

## NATURAL DISASTERS AND INTERNALLY DISPLACED POPULATION IN INDIA: AN ANALYSIS FROM IDMC DATA

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**Abstract:** The frequent climatic hazards are the foremost factor for internal displacement in India, which is ranked first among the South Asian countries. This article intends to examine the temporal change and spatial distribution of internally displaced people due to different natural disasters in India using a globally representative data set of the Internal Displacement Monitoring Centre (IDMC). The Eastern, North-eastern and Southern region are worst affected due to frequent natural hazards and displaced millions of populations. More specifically, we argue that flood is a leading cause of internal displacement in India. Furthermore, the spatial pattern of the reason behind displacement significantly varied with space in India. The seasonal variability of monsoon wind-related atmospheric disturbances increases the frequency of floods and cyclones in India, and huge loss in terms of cropland, cattle, and human life in Odisha, West Bengal of Eastern India, Assam in North-east and Andhra Pradesh and Tamil Nadu in Southern states and is positively associated with huge displacement in India.

**Keywords:** Displacement, IDP, Flood, Cyclone, Natural disaster, Regions, India.

### Introduction

Movement of people can be attributed to migration concept, as migration is movement of people from one place to another place for a period, for various purposes. Its decision is influenced by various socio-economic, political and cultural factors. Migration is a common response to difficult situations and has become increasingly being associated with climate-change pressures (Sillitoe & Alam, 2021; Pryce & Chen, 2011). Internal displacement in the form of migration can be a forced, e.g., to escape from armed conflict or a completely voluntary, e.g., to increase economic gain. Further, within the context of climate change, forced migration might include permanent displacement or temporary displacement and voluntary migration includes climate events that only temporarily disrupt livelihoods (Krishnamurthy, 2012; Bose & Lunstrum, 2012). Moreover, the displacement of people is caused by slow-onset events such as droughts and land degradation or rapid fast-onset of events includes floods, cyclones, landslides and storms (Brzoska, & Fröhlich, 2016; Jayawardhan, 2017). Displacement can be explained as when people are forced to move from one place to another, it is a particular form of migration. Displacement is owing to outcast of people at societal level, slump in economy of a region and political unrest situation in a place. Displacement is caused by impact

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of disaster that is largely determined by the underlying vulnerability of people to absorb the shocks or stresses that compel them to leave their homes and livelihoods just to survive (Ginnetti, & Lavell, 2015). When the displacement is motivated by voluntary choice for better opportunities it is called voluntary displacement. On the other hand, the displacement that is influenced by some external factors, that force people to leave their native places is termed as involuntary displacement (Dhungana, 2007).

Such an involuntary displacement gives birth to a term called Internally Displaced Persons (IDPs). According to the UNGPID (United Nations Guiding Principles on Internal Displacement) displacement of people happens when 'individuals or groups of individuals have been compelled to flee or leave their homes or places of habitual residence, especially in order to avoid the effects of an armed conflict, situations of generalised violence, violations of human rights, or natural or man-made disasters, and have not crossed an international border'. There are mainly five types of displacement in sociology - displacement due to natural calamities, displacement due to political, racial, religious, and other upheavals, displacement due to developmental activities, displacement due to social inequalities, and displacement due to physical and psychic factors (Wyndham, 2006). The potential causes of internal displacement, including conflict, natural and human-made disaster are attributed to the diverse means of preventing or mitigating the effects of such conflicts and disasters (Hussain, 2006). Natural calamities are one of the significant causes of internal displacement of people in India. Disaster displacement is a global issue that affects high as well as lower-middle income countries.

Most of the developing countries of Asia, Europe and Africa are facing the problem of population displacement and its consequences in their socio-economic development and political relationships. Disasters displace millions of people every year, with most of the displacement occurring in Asia-Pacific region, as more natural catastrophes occur in Asia-Pacific countries than in any other area. Countries in the Asia-Pacific region share similar traits, such as sizable, expanding populations and high rates of poverty. Poorer coastal settlements and farms frequently lack the funds to construct proper sea defences, leaving them vulnerable to monsoon rains and storms. The lack of preparation and poor communication prevented the locals from receiving any storm warnings. Densely populated urban areas are more vulnerable due to rapid urbanization and poor design, especially those close to significant rivers and coastal areas. Additionally, there is significant environmental damage in the area. In certain areas, logging and land clearing for farming have led to a drastic loss of tree cover, reducing the effectiveness of natural defences, and raising the danger of landslides (Wood, 2018).

Climate change is expected to increase disaster displacement and influence migration dynamics as the impacts of environmental hazards become more and more

intense with time, especially in developing countries. Certain groups, particularly poor people living in high-risk areas, are worst vulnerable to displacement during and after the disaster events (UNICEF, 2014). Disaster displacement has been recorded in more than 190 countries in the last 11 years. Weather-related hazards accounted for more than 87 per cent of all displacements globally (Ginnetti & Ponserre, 2019). Disasters triggered more than 60 per cent of the internal displacements recorded worldwide in 2021. A total of 38 million people displaced globally, among them 23.7 million are by disasters. Most of the new and repeated displacements triggered by disasters in 2021 were recorded in East Asia, South Asia and the Pacific, which together accounted for about 80 per cent of the total internal displacement. South Asia alone contributes 15% of displacement due to disaster (Global Report on Internal Displacement, 2022). Disasters triggered most of the internal displacement that takes place in South Asia each year, and 2021 was no exception. Nearly 5.3 million disaster displacements were recorded during the year, a relatively high figure globally but lower than the region's decade average of 6.2 million. The decrease was partly the result of a weaker monsoon season. Around 6.9 million people were living as internal displacement people across the region at the end of the year, 5.4 million as a result of conflict and violence and 1.5 million as a result of disasters. The most affected countries were China, Philippines and India. India contributes 4.9 million internal displacements by 2021 (Global Report on Internal Displacement, 2022). People in South Asia face high displacement risk because many highly vulnerable people are exposed to multiple hazards, such as tropical cyclones, floods, earthquakes, landslides, wildfires, droughts, volcanoes and tsunamis. Millions of vulnerable people of India and Bangladesh exposed to multiple hazards and by consequence, they are among the most disaster-prone countries in the world (Ginnetti & Lavell, 2015).

As previous studies rightly pointed out that after development, natural disasters are the second most causes of internal displacement in India. Disaster affected people are expected to return to their permanent places after the disaster because of emotional attachment, community support, not have the resources or means to relocate to a different area, and sense of duty to their place. But this is not true for all cases of natural disasters due to safety concerns, disaster trauma, and sometimes they got opportunity for a fresh start (Das et. al, 2016). India is frequently ravaged by severe natural disasters such as cyclones accompanied by storm surges, and floods. Each year, these extreme natural events hit large areas of the country and cause human casualties and misery. Apart from this, they also cause loss to crop, livestock, human life and physical infrastructure. The motivating factor of internal displacement in India are natural disaster and potentially related problems (Devakumar, 2008). In its country specific data, IDMC states that in India there were 4.9 million new displacements due to disasters in 2021. Tropical cyclones, monsoon rains hit highly exposed areas that are home to millions of people. IDMC

recognizes that India is exposed to a range of natural hazards, including droughts, earthquakes, cyclones, tsunamis and tropical storms. These factors when combined with country's high population density, poverty levels, rapid urbanization and environmental degradation, puts India at a high risk of disaster displacement in South Asia. Number of internally displaced persons in India due to disasters is amongst one of the highest around the world (Bhardwaj, 2021). Despite this, the research in India is mainly focused on development and conflict related displacement. Few studies that were carried out, only give insights about a single state story taking only one disaster into consideration (Sahoo & Pradhan, 2018; Tiwari & Ghosh, 2014). For the first time this study is trying to develop some knowledge about the disaster displacement in India in various states by taking flood and cyclone disaster. This study also sees loss of life and property along with fund allocation by central government in India.

### **Concept and factors of vulnerability**

Vulnerability describes the characteristics and circumstances of a community system or assets that make it susceptible to the damaging effects of a hazard. It is susceptibility to suffer losses. It is the extent to which people or their properties are likely to suffer damage from disaster. There are many aspects of vulnerability arising from anthropological factors. Vulnerability varies significantly within a community and over time (Alam et. al, 2017). Vulnerability is the risk of adverse outcomes to receptors or exposure units (human groups, ecosystems, and communities) in the face of relevant changes in climate, other environmental variables, and social conditions (Philip & Rayhan, 2004). Further, vulnerability is the exposure to contingencies & stress, and difficulty in coping with them. The characteristics is determined by physical, social, economic, and environmental factors or processes which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards. Levels of vulnerability help to explain why some non-extreme hazards can lead to extreme impacts and disasters, while some extreme events do not. In the context of extensive risk, it is often people's vulnerability that is the greatest factor in determining their risk. In the context of different hazards, some groups are more susceptible to damage, loss and suffering than others and likewise some people experience higher levels of vulnerability than others. Vulnerable groups find it hardest to reconstruct their livelihoods following a disaster, and this in turn makes them more vulnerable to the effects of subsequent hazard events. Consequently, in order to reduce disaster risk first we need to reduce vulnerability.

Anthropological factors of vulnerability:

- **Culture:** Beliefs, customs, and values from different cultures can have an impact on how communities prepare for and react to catastrophes. For instance, a community's desire to evacuate or accept help may be influenced by its religious convictions.

- Race and ethnicity: Minorities may face prejudice and marginalisation, which makes them more susceptible to the effects of catastrophes.
- Social factors: Poverty and inequality, marginalisation, social exclusion and discrimination by gender, social status, disability and age (amongst other factors) psychological factors, etc.

### **Data Source**

The Internal Displacement Monitoring Centre (<https://www.internal-displacement.org/>) under Global Internal Displacement Database, which gathers daily data on the occurrence of displacement, estimates of new displacement during the year, and the total number of people displaced at year's end, served as the most reliable source of global data on displacement for the current study. We have also used Indiatat data, which provides information on an event-by-event basis, it also gives details on loss of lives and property brought on by disasters. It gathers data from several sources for each incident and produce the most thorough and accurate assessment of displacement for that natural event. Information is relied on a wide range of sources, such as local, state, and federal government agencies, UN agencies, international databases, civil society organisations, the media, and other organisations. We further conducted a field survey and included case study in this study.

### **Methodology**

To assess the level, trends, and displacement pattern, the analytical approach includes bivariate and descriptive tabulations. To comprehend the situation of displaced persons in India and the state, the internal displacement stock and climatic threats have been arranged by regions over the years. To comprehend the geographic distribution of internal displaced persons in India, a region compilation by grouping the states conducted. Suitable tables and diagrams were employed to depict the Internal displacement, life lost and fund allocation scenario.

### **Results**

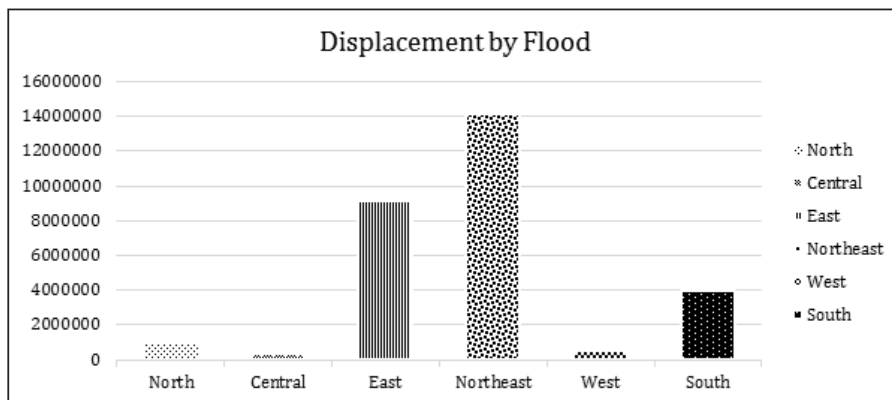
In table 1, Eastern region with 1.7 crore IDP consists of mostly from West Bengal, and Odisha states of India, followed by Northeast region 1.4 crore IDP belong to state of Assam. Southern region consists mainly the state of Andhra Pradesh; Tamil Nadu showing 63 lakhs IDP displacement and Western region with Maharashtra state has around 11 lakhs IDP displaced peoples. In Northern region Uttar Pradesh and Uttarakhand show around 8 lakhs IDP followed by Central region Madhya Pradesh and Chhattisgarh shows only 3 lakhs IDP.

**TABLE 1: DISPLACEMENT IN INDIA BY ALL NATURAL CALAMITIES (2011-2022)**

Regions* (Detail in appendix)	Total Displacement by Natural calamities
North	894405
Central	388430
East	17057249
Northeast	14254999
West	1144578
South	6296809

[Source: Internal Displacement Monitoring Centre. ([www.internaldisplacement.org](http://www.internaldisplacement.org))].

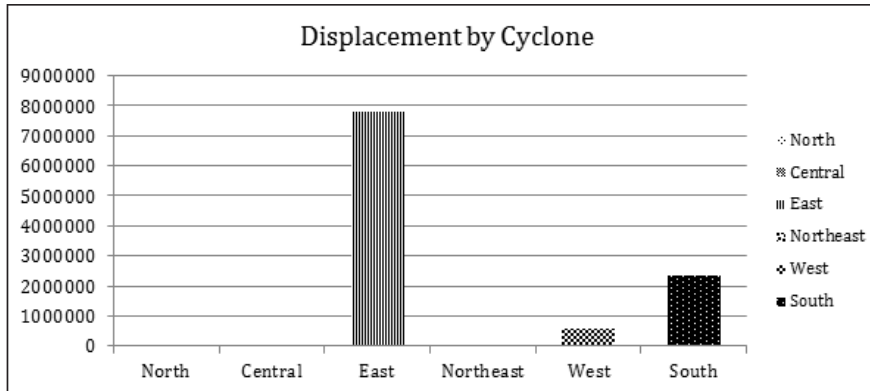
In figure 1, Flood as a form of natural disaster mostly influences the displacement of people in India. The monsoon flood mainly impacts the Northeast region 49 percent, followed by Eastern region 31 percent. The retreating monsoon rainfall in winter affects the Southern region 14 percent, while Northern region 3 percent, Western region 2 percent and Central region 1 percent are least affected by flood situations in India.

**Figure -1: Total Number of Displacement by Flood from 2011 to 2022**

[Source: Internal Displacement Monitoring Centre. ([www.internaldisplacement.org](http://www.internaldisplacement.org))].

In figure 2, the tropical cyclone of Bay of Bengal mainly impacts the Eastern region 72 percent, followed by Southern region 22 percent. The cyclonic formation in Arabian sea affects the Western region 5 percent, while Northeast region 1 percent, and Northern and Central region are least affected by cyclonic events in India.

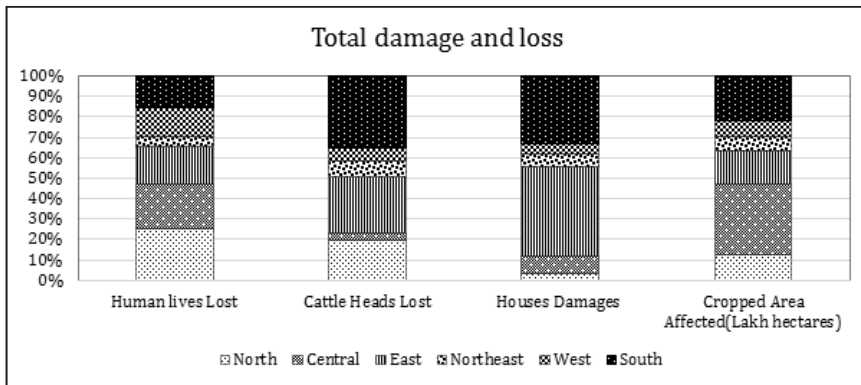
Figure - 2: Total Number of Displacement by Cyclone from 2011 to 2022



[Source: Internal Displacement Monitoring Centre. (www.internaldisplacement.org)].

Figure 3 shows region wise distribution of human life lost, it is found that Northern region has lost maximum human lives, followed by Central, Eastern region. In distribution of Cattle heads lost Southern region has top position followed by Eastern, Northern region. Most of the houses were damaged in Eastern region of India, followed by Southern region. While Central region has experienced maximum Cropped area affected, followed by Southern region.

Figure - 3: Total Damages and loss due to Flood and Cyclone in India from (2011 to 2022)



[Source: Internal Displacement Monitoring Centre. (www.internaldisplacement.org)].

In table 2, states have been arranged in descending order with human lives lost, cattle heads lost, houses damaged and cropped area loss. It has been found that Uttar Pradesh, West Bengal, Karnataka, Madhya Pradesh and Uttarakhand states are worst affected in terms of loss of lives and property by natural disasters. Whereas Delhi and Chandigarh show zero cases of lives and property loss.

**TABLE 2: IMPACT OF NATURAL DISASTERS ON LIVES AND PROPERTY IN INDIA FROM 2011 TO 2021**

States	Human lives Lost	Cattle Heads Lost	Houses Damages	Cropped Area Loss (Lakh hectares)
Andaman & Nicobar Islands	0	0	149	0
Andhra Pradesh	159	13751	89016	25.93
Arunachal Pradesh	302	20273	28006	11.23
Assam	618	3968	434071	9.67
Bihar	1811	17243	917519	18.68
Chandigarh	0	0	0	0
Chhattisgarh	157	1272	57976	0.11
Dadra & Nagar Haveli	6	0	4	0
Daman & Diu	0	0	14	0
Delhi	0	0	0	0
Goa	11	78	1112	0.04
Gujarat	1517	13688	73167	0.89
Haryana	9	69	2758	0.09
Himachal Pradesh	882	31894	45890	2.98
Jammu & Kashmir	162	195	72702	0
Jharkhand	40	131	2059	0.01
Karnataka	1156	68351	384166	31.14
Kerala	1724	63238	430227	1.942
Lakshadweep	0	0	5	0
Madhya Pradesh	2409	12409	423023	83.75
Maharashtra	1856	14133	562308	22.96
Manipur	46	429	48442	0.16
Meghalaya	61	263	41755	0
Mizoram	32	12	8282	0.24
Nagaland	70	8555	13728	0.72
Odisha	341	11003	1081887	19.4
Puducherry	17	1960	87987	0.21
Punjab	212	34273	20649	7.22
Rajasthan	562	10747	199935	28.31
Sikkim	129	3218	26659	0.76

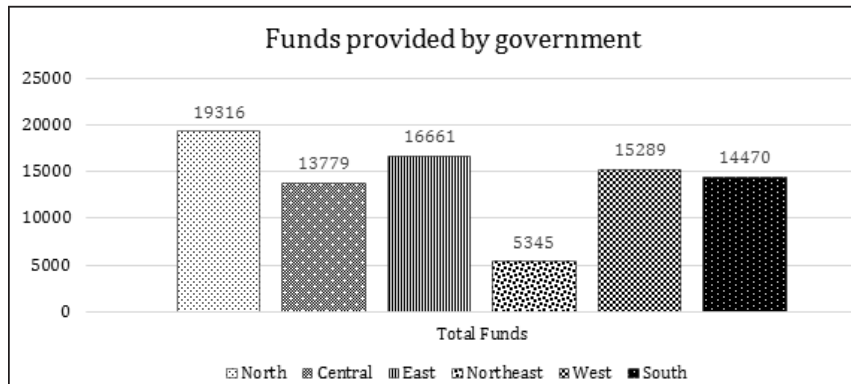


Tamil Nadu	541	19057	3131320	7.13
Telangana	52	390	4364	2.39
Tripura	71	4182	171518	0.1
Uttar Pradesh	2522	2245	577509	24.75
Uttarakhand	4276	14421	28678	0.75
West Bengal	2162	99915	3493793	10.92

(Source: Indiastat data (<https://www.indiastat.com/data/meteorological-data/floods-cyclonic-storms-and-landslides>])

In figure 4, we found that Northern region has received highest (19 thousand crore) funds to overcome natural events, followed by Eastern region with (16 thousand crore) funds. Western, Southern, and Central region receives 15, 14 & 13 thousand crores accordingly. While Northeast region receives lowest, (5 thousand crore) funds to overcome the situation.

**Figure - 4: Total Funds provided by government of India from (2011 to 2022)**



[Source: Internal Displacement Monitoring Centre. ([www.internaldisplacement.org](http://www.internaldisplacement.org))].

### Case Study

Karimul (pseudonym), narrated that “*Gato pach botsore amra tinte boro ghurnijhor er prokope porechi.*” Meaning that ‘In the last five years we have been trapped under the impact of three big cyclones.’ The disaster data also shows that in October 2019 Bulbul cyclone, in May 2020 Amphan cyclone, and in May 2021 Yash cyclone hits Sundarban region. Respondent also narrated that “*Ekhane bonna pray proti botsor hoy. Tai bonnar somoy amader bari-ghor joler tolay pray ek soptaho theke ponero din dube thake.*” Meaning that ‘In this place we face flood almost every year. During flood our houses are submerged under water for at least one week to fifteen days.’ Newspaper reports also shows that with the onset of monsoon rainfall, rivers in Sundarban experience rise in water level (Pramanik, 2022).

Respondent again narrated that “*Amphan er somoy amader bari bhenge jay, ebong amra somudro upokul theke dure sore jete baddho hoi. Oi somoy sorkar theke amader Sarkari bidhyal te kichu diner jonno thakte ebong sukno khabar deya hoy. Kintu amra panio jol ebong souchaloy er somossay pori.*” Meaning that ‘Our houses destroyed by Amphan cyclone and we are forced to move away from coastal region. That time government facilitate us with shelter in government school for few days and provide us dry food items. But we face drinking water and sanitation problems.’ People in Sundarban received governmental support to mitigate in response the disaster event like-temporary shelter and food supplies. Respondent further reported that “*R kota ghurnijhor samlale amra sarkari arthik sahajjo pabo? Oi okhane amar ghor chilo, ekhon keu dekhe bolbe ota bosot vite. Ekhon amar notun kore ghor badhar icche thakleo amar samartho nei*” Meaning that ‘How many more cyclone we need to bear to avail governmental financial support. My house was there, now can anyone identify it as a house land. Now if I wish to build a new house, I do not have ability’ Shows that people of Sundarban are lacking financial support to recover after the disaster is over.

## Discussion

Damage due to disaster is most important focus of the study, we find that house lost due to disaster has mostly reported from Eastern and Southern region. While cattle lost due to disaster are mostly reported from Southern and Central region of India. Further, loss of human lives was mostly reported from Eastern and Central regions, because vulnerable populations such as low-income communities, minorities, and people with disabilities are more likely to die. Moreover, the crops were reportedly lost in Central regions of India. Talking about funds provided by government to overcome the situation is high for Northern region followed by Eastern, Western, Southern, Central region and less amount of funds are provided for Northern region states. From the above figure it is clear that total displacement due to any disaster is highest in the Northeast region and lowest for the central region. Flood related displacement is also high for Northeast and low for Central region. Cyclone leads displacement is maximum for the Eastern region and that Northern and Central region is low. Displacement for other natural events (Droughts) characterised by prolonged hot summer and dry spells that can result in water shortages and agricultural failures) is also high for Eastern region. But Northern region does not experience drought, due to the region’s landscapes, which includes hills and mountains, also plays a role in the area’s heavy rainfall. One of the world’s largest rivers, the Brahmaputra, runs through the area and is a significant supply of water for the area. It’s crucial to remember that while drought may not occur in Northeast India, the area does frequently encounter natural catastrophes like floods and landslides, which may result in substantial property damage and fatalities (Hussain, 2006). Numerous instances of flood-induced alterations to the channel size, location,

and pattern may be seen in the Indus-Ganga-Brahmaputra Plains. The yearly floods in the Ganga-Brahmaputra Plains seem to have a greater geomorphologic impact than the occasional, large floods in the Indian Peninsula's rivers (Kale, 2003). The frequency of cyclones in the Bay of Bengal is significantly higher, almost five times than that of the Arabian Sea within the North Indian Ocean basin, accompanied by most prevalent tropical storm in pre-and-post monsoon seasons. However, compared to other Indian states, the coastal states in the east are more susceptible to tropical cyclone frequency and intensity (Sahoo & Pradhan, 2016). Low-lying location on India's east coasts increases the severity of floods caused by a rise in water levels during a cyclone season. Major river basins like the Mahanadi River in Odisha, the Hooghly in West Bengal, and the Krishna and Godavari in Andhra Pradesh increase the vulnerability of the affected coastal regions to sea level rise and the ensuing flooding. According to the 2011 census, 35% of India's population—31 million people—lives in highly populated coastal areas, are vulnerable to displacement (Rao et. al, 2020).

#### ***What happens to the IDP when the disaster is over?***

In this case, nations are usually held responsible for how they handle disasters and try to provide international aid to displaced peoples. Despite the significant increase in government spending on ex-post aid, ex-ante disaster insurance is given significantly less importance (Das, 2011). India only keeps track of the numbers of displaced people who live in camps and register themselves. It is a well-known truth that there are undoubtedly many displaced people who have relocated elsewhere and never made it to the camps (Chatterjee, 2018). Displaced peoples change their occupation, and people are relocating themselves to places where they haven't encountered seasonal threats, and many families there are severing links to their neighbours and communities (King, 2008; Jordan et. al, 2016). NGOs (Non-governmental Organisation) provided relief material, involvement of in rescue operation, arranging temporary shelters, organisation health camp and developing communication facilities (Mondal et al, 2015). NDRF (National Disaster Response Force) as directed by centre government aided 2707.7 crore and 128.2 crore for Amphan affected people in West Bengal and Odisha respectively in post disaster period (Hishan et al, 2021).

We can reduce the impact of disasters if all people contribute to it. People are not contributing, because of lack of knowledge and limited access to resources for learning about catastrophe prevention and mitigation. The resources available to those in marginalized or poor areas to prepare for catastrophes are constrained. People are discouraged from adopting activities that could lower the risk of catastrophes by certain cultural beliefs and practices. People may lack faith in the institutions in charge of disaster management, including governmental and non-governmental organizations. At the same time, some individuals prioritize other

concerns before disaster preparedness. It will only happen if people participate in all dimensions. The vulnerable society can assess the risk in their environment by developing appropriate plans and implementing such plans among community members. But there are impediments in accessing risks as it takes a lot of information on several elements to access the risks of disasters. However, this information is either unavailable or inadequate in India, making it challenging to quantify the risk adequately. Disasters are frequently complicated events with several interrelated aspects that affect their intensity and impact, making it difficult to estimate the risks involved precisely. Assessing catastrophe risks often entails a great degree of uncertainty, especially when it comes to incidents with high severity. Making decisions on resource allocation is a necessary part of disaster risk assessment. These decisions are driven by political and social considerations, leading to bias and insufficient planning. Using this strategy will properly prepare societies for emergency situations and disasters, as well as increase their ability to deal with accidents and disasters (Salajegheh & Pirmoradi, 2013). Following a natural disaster, many people adopt coping strategies that completely don't escape them from the poverty consequences of disasters, but do assist in reducing the severe negative effects of the natural disaster. People adopt low-profile living to cope with the effects of lower income and loss of household assets. It could include eating less and spending less on things like healthcare, transportation, clothing, and other necessities. Some people rely on government relief materials as a coping strategy for reduced (Daramola et al, 2016). A study also discovered that government 'programmes such as an Early Warning System, Public Distribution System, Multipurpose Cyclone Rehabilitation Centres, Seasonal Residential Care Centres, and Indira Awas Yojana play a significant role in mitigating the impact of disasters among rural communities. Furthermore, because the government was in responsible for utilities, communities where the government had previously responded to infrastructure needs generally retained high-quality infrastructure in the post-disaster period. Community involvement is not required for successful recovery, but it can mitigate the negative impact of social vulnerability in some communities (Patel et al, 2020).

### ***Funds released by government of India***

“Relief and Rehabilitation of Migrants and Repatriates.”

1. The National Disaster Response Fund (NDRF) was established as a single, centralised fund for disaster relief and mitigation initiatives. For the years 2020 to 2025, the fund will receive a sum of Rs. 50,000 crores.
2. State Disaster Response Fund (SDRF): Each state government established this fund to aid in disaster preparedness within its borders. According to the amount of the fund, which varies depending on the state, the federal

government gives 75% to general category states and 90% to special category states.

3. The National Cyclone Risk Mitigation Project (NCRMP) is a national government initiative to lessen the effects of cyclones. 3,000 crores of rupees have been set out for the project between 2020 and 2025.
4. The National Flood Control Programme (NFCP) is a federal government initiative for managing and controlling flooding. For the years 2020 to 2025, the programme will get 2,000 crores of rupees.

In addition to this, depending on the severity of the catastrophe, the government occasionally contributes money to relief and recovery operations.

[Source: Press Information Bureau (PIB) New Delhi, Ministry of Home Affairs, Government of India]

### **Conclusion**

After foregoing results and discussion, this paper assessed that natural disaster has a strong link-up with the internally displaced people. Over the past decade, impact of climate changes has increased to accelerate number of events into natural disasters. Therefore, occurrence of natural disaster such as flood and cyclone were more frequent as compared to other natural disaster. Hence, large number of people is internally displaced by flood and cyclone rather than other events. Most vulnerable regions are the Eastern region followed by South and North-Eastern region due to flood and cyclone. Mostly people were displaced from the Eastern India due to huge damage of houses.

Government has allocated fund for the relief of the huge damage from the natural calamity. Government provided fund for the displaced people is highest among Northern region followed by Eastern region in India while lowest in North-East India where displacement people is highest due to flood. Policy maker should take care about proper allocation of government provided fund among vulnerable regions. Internally Displacement Monitoring Centre is provided data about natural disaster, displacement, damages, and government allocated funding for coping from the damages only in the state and national level. But this data is not provided information about allocated fund by NGOS. This paper is showing region wise number of natural disasters event and internally displace people due to major natural disaster from 2011 to 2022 in India. This study has limited information about impact of drought in the displacement as natural event because action of drought has long term effect during long time and this study only restricted in last past decade. Further study has a scope to explore how much people were displaced due to drought in India over the past decade.

There exists a relationship between natural disaster and unsustainable development. As unsustainable development methods can make natural disasters

worse. Unsustainable growth frequently causes environmental deterioration, such as deforestation, biodiversity loss, and soil erosion. Natural systems may become weaker as a result of these environmental changes, leaving them more vulnerable to the consequences of calamities like floods, cyclones, and droughts. For instance, by weakening the soil and lowering the land's capacity to absorb water, deforestation, which frequently results from unsustainable growth, can raise the danger of floods. Building on floodplains, removing mangrove forests, and erecting seawalls are examples of unsustainable development practises that can increase the danger of floods and storm surges in coastal areas of Sundarban.

Additionally, unsustainable development methods can worsen the effects of natural catastrophes on people's lives and means of subsistence. People are more at danger from natural catastrophes, for instance, when growth is concentrated in weak spots like floodplains or informal settlements lacking adequate infrastructure and services. These communities are especially susceptible to the effects of catastrophes because they frequently lack access to sufficient healthcare, housing, and basic amenities when disasters strike. Therefore, it is crucial to encourage sustainable development methods that give environmental preservation priority and lessen reliance on natural disaster. This entails actions like safeguarding natural ecosystems, encouraging green infrastructure, and making investments in initiatives for disaster risk reduction. By doing this, we can reduce negative impacts of natural disasters affecting both people and the environment.

The study of anthropology and related fields like sociology, geography, and environmental studies may be very helpful in disaster relief and catastrophe mitigation. These fields offer a framework for comprehending the social, cultural, and environmental elements that contribute to catastrophes occurring as well as how people react to them. By researching the geographical and environmental aspects that contribute to catastrophe incidence, anthropology and related disciplines may also help with disaster mitigation. Geographers, for instance, can map regions vulnerable to landslides and floods, and environmental scientists may research how climate change is affecting the frequency and intensity of natural disasters.

Studying the social and cultural dimensions of disasters is one of the main ways that anthropology and related disciplines may help with disaster intervention and mitigation. Researchers can pinpoint the unique requirements and vulnerabilities of various communities by looking at how different groups of people experience and react to catastrophes. Through community engagement and education, anthropology and related disciplines can contribute to disaster intervention and mitigation in addition to research. Researchers may aid in increasing public knowledge of the dangers and effects of disasters as well as offer advice on how to prepare for and respond to them by working closely with communities. Creating community-based disaster preparedness plans, teaching emergency response skills, and promoting laws and initiatives that enhance disaster resilience are a few examples of what

this might include. Overall, by providing a comprehensive understanding of the social, cultural, environmental, and geographic factors that contribute to their occurrence and impact, anthropology and related disciplines can play a critical role in the intervention and mitigation of disasters. Researchers may contribute to the creation of more sustainable and effective plans for disaster response and resilience by collaborating with communities.

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## APPENDIX

Regions	States
Northern region	Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttarakhand
Central region	Chhattisgarh Madhya Pradesh Uttar Pradesh
Eastern region	Bihar, Jharkhand, Odisha Sikkim, West Bengal
Northeastern region	Arunachal Pradesh Assam Manipur Meghalaya Mizoram, Nagaland, Tripura
Western region	Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat, Maharashtra
Southern region	Andaman & Nicobar Islands, Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu, Telangana

Physiographic division of Indian states

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