NATURAL DISASTERS, FORCED MIGRATION AND POPULATION GROWTH IN THE 21ST CENTURY IN INDIA

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### Abstract

*The impact of drought, floods, severe weather and other effects of climate change may worsen in the future, contributing to growing human migration as vulnerable people seek safer more stable living conditions. This expected migration of thousands of people can negatively affect human well-being and political status. The paper presents the effect and its management.*

**Keywords :** *natural disasters, forced migration, population growth*

Drought, floods, severe weather and other effects of climate change have begun to threaten communities in many parts of the India. These impacts will worsen in the future, contributing to growing human migration as vulnerable people seek safer more stable living conditions. This expected migration of thousands of people can negatively affect human well-being and political status.

Rapid population growth in areas vulnerable to climate change will contribute to migration pressures by further straining limited natural resources and increasing population density in areas exposed to climate risks, including sea level rise and area prone to natural calamities.

Responding to the demand for family planning and reproductive health, especially in areas that are highly vulnerable to natural disasters, can slow population growth and reduce migration pressures.

### Natural Disasters Migrants

People have always moved from place to place in search of greater opportunity, but climate change and impact of natural disasters are expected to trigger larger and more complex waves of human migration. Disruption of ecosystem-dependent livelihoods will likely remain leading driver of long-term migration over the next two to three decades, and climate change is likely to exacerbate this situation.'

Estimates of future "climate migrants" and natural disasters migrants range from 200 million to 1 billion by 2050. Projecting the number of people who will migrate due to climate change is an inexact science. This is largely because of uncertainties about the severity and location of future climate change impacts and economic and social conditions, as decisions to migrate typically result from linked environmental, social, and economic factors. In addition, the extent of future population, growth and distribution is a critical underlying determinant. Nevertheless, the magnitude of climate-induced migration will be significant, putting pressure infrastructure and services in receiving areas undermining economic growth, and compromising the well-being of migrants.

Climate change is considered a 'threat multiplier' by experts in the security community, and climate-induced mass migration can contribute to heightened tension in the world. Impaired access to road and water and severe weather are challenges that have historically led to tension and conflict. As more and more people are displaced or compelled to migrate in the face of these challenges, political, ethnic and religious tensions may result. A recent report by National Intelligence Council (NIC) predicts that many people who migrate for economic reasons will perceive additional reasons to migrate due to harsh climates; both within countries and from developing to industrialized countries. "May receiving nations," the NIC warns "will have the resources riot due to these climate migrants.

Those displaced by climate change lack legal status as "refugees." Often referred to climate refugees' people displaced by climate change are not formally recognized as refugees. That term legally applies only to people who leave their home countries due to fear of persecution, war, or violence: Many who migrate due to climatic factors - often relocate within their own countries, or cross borders due to a combination of environmental, social, political and economic factors. Therefore, it is difficult to designate climate change as a singular driver of migration. Despite the significant implications for human well-being, lack of official status means that climate migrants are unlikely to be recognized within current international refugee and immigration policy.

Displacement due to natural disasters will take different forms and require different responses. Millions of people may be forcibly displaced in response to climate events, such as floods, extreme weather, and sea level rise, which over time could render entire populations stateless. Others will be compelled to migrate due to more gradual changes associated with climate processes, such as shifting temperature and rainfall patterns that affect water supply and agricultural production. The characteristics and needs of these different categories of migrants are likely to vary widely, requiring a range of humanitarian and political responses.



## Population Concerns

Demographic trends play an important role in vulnerability to climate change impacts and contribute to climate-induced migration. Yet population is often overlooked in the development of climate change adaptation strategies, including efforts to address climate-induced migration.

Migration, whether permanent or temporary, has always been a traditional response or survival strategy of people confronting the prospect, impact or aftermath of disasters (Hugo 1996). However, today, more than ever, the complex nature of disasters such as Super Cyclone in the city of New Orleans, bring with them an enormous potential for the uprooting of large numbers of people. The increasing complexity of disasters is rooted in the interplay of social and economic factors in the environment, exacerbating the vulnerability of people and environments and intensifying their impacts when they occur. Super Cyclone impact on Odisha was compounded by an excessive dependence on technology and half a century's assault on the natural defenses of the environment of Coastal State, leaving the State tragically vulnerable. Virtually the entire population of the Coastal State has been displaced, a large proportion of it perhaps permanently, presenting a host of profound economic, social and psychological challenges to individuals, communities and all levels of government.

Despite technological and scientific advances in prediction and mitigation, we have seen a serious increase in both mortality and economic losses from disasters, particularly in our country. Disasters are, in fact, increasing in impact and scope through the combined effects of economic, social, demographic, ideological and technological factors. Greater numbers of people are more vulnerable to natural and other hazards than ever before, due in part to increases in population, but more so to their location in dangerous areas. In fact, disaster risk and losses have dramatically increased, but unevenly so according to region. However, regardless of region, some form of displacement of individuals and communities frequently results from the threat or impact of a disaster.

Both disasters and forced migration are terms that are used to describe a wide variety of environmental and social processes. Perhaps, because the term is so widely and loosely used, disasters are quite difficult to define. Although the term "disaster" actually refers to a process, essentially the disruption of social functions, it is generally employed to characterize an event or agent such as Cyclone or the Earthquake, or the flood, drought etc.

Despite a popular construction of disasters as "acts of God" or "fate" in which nobody is really responsible, there has been a general reconsideration in the scientific community of this event/agent focused perspective. According to environmentalists most natural disasters are more explainable in terms of the "normal" order of things,

that is, the conditions of inequality and subordination in the society rather than the accidental geophysical features of a place. This perspective shifted the focus away from the disaster event and towards the "on-going societal and man-environment relations that prefigure [disaster]".

Thus, disasters occur at the interface of society, technology and environment and are fundamentally the outcomes of the intersection of these features. To adequately analyze disasters the barrier between human activity and eco-system activity must be collapsed, transforming a relationship of difference into a relationship of mutuality. In very graphic ways, disasters serve as indices of the success or failure of a society to adapt, for whatever reasons, to certain features of its natural and socially constructed environment in a sustained fashion.

The natural or technological agents, however, cannot be relegated to a secondary role. The broad array of "objective" natural and technological phenomena that produce or trigger disasters can create a wide variety of physical and social impacts, according to the context in which they occur. In the opinion of environmentalist, disaster agents include natural hazards (atmospheric, hydrological, geological, and biological), technological hazards (dangerous materials, destructive processes, mechanical, and productive), and social hazards (war, terrorism, civil conflict and the use of hazardous materials, processes, and technologies).

The concept of vulnerability links the relationship that people have with their environment to social forces and institutions and the cultural values that sustain or contest them. Vulnerability refers to the totality of relationships in a given social situation producing the formation of a condition that, in combination with environmental forces, produces a disaster. Disaster risks and outcomes are socially produced at the intersection of a complex and dynamic range of hazard and vulnerability patterns, associated with underlying social, economic, territorial and political processes operating in specific locals. The concept of vulnerability links general political economic conditions to very particular environmental forces to understand how basic conditions such as poverty or racism produce susceptibilities to very specific environmental hazards. Vulnerability, thus, integrates not only political economic, but environmental forces, defined in terms of both biophysical and socially constructed risk.

By vulnerability we mean the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard. It involves a combination of factors that determine the degree to which someone's life and livelihood is put at risk by a discrete and identifiable event in nature or in society. Vulnerability in their approach is generated through a causal chain of root causes embedded in ideological,



social and economic systems, the dynamic pressures of a demographic, socio-economic or ecological nature and specific sets of unsafe conditions which, when combined with a natural hazard, produce a disaster. This more complex understanding of vulnerability enables researchers to conceptualize how social systems generate the conditions that place different kinds of people, often differentiated along axes of class, race, ethnicity, gender, or age, at different levels of risk from the same hazard and suffering from the same event. Therefore, a single disaster can fragment into different and conflicting sets of circumstances and interpretations according to the experience and identity of those affected, thus motivating in many instances different responses. Depending on their experience, some groups may migrate because of the disaster and other groups will not.

The complexity of disasters today is demonstrated by the processes in which they can combine with and compound each other. For example, in 1999 Super Cyclone (a natural agent) produced floods in Odisha (a socio-natural phenomenon) that inundated warehouses full of pesticides and fertilizers (a technological hazard), producing what might be called a compound or complex disaster. Super Cyclone, Flood has just fully realized the nightmare of everybody. There is no question that environmental changes, particularly in the form of degradation, have increased the severity of socio-natural disasters. Moreover, disasters, singly or in combination, can further be compounded by the incidence of political upheaval, such as war, ethnic cleansing, or terrorism, or social factors such as racism, exclusion or religious persecution. And disasters can contribute to political instability that can lead to conflict with the potential to displace people.

To the degree that disasters force people to relocate either temporarily or permanently, disaster victims have been seen as a subset of the category of environmental refugees, a term that has generated a considerable amount of recent debate. As associated with disasters, the phenomenon of forced migration is also complex. Unless explicitly limited to referring to permanent, involuntary transfer to distant locations, the concept of forced migration refers to a variety of demographic movements, such as: flight, evacuation, displacement, resettlement, as well as forced migration.

Flight - escape

Evacuation - removal of people from harm's way

Displacement - the uprooting of people from a home ground

Resettlement - relocation of people to new homes

Forced migration - people must move to a new and usually distant place

If the threat of disaster is immediate, flight or escape to the closest safe location is a frequent response. An impending

threat may result in an evacuation that resembles flight or may be more organized, administrated by internal or external agents. Displacement similarly can occur as the result of flight or be more planned in the sense that people are organized and obliged to move from one residence site to another either temporarily or permanently. If the movement is thought to be permanent, resettlement in the form of the creation of a new residence site may actually be the outcome. Finally, as mentioned earlier, forced migration involves permanent, longer distance moves generally into completely different environments. Some of the forms of demographic movement may lead to others-flight or evacuation, for example, may lead to displacement and resettlement or eventually to forced migration.

Each form of demographic movement may vary along a number of scales or continua associated with certain characteristics that refer largely to the social and environmental relations expressed in the particular context. Since the 1980s researchers have linked the issue of environmental change with human migration, explicitly designating as "environmental refugees" people who are forced to leave their homes, temporarily or permanently, due to the threat, impact or effects of a hazard or environmental change. Although environmental studies have traditionally focused on the natural world, the impacts of pollution, deforestation, soil erosion, degradation, desertification and other environmental processes on human beings have also been a source of both interest and concern to ecological and social scientists. Indeed, the impacts of many of these processes have often been framed as "disastrous" because they create stress, disrupt normal social processes, and force people to adapt by making temporary adjustments or permanent changes in how, where and when they do things in life. Environmentalist asserted that recent human-induced environmental change, such as desertification, deforestation, or soil erosion, compounded by natural and man-made disasters, could force as many as 50 million people to migrate from their homes by 2020. They see environmental change and disasters as triggers or detonators that lead to land competition, resource degradation, occupation of fragile regions and impoverishment that eventually force people to migrate.

Other researchers dispute the accuracy of the term "environmental refugee," finding it misleading. They attribute the displacement of people to a complex pattern of factors including political, social, economic as well as environmental forces. Natural disasters are seen to cause temporary displacement, but not authentic, i.e., permanent, migration. Indeed, if permanent migration does occur as the result of a disaster, it is seen as more the result of deficient responses of weak or corrupt states rather than the environment as expressed in the form of a natural

hazard impact. Some critique that focusing on environmental factors as causes of migration often obscures the role of political and economic factors is well-taken, and echoes the position held by most disaster researchers today that focusing solely on agents reveals little about the political or economic forces that together with agents produce disasters or, for that matter, any forced migration that might ensue.

In some sense, the objections of Black, Wood, Castles and other scholars to the term "environmental refugee" are based on the construction of human-environment relations as a duality, in which each domain is separate and capable of causing things to happen in the other. Seeking single agent causality in the environment tends to elide the fact that the environment, and its resources as well as its hazards, is always channeled for people through social, economic and political factors, even in the best of times.

It is important to remember here that a disaster is also not defined in terms of the event itself, but in terms of both the processes that set it in motion and the post-event processes of adaptation and adjustment in recovery and reconstruction. Forced migration can be part of the process prior to the event or after, but it is not inevitable. Disasters can act as triggers or accelerators of imminent.

### Conclusion

Disasters are brought about by the interrelatedness of a range of factors of different orders: cultural, social, environmental, economic, institutional and political, all of which are taking place in the context of imposed space change and of local level responses and initiatives. Moreover, these changes are taking place simultaneously in an interlinked and mutually influencing process of transformation. Forced migration associated with disasters, therefore, is commonly the result of the

interactions that both bring about the disaster and are then accentuated by the event itself.

Most local displacement by disaster tends to be temporary, but may become permanent, particularly if the disaster permanently alters or destroys a local economic base. However, that outcome is usually not entirely the result of the agent alone, but rather government response. The government decision not to reconstruct homestead, a major regional employer after natural calamities led to a permanent alteration of the economy of the state or county and may account for some of the permanent migration that ensued. The catastrophic losses from different natural disasters demonstrate in horrific fashion the urgent need to develop the conceptual, strategic and material tools to confront the increasing challenges of natural hazards made even more potent and complex by climate change, increasing population densities and environmental degradation in the 21st century.

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