# DECCMA







#### Introduction

India is geographically diverse and is no stranger to the effects of environmental change. Sea level rise, irregular precipitation, glacial melt and extreme events endanger a large number of lives and livelihoods. Semi-arid regions in the southern and western parts, deltas in the eastern parts, and glacier fed river basins in the northern parts of the country are three such climate change "hot spots" which have been identified under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) program. Canada's International Development Research Centre (IDRC) and the UK's Department for International Development (DFID) have supported this program to help build the resilience of vulnerable populations and their livelihoods in these hot spots by supporting collaborative research on climate change adaptation to inform policy and practice.





## Glacier-fed basins (HI-AWARE)

Understand the underlying vulnerabilities and drivers leading to interlinked impacts and manifestations across the social strata of mountain systems.

**Study sites** - low-elevation, mid-elevation and high-elevation areas of Uttarakhand & Sikkim

## Semi-arid regions (ASSAR)

Understand the barriers and enablers for effective adaptation, and what responses enable more widespread, sustained adaptation in semi-arid regions. **Study sites** - Urban and Peri-urban Bangalore & 2 Rural districts of Karnataka

#### **Deltas (DECCMA)**

Assessing migration as an adaptation in deltas, and delivering policy-support to enable gender-sensitive adaptation. **Study sites** - Mahanadi Delta, Odisha & Indian Bengal Delta, West Bengal

The drivers of migration are affected by environmental change linked to climate. Nevertheless, migration is widely recognised as an effective adaptation in these climate change hotspots of mountain systems, semi-arid regions and deltas.

Migration is already an established household adaptation to cope with environmental and economic stresses. Based on our research within ASSAR, DECCMA and Hi-AWARE, we can identify some common trends of migration in India across the semi-arid areas, mountainous regions, and deltas.

#### INTERNAL MIGRATION PREDOMINATES

The majority of migration in each of the hotspots is internal, with migrants moving within their state or to other states in India.

From the low-elevation, mid-elevation and high-elevation areas of Uttarakhand the movement is within the districts and State and across Punjab, Chandigarh and National Capital Region (Delhi NCR). Within the State the movement is towards nearby cities and towns of Guptakashi, Almora, Haridwar, Rishikesh, Mussoorie and Dehradun. For Sikkim, this movement is largely observed to Gangtok.

From the semi-arid areas of Karnataka, movement is towards Bangalore and other states of Maharashtra (Pune and Mumbai) and Telengana (Hyderabad). Within the state, Gulbarga being a relatively large district with only one big urban center (Gulbarga town), exhibits stepwise (or incremental) migration; rural folks often first seek temporary options in Gulbarga which further facilitates migration to bigger cities like Hyderabad, Pune and Bangalore.

From the Indian Bengal Delta (IBD), West Bengal, movement is towards Kolkata, West Bengal which is the nearest metropolitan area. Maharashtra, Tamil Nadu, Kerala, and Gujarat are the other Indian States attracting migrants from IBD. Migrants from the Mahanadi Delta (MD), Odisha are moving to other parts of the state such as Bhubaneswar, Puri, and Paradwip. Other preferred destinations for migrants of MD are West Bengal, Karnataka, Tamil Nadu, and Gujarat. The informants of opportunities in the destination states were friends and family members who have already migrated temporarily to these areas.

In the mountainous regions and semiarid areas, social networks (peer and kin-based associations) were found to be the most common facilitator of migration: of varying temporal nature as well as destinations. Broker economy mediating access to livelihood opportunities within and outside the select districts was found to be widespread as well. Construction, brick kiln and textile industries are some of the common sectors that operate via the broker economy to access cheap, and often unregulated labour. In contrast in deltas, the role of broker economy to setup work and shelter was not so prevalent.

## SYNTHESIZED MIGRATION FINDINGS IN INDIA



#### MALE MIGRATION EXCEEDS FEMALE MIGRATION

Male migration is higher than female migration in all three hotspots.

From the mountainous areas, it is mostly the men who migrate, and seasonally the women migrate during winters to cope with the harsh weather conditions. Semiarid regions also have the male working age population, between 20s to late 40s, migrating more than women. Deltas have mainly male migrants in the age group of 21-30 years with primary and secondary education migrating more.

With this greater incidence of male migration, the women who are staying back have to take on extra workload handling household chores along with the additional responsibility of looking after the farmlands. The responsibilities for the women have increased but with migration they have an increased decision making power in many cases

#### ECONOMIC REASONS DRIVE MIGRATION

Across all the three hotspots, economic reasons are the primary driving of movement. Economic Reasons include employment – lack of it at the origin acting as a push factor and opportunities at destination acting as pull factors.

In case of the mountainous regions, the economic reasons include better job opportunities and higher wages. Reasons such as declining share of landholdings and poor land quality at the origin contribute to the economic reasons.

The main driver for migration in semi-arid areas is the entrenched precariousness of farm-based livelihoods, which emerges from unfavourable market dynamics and inadequate access to market, infrastructure, information and technical support. This contributes to the lack of economic opportunities at the source.

Deltas are fertile tracts of land and agriculture is the mainstay of the population. However, increasing unsustainability of agriculture in the deltas accompanied by lack of other economic opportunities is prompting people to seek employment opportunities outside the deltas. Often environmental stresses contribute to the unsustainability of agriculture.

## URBAN AND PERI-URBAN CENTRES ATTRACT MIGRANTS

The nearest urban and peri-urban regions attract migrants from these hotspots. These regions are experiencing an influx of people mainly for the economic opportunities they provide, followed by education and other reasons.

For the semi-arid areas, Bangalore, Pune, Mumbai and Hyderabad emerged as top migrant destinations. The choice of the city is contingent on proximity, availability of work (predominantly construction sector, manufacturing and other informal odd jobs) and ease of access to work mediated by networks. For example, Gulbarga, owing to its location at the cusp of three states and advent of highways and better connectivity, sends migrants to Mumbai, Pune, Hyderabad and Bangalore. Likewise, migrants from Kolar frequent Bangalore the most, followed by other big cities further south.

From the low-elevation, mid-elevation and high-elevation areas of Uttarakhand the movement of migrants is within the districts towards nearby cities and towns of Guptakashi, Almora, Haridwar, Rishikesh, Mussoorie and Dehradun. The choice of these destinations is proximity and the availability of work in these tourist and religious destinations. For Sikkim, the primary destination is Gangtok.

In case of the Mahanadi Delta, Bhubaneswar attracts migrants. Being the capital city of Odisha, and the state's economic and educational centre, Bhubaneswar has witnessed rapid development during the past two decades. Other cities like Puri - famous for religious tourism - and Paradwip – a port city on the Mahanadi River - attract many people from neighbouring rural and urban communities.

For the Indian Bengal Delta, the peri-urban areas of Kolkata are the primary destination for migrants. Barrackpur, Barasat and Rajarhat in North 24 Parganas, and Rajpur-Sonarpur, Baruipur, Garia in South 24 Parganas, possess pull factors such as better work opportunity/ business, high quality educational and health institutions, lower land prices, lower cost of living (than Kolkata), and an easier commute to Kolkata than from the rural areas.

## **REMITTANCES IMPROVE MATERIAL WELLBEING**

Remittances, in the form of money, knowledge and ideas, contribute to improving the wellbeing of families in migrant-sending areas.

In the semi-arid areas, the mean monthly income of migrant households, including the remittances received, was almost double that of non-migrants.

In the mountainous regions, there is more variability. The remittance amount varies, as does the receipt across different elevations. Higher remittances are received from international migrants. A very low percentage of population uses the remittance money for coping with climate induced disasters.

Migrant-sending households in deltas areas receive remittances monthly or once every 2-3 months. Remittances have improved their standard of living by enabling them to pay for daily consumption needs (food, bills), healthcare, and education.

## **ENVIRONMENTAL HAZARDS CONTRIBUTE TO MIGRATION**

Environmental Hazards are both immediate and proximate causes of migration in these three hotspot areas. Rapid-onset hazards often become the immediate cause of migration, while slow-onset hazards affect the ability to earn a living which, in turn, contributes to migration.

Rapid-onset hazards usually lead to loss of lives, cultivable lands and property, leaving little or no options for the inhabitants of the area to adapt in-situ. Under such situations migration is the only viable option for survival.

Changes in rainfall patterns affect all the three hotspots.

Slow-onset hazards threaten natural resource-based livelihoods such as agriculture, which is the primary livelihood of most of the rural population. When the ability to earn a living is compromised, these environmental hazards are stressors that motivate people to consider migration for better economic opportunities elsewhere.



## MIGRATION CAUSED DIRECTLY BY ENVIRONMENTAL HAZARDS IS TYPICALLY PERMANENT

## When environmental hazards are the direct cause of migration, and there is no longer an option to stay, the duration is typically permanent.

A confined region in a block in Tehri Garhwal district of Uttarakhand has been experiencing cloud burst events/ heavy precipitation events which have caused significant landslides washing away many houses and parts of land. Cloud bursts are damaging the agricultural fields and houses, forcing people to move in search of employment to rebuild the damaged structures. This village has witnessed permanent migration wherein households have left or have been re-located by the government owing to the high risk factor and exposure to such events. A similar narrative evolves for villages in the higher elevation of Uttarakhand where the devastating floods of 2013 has led to loss of livelihoods and migration.

In the Indian Bengal delta, two inhabited estuarine islands of Lohachara and Suparibhanga have been submerged. The entire populations of a number of villages of Ghoramara Island were compelled to forego their homes and seek refuge on nearby islands. The government of West Bengal resettled the displaced people in five settlements of Sagar Island by giving them homestead land and cultivable land.

In the Mahanadi delta, the Satavaya Gram Panchayat within Kendrapara district of Odisha has experienced shifting of the shoreline, gradual erosion and deposition. Coupled with the impacts of major cyclones, this has washed away 11 villages. At present five villages are at risk. Recognising the threats to their citizens, the state government of Odisha has taken a pioneering "humanitarian approach" to relocation, providing new homes and amenities 9 kilometres inland in the village of Bagapatia where displaced communities are resettled.

## **CONSEQUENCES OF MIGRATION**

Whilst migration can give rise to economic benefits, there are other social consequences for the migrants and the families they leave behind.

Migrant sending areas in all hotspots are experiencing a change in population structure as the young working age population tend to migrate away. Migration affects gender roles, with women in the sending areas often ending up overburdened as the males are migrating. The migrant-receiving areas are often inadequately prepared to accommodate them, in terms of infrastructure. This leads to migrants often living in unsanitary conditions and contracting diseases. Also due to linguistic diversity across different states in India, inter-state migrants face considerable challenges in terms of assimilation and accessibility to state sponsored social security services.

## **OUR FINDINGS VS. FINDINGS FROM CENSUS DATA**

Urban and periurban regions attract migrants justify the Census finding of increase of Rural to Urban Movement

Economic reasons drive *migration corroborates* the finding that Better employment opportuties is the prominent reason for male migration.

#### Difference in migration numbers across gender

Census data reveal that the incidence of Female Migration is higher than that of Male Migration and it is so owing to accounting "Marriage" as a driver of Migration. When Marriage as a driver is kept aside



the numbers for Female Migration exhibit a considerable drop, thereby highlighting the way more incidence of Male Migration. In the three research projects, the thrust is to examine Migration as a response to environmental and economic changes, and thus Marriage as a driver has not been considered in the studies.

#### WHAT NEEDS TO BE IN PLACE TO ENSURE MIGRATION IS A SUCCESSFUL **ADAPTATION OPTION?**

Migration should be managed in order to reduce the challenges and improve the benefits. A national and/or state level policy or action plan on climate and environment-induced migration, and rehabilitation and relocation of vulnerable migrants, would provide the policy framework for this to be supported. In particular such a policy/action plan should recognise that:

- o Distress migration should be managed by understanding its drivers and barriers
- o Thriving peri-urban areas need to have proper infrastructure and planning to accommodate the influx of migrants
- o Resettlement plans should take into account livelihood support as well as housing/land
- o Skill development programmes for migrants will increase the likelihood of migration being successful
- o Gender is addressed, to support (largely male) migrants and those left behind (largely female) to build their adaptive capacity.

#### CONTACT





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