

Labour Migration from Kosi-Seemanchal Regions of Bihar: Trends and Patterns (2000-2025)

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Abstract

Migration is an integral part of human history. The Kosi-Seemanchal region of Bihar is a socio-economically backward area dominated by agricultural and allied economic activities, where unemployment and poverty are the principal drivers of out-migration. Inequality in economic development, arising from the uneven spread of the Green Revolution across the region, is the principal cause of large-scale rural out-migration of labour. As economic considerations increasingly shape rural livelihoods, migrant labourers are compelled to search for better wages elsewhere. The development purposive of rapid transportation and communication has further reshaped migration trends and patterns over time.

The present paper analyses the trends and changing pattern of labour migration from the Kosi-Seemanchal region. The study is based on primary data collected from 300 migrant labourers through a multi-stage sampling design (selection of Community Development Blocks, followed by random sampling of migrant households within each block) across seven Community Development Blocks of the Kosi-Seemanchal region. The study covers the period 2000-2025, with data analysed at five-year intervals. Descriptive statistics were applied, and MS Excel and ArcGIS software were used to visualise migration flow and the spatial distribution of migrant labor.

The results show that migrant labourers are shifting from the traditional destinations of north-western India towards western and southern India. Seasonal migration remains the dominant type of movement in this area, although the pattern is gradually shifting from short-term to longer-term inter-state migration, altering the occupational structure of the population. The large-scale out-migration of labour from the study area is also creating labour scarcity in the region's own farming and construction sectors.

Keywords: Out-migration, Labour migration, Destination, Remittances, Kosi-Seemanchal Region.

1. Introduction

The Kosi-Seemanchal region, characterized by its unique socio-economic landscape and recurrent environmental vulnerability due to the Kosi River system, has emerged as a significant hub for labour mobility in Bihar (Kumar et al., 2025; Kumar & Shekhawat, 2024). Persistent poverty and underdevelopment in this flood-prone geography have institutionalized a "culture of migration," where a majority of households rely on remittances as a primary survival strategy (Kumar, 2020).

Migration is a geographical phenomenon in which people change their location for short-term or long-term periods. Ravenstein's law of migration and Lee's subsequent push-pull theory of migration explain the process and pattern of migration within a country (Ravenstein, 1889; Lee, 1966). Unequal distribution of resources generates the conditions for migration. Human beings have basic needs of food, shelter, clothing and employment, and in order to fulfil these needs, they migrate from less to more developed regions.

One of the earliest extensive studies of internal migration in India was by Gosal (1961). He studied the geographical patterns and causes of population mobility. The study used Census data to show migration is influenced by regional disparities in economic opportunities, agricultural productivity, industrial expansion and levels of urbanization. Gosal noted that the migration streams were largely from economically less developed rural areas to the urban and industrial hubs pointing to the unequal geographical distribution of labor opportunities.

The neo-classical macro-economic model suggests that modern rural-to-urban migration is driven by rural-urban income differentials, wage gaps, and the probability of obtaining an urban job (Todaro, 1969; Harris & Todaro, 1970). By contrast, the new economics of labour migration views the migration decision as a household-level, rather than purely individual, decision (Stark & Bloom, 1985). Migration is, however, age, gender and distance-selective. No matter how short or long, easy or difficult, every act of migration involves an origin, a destination, and an intervening set of obstacles, among which distance is always present (Lee, 1966). It also depends on push factors at the place of origin and pull factors at the destination (Lee, 1966), and is influenced by economic factors, the development of trade and commerce, and political and socio-cultural factors. Bihar has long history of migration. In the 1830s, a century-long wave of indentured (Girmitiya) labour migration began from eastern Uttar Pradesh and Bihar to sugarcane and rubber plantations in British colonies across the Caribbean, Fiji, and Mauritius. By the second half of the 19th century, two major internal migration streams also emerged from the state, directing workers to the tea

gardens of Assam and the urban labour markets of Calcutta (Datta, 2019). It accounted for eastward migration. The patterns of migration have been changing as a development in transportation and communication.

The age of discovery is itself rooted in migration in the history and geography of the world. Bihar's relative economic backwardness has been attributed to its colonial history, characterised by the permanent settlement, the land tenure and zamindari systems, landlessness, and the freight equalisation policy of the central government in the post-independence period (Mathew & Moore, 2011). Rural livelihood insecurity is a dominant driver of out-migration in the Kosi-Seemanchal region of Bihar (Kumar & Jha, 2018). The uneven success of the Green Revolution and limited industrial development created a deficit of employment in parts of Bihar, which in turn caused out-migration (Cleaver, 1972). Poverty declined from 61 per cent in 1994 to 55 per cent in 2005 and to 34 per cent in 2012, yet a disproportionate share of India's poor still lives in Bihar, where 34 per cent of the population remains below the poverty line (World Bank Group, 2016). Migration has also been linked to the degree of social openness in a society, it tends to increase with scientific and technological innovation and decrease in relatively static, traditional social orders. Census of India (2011) data show that Bihar ranks second among Indian states in the number of residents working outside their home state, after Uttar Pradesh, with migrants accounting for 7.2 per cent of its population (Rehman, 2025).

The Kosi-Seemanchal region of Bihar has witnessed a history of colonial rule, the zamindari system, poverty, unequal temporal and spatial economic development, low per capita income, a low level of industrialization, flood hazards, high population growth, a low level of agricultural mechanization, a shortage of high-yielding variety seeds, inadequate access to financial support for farmers, and unemployment. These circumstances together create push factors at the place of origin and result in inter-state migration of labour (Kumar & Kumar, 2020). The studies focusing on the Kosi-Seemanchal region demonstrate that the unviability of smallholder agriculture, coupled with endemic landlessness, forces rural laborers to prioritise out-migration as a primary income-diversification strategy (Kumar & Manish, 2020; Madhuri et al., 2014).

The regional specificities of the Kosi-Seemanchal area, where migratory decisions are often driven by a complex interplay of systemic socio-economic factors and environmental stressors (Kumar & Shekhawat, 2024, 2025). Specifically, historical patterns in the region underscore how rural poverty and the lack of local employment prospects compel individuals to seek livelihoods elsewhere (Anand, 2025). Empirical evidence highlights how this region's

agrarian dependency is exacerbated by frequent flooding, transforming migration from a choice into an essential livelihood strategy (Mohan & Kumar, 2024).

Climatic hazards, particularly floods in the Kosi-Mahananda and Ganga basin caused by heavy rainfall in the terai region of Nepal, also contribute to high flood vulnerability in the region (Sahani et al., 2023), which undermines basic infrastructure and threatens livelihoods (Dewan, 2013). By contrast, the success of the Green Revolution in the north-western states of India created employment opportunities in agricultural fields, initiating a chain of labour migration that emerged from the Green Revolution's uneven spatial and temporal impact (Datta, 2025). Bihar, held back by economic backwardness and stagnant agriculture and allied sectors, saw the movement of labour towards Punjab, Haryana and western Uttar Pradesh, where demand for labour was increasingly met by migrants from Bihar.

The Kosi-Seemanchal region, part of the Kosi-Mahananda-Ganga plain and characterised by intensive subsistence agriculture, has been unable to sustain its labour force in agriculture and allied sectors because of low wages and the factors noted above; consequently, NCR Delhi, Haryana and Punjab emerged as the most favoured destinations for these migrants. Industrial and trade development in and around NCR Delhi generated employment in the secondary and tertiary sectors, and the Bihar-Delhi migration corridor is among the densest in India: the net rural-to-urban inter-state migration from Bihar to Delhi between 2001 and 2011 is estimated to be the second largest such movement in the country (Census of India, 2011; Indian Institute for Human Settlements, 2012).

In India, large cities act as the chief recipients of rural migrants, with a positive correlation observed between city size and the share of rural migrants (Nazim, 2019). Studies report that approximately 25 Per Cent of Bihar's total interstate migrant labourers prefer the National Capital Region (NCR) of Delhi as a destination (Indian Institute of Public Administration [IIPA], 2010; Rodgers et al., 2013). A rapid shift has been observed from around 2010 onward, driven by developments in transportation and communication, with Gujarat, Maharashtra, Tamil Nadu, Karnataka and Telangana emerging as the most favoured migratory destinations. The chief advantage of these destinations is that they offer year-round employment, reducing the seasonal unemployment migrants previously faced, in construction, automobile manufacturing, and other secondary and tertiary activities.

Despite a growing body of literature on migration from Bihar, relatively few studies have examined the changing spatial pattern of destinations over a long (2000-2025) time-frame using primary household-level data specific to the Kosi-Seemanchal region. This paper addresses that gap by combining primary survey data with GIS-based visualization to trace

the shifting geography, age composition, income differentials and mode of transport associated with labour out-migration from the region, and to relate these trends to the region's own development challenges.

2. Study Area

The Kosi-Seemanchal region is located in the north-eastern part of Bihar. It has a latitudinal and longitudinal extent of 25.20°N to 26.50°N and 86.20°E to 88.20°E, and forms part of the Kosi, Mahananda and Ganga plain.

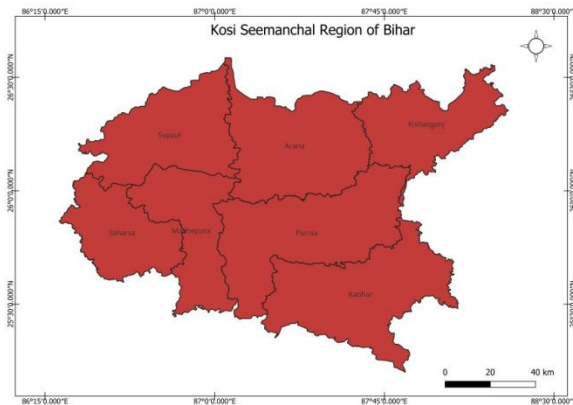


Fig. 1 (a)

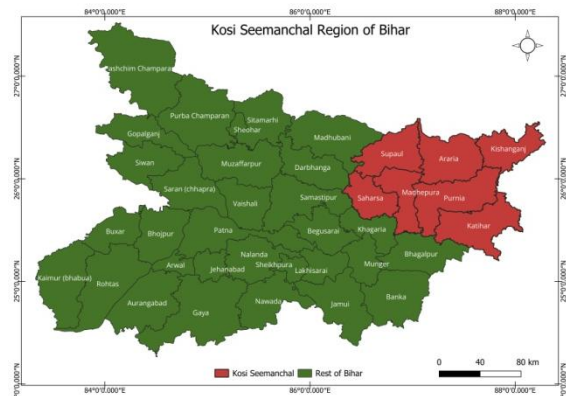


Fig. 1 (b)

Fig. 1: Study Area — (a) Kosi-Seemanchal, (b) Kosi-Seemanchal region of Bihar

Source: Survey of India

The Kosi-Seemanchal region covers an area of 16,899 sq. km, divided into two divisions—Kosi and Purnia—comprising seven districts: Saharsa, Supaul, Madhepura, Purnia, Araria, Katihar and Kishanganj. The region shares an international boundary with the terai region of Nepal to the north, and is bounded by the Ganga River to the south, the Kosi River to the west, and West Bengal to the north-east.

The Kosi-Seemanchal region is spread over eighty Community Development Blocks and has a total population of 16,969,116 (Census of India, 2011). The population density is 1,004 persons per sq. km (Census of India, 2011) and the region has experienced high population growth. The climate is sub-tropical, and the region lies in the Zone-2 (North-East Alluvial Plain) agro-climatic zone of Bihar. Intensive subsistence agriculture is practised by farmers in the region (Nazim & Ranjan, 2024). The construction of the Kosi Barrage and several embankments has reduced the region's exposure to recurring floods, although flood vulnerability increases when embankments breach during the monsoon season. The Kosi-Mechi river-linking project has been proposed for river-water management. The economy of the region depends mainly on agriculture and allied sectors.

3. Aims and Objectives

The major objectives of the present study are:

1. To analyse the trends and pattern of labour migration from the Kosi-Seemanchal region of Bihar.
2. To examine the age-group composition and causes of labour migration in the study area.
3. To analyse income levels among migrant labourers and the problems created in the origin area by labour migration.

4. Materials and Methods

The present study is based on both primary and secondary sources of data. To analyse the trends and pattern of labour migration, data for the period 2000 to 2025 were considered, with a five-year interval adopted for analytical purposes. A multi-stage sampling design was used: seven Community Development Blocks—Kumarkhand, Banmankhi, Nauhatta, Chhatapur, Kursela, Bhargama and Bahadurganj—were purposively selected to represent the region's constituent districts, and within each block, migrant and return-migrant households were selected using simple random sampling, yielding a total sample of 300 migrant labourers. Structured questionnaires and interview schedules were used to collect information from migrant and return-migrant households. Secondary data were drawn from the Census of India, 2011 and the Bihar Economic Survey, 2024-25. Descriptive statistics were applied for analysis, and MS Excel and ArcGIS software were used to visualize migration flow and the spatial distribution of migrant labor.

It should be noted that the sample of 300 households drawn from seven of the region's eighty Community Development Blocks, while adequate for identifying broad trends, is not statistically representative of the entire Kosi-Seemanchal region; the purposive selection of blocks means that findings should be read as indicative rather than generalisable in a strict statistical sense. This limitation is discussed further below.

5. Results and Discussion

This section presents the trends and pattern, age composition, income levels and problems associated with labour migration in the study area, organised under the sub-headings below.

5.1 Trends and Pattern of Migration by Destination

Table 1: Places of Destination in India (in per cent)

Years	NCR Delhi, Rajasthan, Uttar Pradesh	Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir	Karnataka, Tamil Nadu, Telangana, Andhra Pradesh	Maharasht ra and Gujarat	West Bengal	Other
2000-2005	35	56	-	-	4	5
2005-2010	37	55	-	1	3	4
2010-2015	33	53	2	5	2	5
2015-2020	31	43.66	8	11	1.33	5
2020-2025	30	35.33	16	14	0.66	4

Source: Based on Field Work, 2025

The inter-state migration flows from the Kosi-Seemanchal region reveal a dynamic shift in destination over the past two decades, 2000-2025 (Tables 1, 2 and Fig. 3). In 2000-2005 fig. 2. (a), 35 per cent (105) of migrant destinations were in NCR Delhi, Rajasthan and Uttar Pradesh, 56 per cent (168) were in Punjab, Himachal Pradesh, Haryana and Jammu & Kashmir, 4 per cent (12) were in West Bengal, and the remaining 5 per cent (15) were in other parts of India. In Punjab, Haryana, Himachal Pradesh, Rajasthan and Uttar Pradesh, migrant labourers primarily found employment in agriculture and allied sectors, while in NCR Delhi they found employment in the secondary and tertiary sectors. In 2005-2010 fig. 2. (b), the trend remained broadly similar: 37 per cent (111) of migrant destinations were in NCR Delhi, Rajasthan and Uttar Pradesh, 55 per cent (165) in Punjab, Haryana, Himachal Pradesh and Jammu & Kashmir, 1 per cent (3) in Maharashtra and Gujarat, 3 per cent (9) in West Bengal, and 4 per cent (12) in other states.

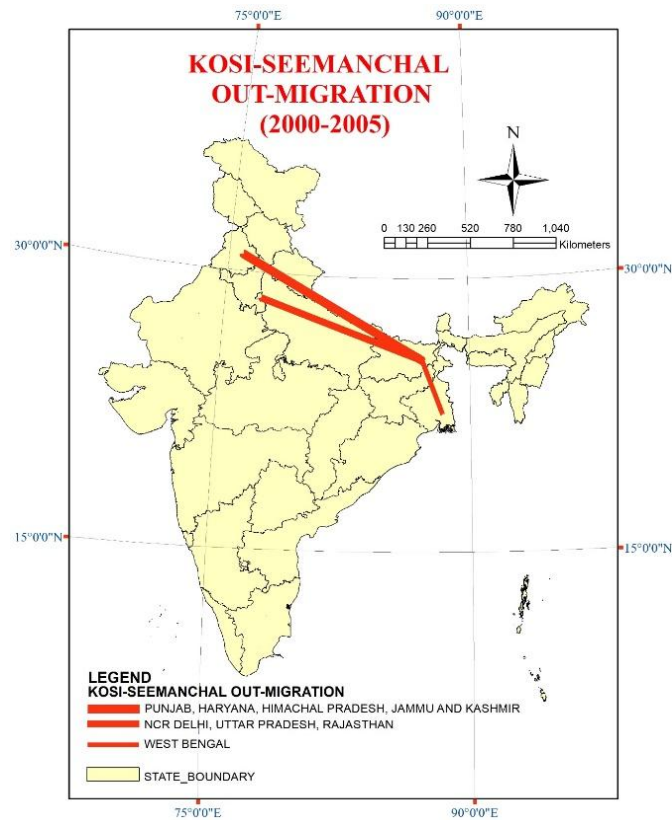


Fig. 2. (a) Kosi-Seemanchal Out-migration (2000-2005)

Source: Based on Field Work, 2025, Table – 1

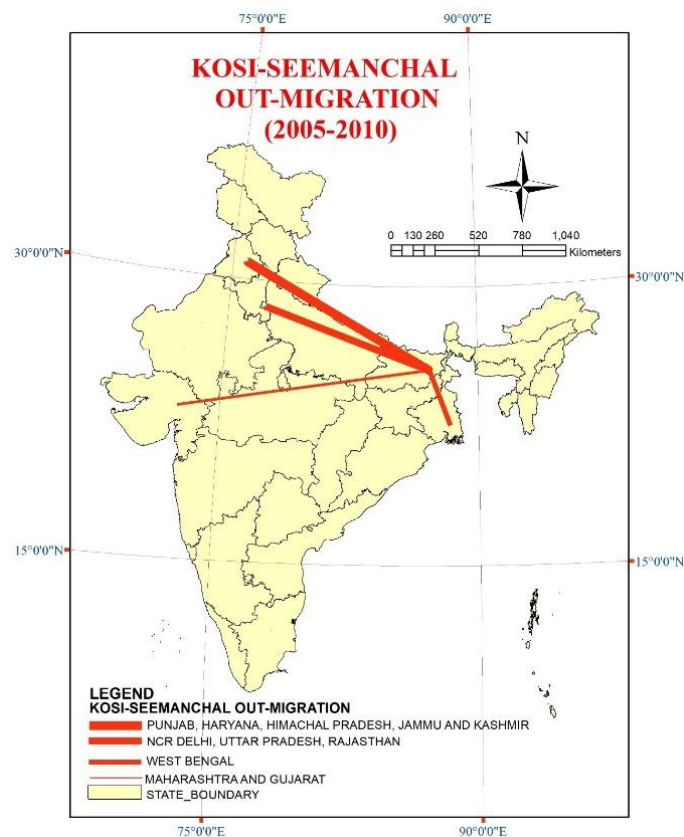


Fig. 2. (b) Kosi-Seemanchal Out-migration (2005-2010)

Source: Based on Field Work, 2025, Table – 1

Table- 2: Places of Destination showing different states of India.

Year	NCR Delhi, Rajasthan, Uttar Pradesh			Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir			Karnataka, Tamil Nadu, Telangana, Andhra Pradesh			Maharashtra and Gujarat			West Bengal			Other		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
2000- 2005	103	2	105	167	1	168	0	0	0	0	0	0	10	2	12	15	0	15
2005- 2010	109	2	111	161	4	165	0	0	0	3	0	3	7	2	9	12	0	12
2010- 2015	95	4	99	157	5	162	6	0	6	10	2	12	4	2	6	14	1	15
2015- 2020	85	8	93	124	7	131	24	0	24	30	3	33	3	1	4	13	2	15
2020- 2025	80	10	90	97	9	106	48	0	48	37	5	42	2	0	2	11	1	12

Here M= Male, F= Female, T= Total

Source: Based on Field Work, 2025

Comparing 2000-2005 with 2005-2010, there was a 2 percentage-point increase in the share of migrants destined for NCR Delhi, Uttar Pradesh and Rajasthan, alongside a 1 percentage-point decrease each for Punjab-Haryana-Himachal Pradesh-Jammu & Kashmir and West Bengal. Migration to Maharashtra and Gujarat first appeared in this period.

In 2010-2015 fig. 2. (c), a slight decline in the north-western region's share was observed, while out-migration to Maharashtra-Gujarat and South India began to increase, indicating a diversifying pattern of destinations: 33 per cent (99) to NCR Delhi, Rajasthan and Uttar Pradesh, 53 per cent (159) to Punjab, Haryana, Himachal Pradesh and Jammu & Kashmir, 2 per cent (6) to Tamil Nadu, Karnataka, Andhra Pradesh and Telangana, 5 per cent (15) to Maharashtra and Gujarat, 2 per cent (6) to West Bengal, and 5 per cent (15) to other states. This represents a 4 percentage-point decrease for NCR Delhi-Uttar Pradesh-Rajasthan, a 2 percentage-point decrease for Punjab-Haryana-Himachal Pradesh-Jammu & Kashmir, a 4 percentage-point increase for Maharashtra-Gujarat, and a 1 percentage-point decrease for West Bengal. In 2015-2020 fig. 2. (d), the dominance of Punjab-Haryana-Himachal Pradesh-Jammu & Kashmir declined sharply, while migration to the South Indian states and Maharashtra-Gujarat grew significantly: 31 per cent (93) to NCR Delhi, Rajasthan and Uttar Pradesh, 43.66 per cent (131) to Punjab, Haryana and Jammu & Kashmir, 8 per cent (24) to Tamil Nadu, Karnataka, Telangana and Andhra Pradesh, 11 per cent (24) to Maharashtra and Gujarat, and 1.33 per cent (4) to West Bengal.

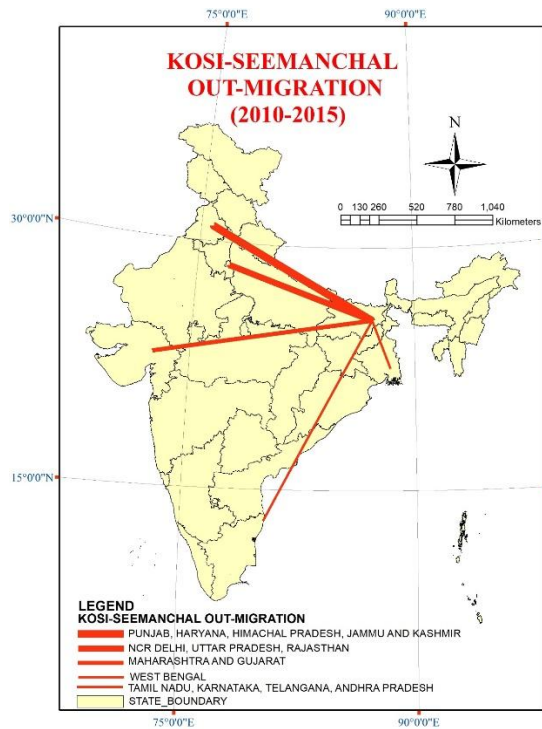


Fig. 2. (c) Kosi-Seemanchal Out-migration
(2010-2015)

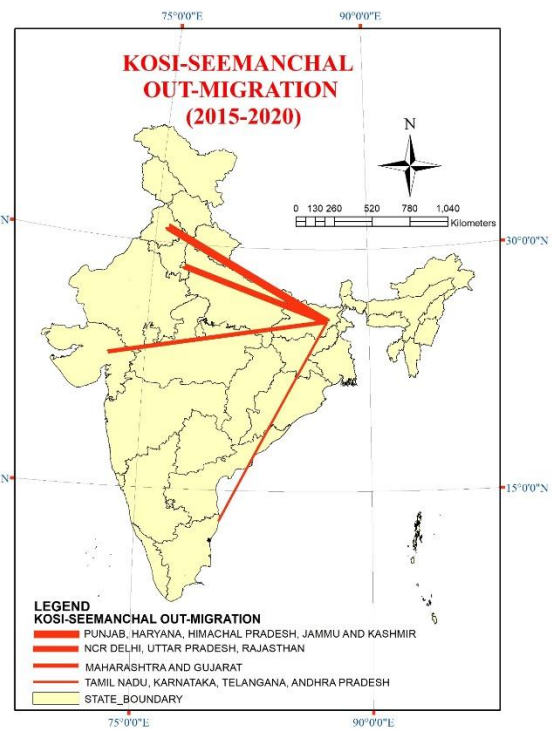


Fig. 2. (d) Kosi-Seemanchal Out-migration
(2015-2020)

Source: Based on Field Work, 2025

This period thus shows a 2 per cent decrease for NCR Delhi-Rajasthan-Uttar Pradesh, a 9.34 percentage-point decrease for Punjab-Haryana-Himachal Pradesh-Jammu & Kashmir, a 6 percentage-point increase for Tamil Nadu-Karnataka-Telangana-Andhra Pradesh, a 6 percentage-point increase for Maharashtra-Gujarat, and a 0.67 percentage-point decrease for West Bengal. In 2020-2025 fig. 2. (e), a marked shift occurred: Punjab-Haryana-Himachal Pradesh-Jammu & Kashmir declined further, while migration to South India and Maharashtra-Gujarat increased, indicating growing economic opportunities in the industrial and service sectors. In this period, 30 per cent (90) of migrants were destined for NCR Delhi, Rajasthan and Uttar Pradesh, 35 per cent (106) for Punjab, Haryana, Himachal Pradesh and Jammu & Kashmir, 16 per cent (48) for Tamil Nadu, Karnataka, Telangana and Andhra Pradesh, 14 per cent (42) for Maharashtra and Gujarat, and 0.66 per cent (2) for West Bengal—representing a 1 percentage-point decrease for NCR Delhi-Rajasthan-Uttar Pradesh, an 8.33 percentage-point decrease for Punjab-Haryana-Himachal Pradesh-Jammu & Kashmir, an 8 percentage-point increase for Tamil Nadu-Karnataka-Telangana-Andhra Pradesh, a 3 percentage-point increase for Maharashtra-Gujarat, and a 0.67 percentage-point decrease for West Bengal. In sum, new migration flows towards Maharashtra-Gujarat and South India

began around 2010-2015 and strengthened considerably over 2015-2025, pointing to a broader structural change in India's labour market.

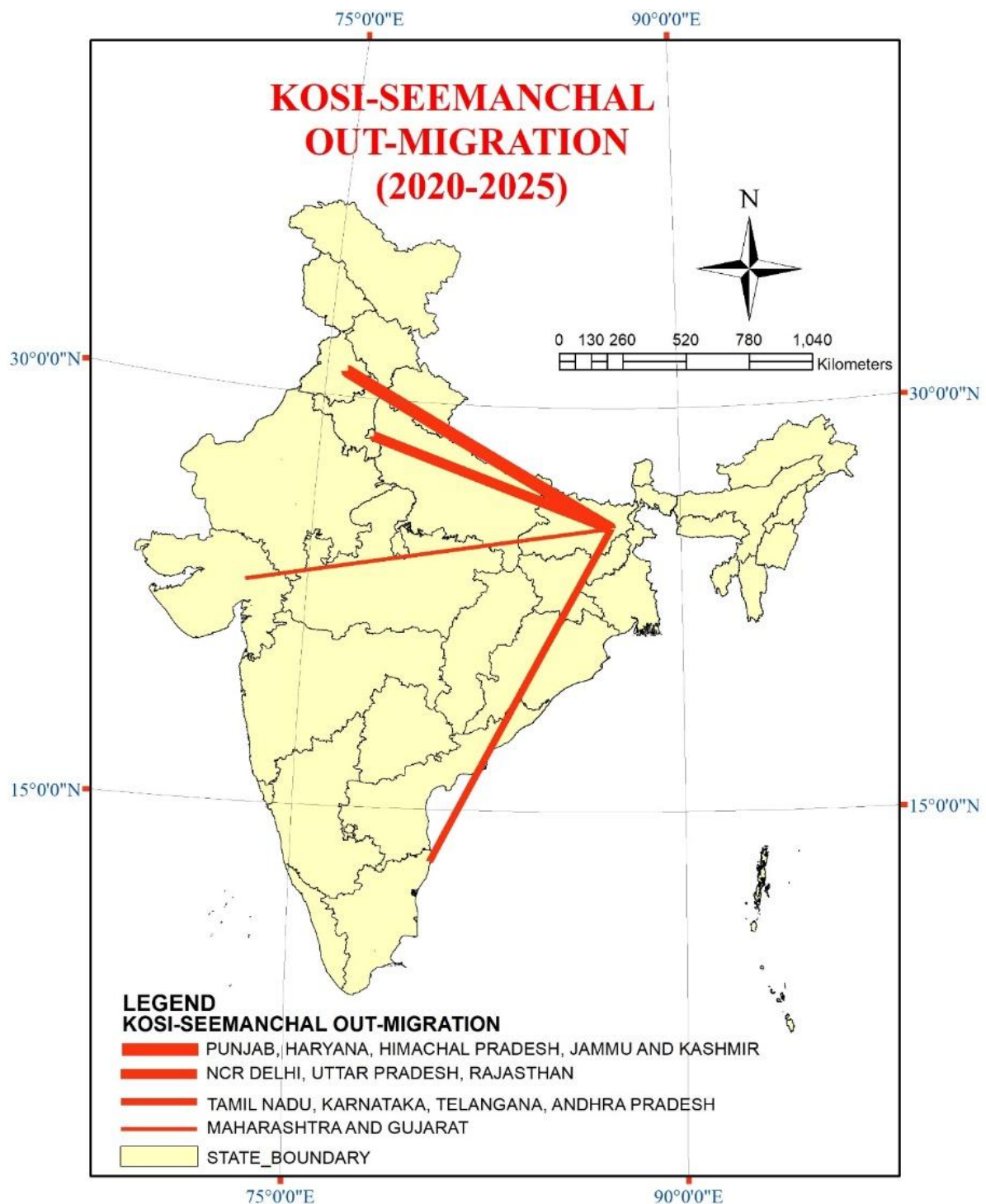


Fig. 2. (e) Kosi-Seemanchal Out-migration (2020-2025)

Source: Based on Field Work, 2025, Table – 1

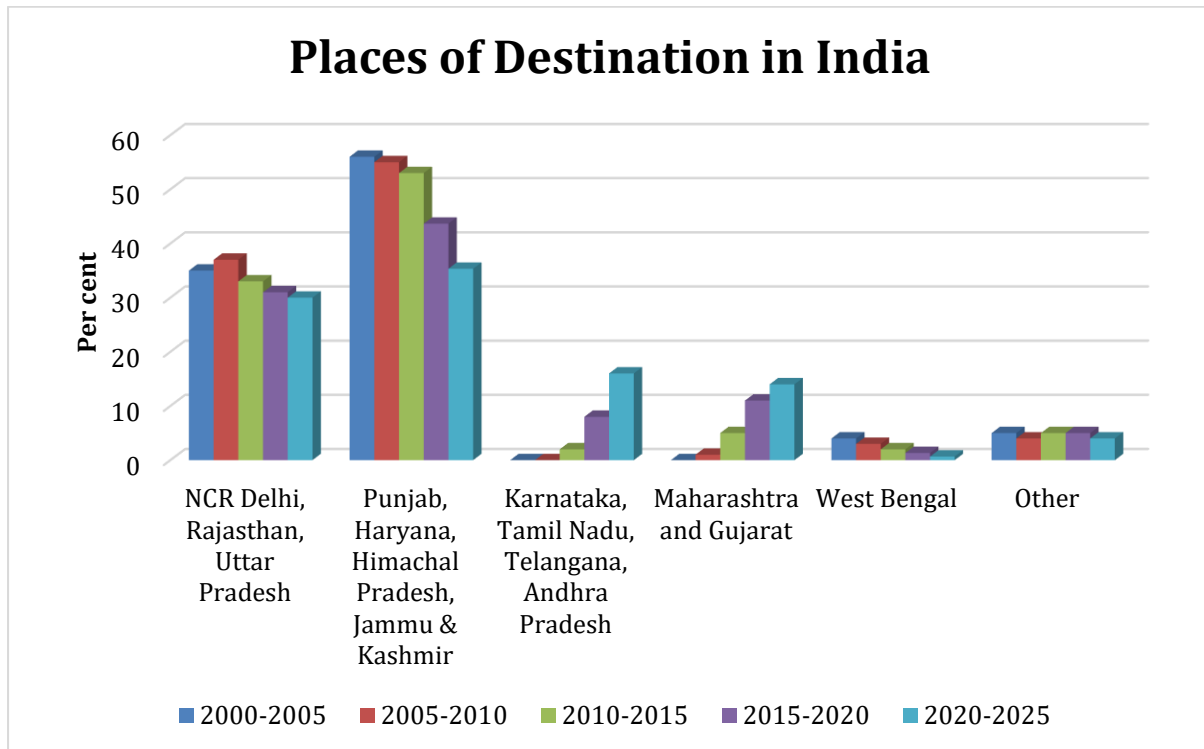


Fig. 3: Percentage Share of Migrant Labour by Destination Category, 2000-2025

Source: Based on Field Work, 2025

The study finds that migrants' destinations within NCR Delhi include Sadar Bazar, Azadpur Mandi (Asia's largest fruit wholesale market), Karol Bagh, Old Seelampur market, Noida and Ghaziabad. In Punjab and Haryana, destinations include Sonipat, Panipat, Ambala, Rohtak, Gurugram, Faridabad, Jhajjar, Ludhiana, Amritsar, Jalandhar, Kapurthala, Sangrur, Mansa, Bathinda, Barnala, Gurdaspur and Tarn Taran, as well as Chandigarh. In Jammu and Kashmir, destinations include Jammu city, Srinagar, Kathua, Anantnag, Baramulla and Pulwama. In Himachal Pradesh, destinations include Shimla, Solan, Kullu, Mandi, Kangra and Una. In Gujarat, major destinations include Surat, Ahmedabad, Vadodara, Rajkot and Bhavnagar. In Maharashtra, destinations include Mumbai, Pune, Nagpur and Nashik. In Tamil Nadu, destinations include Chennai, Tiruppur, Coimbatore, Sriperumbudur, Oragadam, Tiruchirappalli and Karur. In Andhra Pradesh, destinations include Visakhapatnam, Vijayawada, Tirupati, Guntur, Amaravati and Kakinada. In Telangana, major destinations include Hyderabad, Nizamabad, Warangal and Sangareddy. Overall, a clear shift in migrant destinations has been observed in recent decades, from the north-western provinces towards the western and southern parts of India.

5.2 Age Composition of Migrant Labourers

Table 3: Age Groups of Labour Migrants and Percentage Share of Inter-State Migration in the Kosi-Seemanchal Region of Bihar

Age Group	Percentage Share
5-15	2%
15-30	43%
30-45	31%
45-60	18%
60 and above	6%

Source: Based on Field Work, 2025

Age group plays an important role in migration. From Table 3 and Fig. 4, it was found that 2 per cent of migrant labourers are aged 5-15 years, 43 per cent are aged 15-30 years, 31 per cent are aged 30-45 years, 18 per cent are aged 45-60 years, and 6 per cent are aged 60 years.

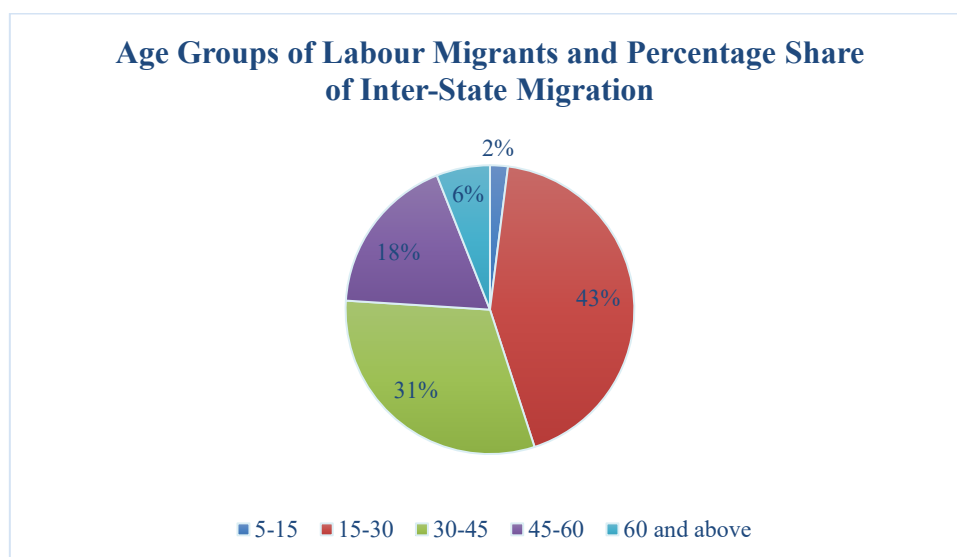


Fig. 4: Age Groups and Percentage of Inter-State Labour Migrants

Source: Based on Field Work, 2025

It is a matter of concern that 2 per cent of migrants are child labourers, the majority of them are from low socio-economic backgrounds Scheduled Castes and Scheduled Tribes especially vulnerable groups are Mushar, Bantar and Sautar community. These children work primarily in poultry farms, tea shops, as street vendors, in popcorn stalls, godowns and brick kilns. The largest share of migrants is in the 15-30 age group, and 92 per cent of migrant labourers fall within the broader 15-60 age group, although older migrants are also present.

5.3 Income Levels of Migrant Labourers

Table 4: Average Monthly Income of Migrant Labourers in Different States/Regions

Place of Destination	Monthly Income (Rs.)
NCR Delhi, Rajasthan, Uttar Pradesh	14,000 - 18,000
Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir	12,000 - 16,000
Tamil Nadu, Telangana, Andhra Pradesh, Karnataka	22,000 - 30,000
Maharashtra and Gujarat	22,000 - 28,000

Source: Based on Field Work, 2025

Table 4 shows the average monthly income of migrant labourers across destination states/regions. In NCR Delhi, Rajasthan and Uttar Pradesh, average monthly income is Rs 14,000-18,000; in Punjab, Haryana, Himachal Pradesh and Jammu & Kashmir it is Rs 12,000-16,000; in Tamil Nadu, Karnataka, Telangana and Andhra Pradesh it is Rs 22,000-30,000; and in Maharashtra and Gujarat it is Rs 22,000-28,000. The higher income levels in Tamil Nadu, Karnataka, Telangana, Andhra Pradesh, Maharashtra and Gujarat appear to explain the shift of migrant destinations towards these states, reflecting the wider opportunities available in their service sectors. In Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, and parts of Uttar Pradesh, migrant labourers mainly find work in agriculture and allied sectors, while in NCR Delhi, Tamil Nadu, Karnataka, Telangana, Andhra Pradesh, Maharashtra and Gujarat, migrants are employed in secondary and tertiary activities such as construction, the automobile industry, textiles and pharmaceuticals.

5.4 Mode of Transport and Gender Composition

Men dominate inter-state migration, while women constitute about 2-3 per cent of migrant labour, working mainly in agriculture, construction and domestic work over the past five years. Railways have been the primary mode of transport for inter-state migration, with Saharsa and Katihar as the main railway stations from which migrants depart. Air services are available from Purnia, Darbhanga and Patna airports. The patterns of migration were further complicated during the COVID-19 pandemic, which triggered large-scale reverse migration and exposed the fragility of migrant livelihoods through severe income shocks and limited access to social protection (Kumari, 2025). The primary survey finding states that during the pandemic, migrant labourers faced severe challenges, including issues of social security, unemployment, food, shelter and transportation, which in some cases compelled them to undertake reverse migration to their home villages on foot, bicycles. Many reported overcrowding and inadequate seating on buses, and railway services towards Punjab and

Haryana were reported to be unhygienic and poorly managed, with heavy passenger loads during peak migration seasons. This region witnessed road transport emerge as a new mode of migration, with bus services made available from villages. The Baijnathpur paper mill (Saharsa) and the rail sleeper factory (Madhepura) remain non-operational; the Banmankhi Sugar Industry (Purnia), the RBHM jute mill, and Sun Bio Manufacturing Private Limited (the erstwhile old jute mill, Katihar) are also dysfunctional, contributing to local unemployment.

5.5 Problems Associated with Labour Migration

The study area faces major problems of landlessness, poverty and low per capita income, which act as the principal push factors for labour migration. Low levels of agricultural mechanisation and the absence of industrial units and services mean the region has been unable to absorb its growing population into productive employment, and prevailing low wages act as a further push factor. The region also faces seasonal unemployment during the agricultural off-season. Migrants report housing difficulties in NCR Delhi, Punjab and Haryana, often having to stay in pump-houses in agricultural fields; in NCR Delhi, a single room is shared by 10-12 migrant labourers at a rent of Rs 1,600-2,200 per month. Education level also influences labour migration: less-educated migrants tend to work in agriculture, while those with higher-secondary education and technical skills work in the secondary and tertiary sectors. Migrants also report experiencing greater regional discrimination in workplaces in Punjab, Haryana, NCR Delhi, Rajasthan, Uttar Pradesh, Maharashtra and Gujarat, and report comparatively less discrimination in Tamil Nadu, Karnataka, Telangana and Andhra Pradesh.

6. Conclusion

The migration landscape of the Kosi-Seemanchal region underscores the interplay between environmental risk, structural inequality, and the necessity of mobility as a livelihood strategy. The Kosi-Seemanchal region continues to face significant challenges of labour out-migration. The migration pattern has been shifting from the north-western provinces towards western and southern Indian states, consistent with the region's transformation in occupational structure from the primary sector towards the secondary and tertiary sectors, facilitated by improvements in transportation and rising levels of education among migrants. Men continue to dominate inter-state migration, although women's participation is growing.

This region faces a problem of child labor, which accounts for 2 per cent, and the majority of them are from low socio-economic backgrounds, Scheduled Castes, and Scheduled Tribes; especially vulnerable are the Mushar, Bantar, and Sautar communities. This vulnerability demands rigorous enforcement of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, particularly across unregulated informal sectors. There is a need for targeted policy and planning in the source and destination regions to eradicate child labor problems.

The Kosi-Seemanchal region is rich in both natural and human resources. The fertile lands of the Kosi-Mahananda-Ganga plain remain under traditional, subsistence-oriented agriculture, and the region continues to lag in skill development, management education, agro-based industry, animal husbandry, floriculture and rural tourism. Food-processing units for maize, makhana, coconut, potato, mango, litchi and pineapple, along with jute and paper industries, could add value to farm produce and strengthen the local farm economy. The surface water of the Kosi-Mahananda rivers holds potential for hydro-electric power generation and irrigation through the canal system. The Gulab Bagh mandi, The Murliganj, The Banmankhi, The Singheshwar, The Bihariganj, The Triveniganj, The Forbesganj, The Katihar market, The Kishanganj market are an important agricultural and service market in the region, would benefit from improved management and modern facilities, and the region could be integrated into an organic-farming corridor. Taken together, these measures could help build the basic infrastructure needed for local employment generation, and thereby offer a partial policy response to the large-scale labour out-migration documented in this study.

7. Limitations of the Study

The findings of this study are subject to certain limitations. The primary sample of 300 households was drawn from seven of the region's eighty Community Development Blocks using a purposive-cum-random (non-probability) design; the results are therefore indicative of broad trends rather than statistically representative of the Kosi-Seemanchal region as a whole.

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Author Contributions:

Both authors contributed to the conception and design of the study. Ashish Ranjan do fieldwork, data analysis, GIS mapping and Dr. Nazim do drafting and supervision.

Data Availability Statement:

The datasets generated and analyzed during the current study are not publicly available and cannot be shared due to strict privacy and confidentiality protections for the surveyed migrant households.

Conflict of Interest:

The authors declare that they have no known competing financial or personal interests that could have influenced the work reported in this paper.

Ethical Statement: Informed consent was obtained from all migrant and return-migrant respondents prior to their participation in the household survey, and respondent confidentiality was maintained throughout data collection and reporting.

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References

1. Anand, A. (2025). In search of a better life: A comprehensive study of migration patterns and outcomes of migrants from Bihar in Delhi. *International Journal of Arts Humanities and Social Studies*, 7(2), 186–193. <https://doi.org/10.33545/26648652.2025.v7.i2c.300>
2. Census of India. (2011). Provisional population totals. Office of the Registrar General & Census Commissioner, India, Ministry of Home Affairs, Government of India.
3. Cleaver, H. M. (1972). The contradictions of the Green Revolution. *The American Economic Review*, 62(1/2), 177–186.

4. Datta, A. (2019). Continuity and change: Migration and development in India: The case of Bihar (Doctoral dissertation, Erasmus University Rotterdam). <https://repub.eur.nl/pub/115666/approved-529178-L-bw-Datta.pdf>
5. Datta, A. (2025). Migration from contemporary Bihar. In D. K. Mishra (Ed.), *Internal Migration in Contemporary India* (2nd ed., pp. 138–152). Routledge India. <https://doi.org/10.4324/9781003674894>
6. Dewan, R. (2013). Study of Kosi flood disaster on migrant children of Bihar, India. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 7(4), 44–50.
7. Gosal, G. S. (1961). Internal migration in India: A regional analysis. *The Indian Geographical Journal*, 36(3), 106–121.
8. Harris, J. R., & Todaro, M. P. (1970). Migration, unemployment and development: A two-sector analysis. *The American Economic Review*, 60, 126–142.
9. Indian Institute for Human Settlements. (2012). *Urban India 2011: Evidence*. Indian Institute for Human Settlements.
10. Indian Institute of Public Administration. (2010). *A study of Bihari migrant labourers: Incidence, causes and remedies*. Sponsored by the Department of Labour Resources, Government of Bihar.
11. Kumar, A., & Kumar, M. (2020, June 13). Marginalised migrants and Bihar as an area of origin. *Economic & Political Weekly*, 55(24), 21–24. <https://www.epw.in/journal/2020/24/commentary/marginalised-migrants-and-bihar-area-origin.html>
12. Kumar, P. (2020). Problems of labour migration from Bihar. *International Education and Research Journal*, 6(9). <http://ierj.in/journal/index.php/ierj/article/view/2251/2133>
13. Kumar, P., & Jha, M. K. (2018). From Kosi to Delhi: Life and labour of the migrants. In R. Samaddar (Ed.), *Migrants and the Neoliberal City* (pp. 307–329). Orient BlackSwan.
14. Kumar, R., & Shekhawat, S. (2024). Migratory movements: Dissecting the causes and patterns from Bihar's Kosi Division. *Migration & Diversity*, 3(4). <https://doi.org/10.33182/md.v3i4.3305>
15. Kumar, R., Shekhawat, S., & Singh, M. (2025). Unravelling migration dynamics: A socio-economic examination of Bihar's Kosi Division migration phenomenon. Research Square. <https://doi.org/10.21203/rs.3.rs-6252230/v1>

16. Kumari, P. (2025). Reverse migration during the COVID-19 pandemic in Bihar. *International Journal for Multidisciplinary Research*, 7(6). <https://doi.org/10.36948/ijfmr.2025.v07i06.63029>
17. Lee, E. S. (1966). A theory of migration. *Demography*, 3(1), 47–57. <https://doi.org/10.2307/2060063>
18. Madhuri, M., Tewari, H. R., & Bhowmick, P. K. (2014). Livelihood vulnerability index analysis: An approach to study vulnerability in the context of Bihar. *Jambá: Journal of Disaster Risk Studies*, 6(1). <https://doi.org/10.4102/jamba.v6i1.127>
19. Mathew, S., & Moore, M. (2011). State incapacity by design: Understanding the Bihar story (IDS Working Paper No. 366). Institute of Development Studies. <https://www.ids.ac.uk/download.php?file=files/dmfile/Wp366.pdf>
20. Mohan, S., & Kumar, M. (2024a). Rightless migration in India: A study of inefficiency and sufferings sprouting in the agricultural fields of Bihar. *Journal of Ecohumanism*, 3(8). <https://doi.org/10.62754/joe.v3i8.5472>
21. Nazim, M. (2019). Population migration: A socio-economic analysis. Rajesh Publications.
22. Nazim, M., & Ranjan, A. (2024). Rainfall variability trends and its impact on crop production in North Bihar. *Geographical Outlook*, 33(1), 1–16. https://www.researchgate.net/publication/400089300_Rainfall_Variability_Trends_and_its_Impact_on_Crop_Production_in_North_Bihar
23. Ravenstein, E. G. (1889). The laws of migration. *Journal of the Royal Statistical Society*, 52(2), 241–305. <https://doi.org/10.2307/2979333>
24. Rehman, A. (2025, July 10). Bihar migrants in Delhi worried about electoral roll revision back home: “How will I prove who I am and where I am from?” *The Indian Express*.
25. Rodgers, G., Datta, A., Rodgers, J., Mishra, S. K., & Sharma, A. N. (2013). The challenge of inclusive development in rural Bihar. Institute for Human Development in association with Manak Publications. <https://www.ihdindia.org/rpb/pdf/bihar-book-ihd-2013.pdf>
26. Sahani, R. K., Badiger, S., Samrat, A., & Krishnan, S. (2023). Flood frequency and flood intensity changes in the post-embankment period in the Kosi sub-basin, India: Impact of location, caste, and class on the flood vulnerability of marginal

communities. *Frontiers in Water*, 5, Article 1017945.
<https://doi.org/10.3389/frwa.2023.1017945>

27. Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *The American Economic Review*, 75(2), 173–178. <https://www.jstor.org/stable/1805591>
28. Todaro, M. P. (1969). A model of labor migration and urban unemployment in less developed countries. *The American Economic Review*, 59(1), 138–148. <http://www.jstor.org/stable/1811100>
29. World Bank Group. (2016). Bihar: Poverty, growth and inequality (World Bank Group Brief). <https://documents1.worldbank.org/curated/en/781181467989480762/pdf/105842-BRI-P157572-PUBLIC-Bihar-Poverty.pdf>