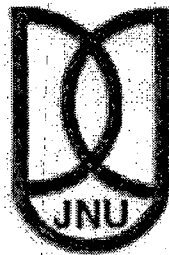


**INTRA – STATE AND INTER – STATE NATURAL
CALAMITY MIGRATION IN INDIA**

*Dissertation submitted to Jawaharlal Nehru University
in partial fulfillment of the requirements
for the award of the degree of*

MASTER OF PHILOSOPHY

SOUMYADEEP BANERJEE



**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
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2008

Dedicated

To

My Family



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DECLARATION

I do hereby declare that the dissertation titled "INTRA – STATE AND INTER – STATE NATURAL CALAMITY MIGRATION IN INDIA" submitted by me is a bonafide work and it has not been submitted to any other university for the award of any other degree.

(Soumyadeep Banerjee)

It is hereby recommended that the dissertation may be placed before the examiners for evaluation.

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ABBREVIATIONS

NCM	Natural Calamity Migrant.
NCMSR	Natural Calamity Sex Ratio.
NCIM	Natural Calamity In – migrant.
NCOM	Natural Calamity Out – migrant.
NCMRO	Natural Calamity Migration Ratio.
ORGCC	Office of Registrar General and Census Commissioner
RNCM	Rural Natural Calamity Migrant.
UNCM	Urban Natural Calamity Migrant.
RNCMRO	Rural Natural Calamity Migration Ratio.
UNCMRO	Urban Natural Calamity Migration Ratio.
RNCMSR	Rural Natural Calamity Sex Ratio.
UNCMSR	Urban Natural Calamity Sex Ratio.
TM	Total Migrants.

CHAPTER-1: INTRODUCTION

1.1 Introduction:

Migration of people is an instinctive consequence of natural calamities. People may be either coerced to take such a decision or it may be the most suitable of several alternatives available to them (Doliashvili et al., 2008). They may move as individuals, families, small groups, large groups or huge crowds (Ketel, 2004). Most of them would resettle within the country of origin and only few would emigrate to another nation, this latter group is referred to as 'refugees' (Brown, 2008; Doliashvili et al., 2008; Ketel, 2004). These migrants are displaced from their homes and cut off from their social networks thereby altering their habitual activities and social relations. (Doliashvili et al., 2008). The cost to the society of such displacements would be enormous, both financially and socially because of social, political and economic turmoil (Ketel, 2004). Hence, there is a need to better understand the relationship between natural calamity and human migration.

1.2 Natural Calamity:

Natural hazard is a dangerous condition or event with meteorological, geological or even biological origin that threat or have the potential for causing injury to life or damage to property or the environment (Dey et al., 2006). These extreme events originate in the biosphere, lithosphere, hydrosphere or atmosphere (Alexander, 2000). Examples of natural hazards are earthquakes, volcanoes, floods, windstorms, slides, droughts or any other meteorological or geological event could permanently or temporarily render a human settlement unfit for habitation (Bates, 2002). When a community is vulnerable to the onslaught of a natural hazard, the natural hazard turns into a natural calamity (Brown, 2008). The natural calamities could be distinguished broadly distinguished into two categories : first, sudden onset natural calamities (for example flood, earthquake, slide) with short response period ranging from few minutes in case of earthquakes, flash floods

and some slides to several days in case of windstorms and floods. The casualties and losses are high in sudden onset natural calamities. Second, slow onset natural calamities (for example drought) can take months or sometimes years to become disastrous (Arya et al., n.d.)

Between 1974 – 2003, 6,367 natural calamities all over the world led to the death of more than 2 million people, affected another 5.1 billion people and the damages added up to US\$ 1.38 trillion (Guha – Sapir et al., 2004). By 2003, 1 person in every 225 people worldwide was affected by natural calamities (Guha – Sapir et al., 2004). In all 414 natural calamities were recorded in 2007 that killed 16847 persons, affected over 211 million people and caused damage worth US\$ 75 billion (Scheuren et al., 2007). A global upward trend in frequency of natural calamity has been noted along with the rise in the number of people affected by them in the past few years. The rise can be explained by increase in number of calamities reported, rapid population growth in developing countries and fast but unplanned development, particularly that in the urban areas (Red Cross and Red Crescent, 2004).

Region	Drought	Famine	Flood	Windstorm
Asia	23.73	25.81	40.76	41.80
Africa	51.52	69.35	17.26	6.04
Latin America	13.39	1.61	19.63	12.55
Oceania	4.46	0.00	3.87	9.27
Europe	4.46	3.23	13.11	12.67
North America	2.43	0.00	5.37	17.67
World (In no.)	493	62	1808	1737

Source : Calculated from Reuveny, 2005

Between 1975 and 2001 there were in all 4,100 natural calamities all over the world (Reuveny, 2005). The frequency of the natural calamities

differed. For instance, 44.1 percent of all natural calamities were floods, 42.4 percent were windstorms and 12.0 percent were droughts. The distribution of natural calamities was not uniform across . Asia accounted for 38.9 percent of them, followed by Africa (17.4 percent), Latin America (15.6 percent), Europe (11.7 percent), North America (10.2 percent) and Oceania (6.2 percent). Moreover, the frequency of any particular type of natural calamity varied spatially. For instance, floods and windstorms were more common in

Region	Drought	Famine	Flood	Windstorm
Asia	7.33	1.00	46.18	45.49
Africa	35.57	6.02	43.70	14.71
Latin America	10.31	0.16	55.47	34.06
Oceania	8.70	0.00	27.67	63.63
Europe	4.57	0.42	49.27	45.74
North America	2.88	0.00	23.32	73.80
World	12.02	1.51	44.10	42.37

Source : Calculated from Reuveny, 2005

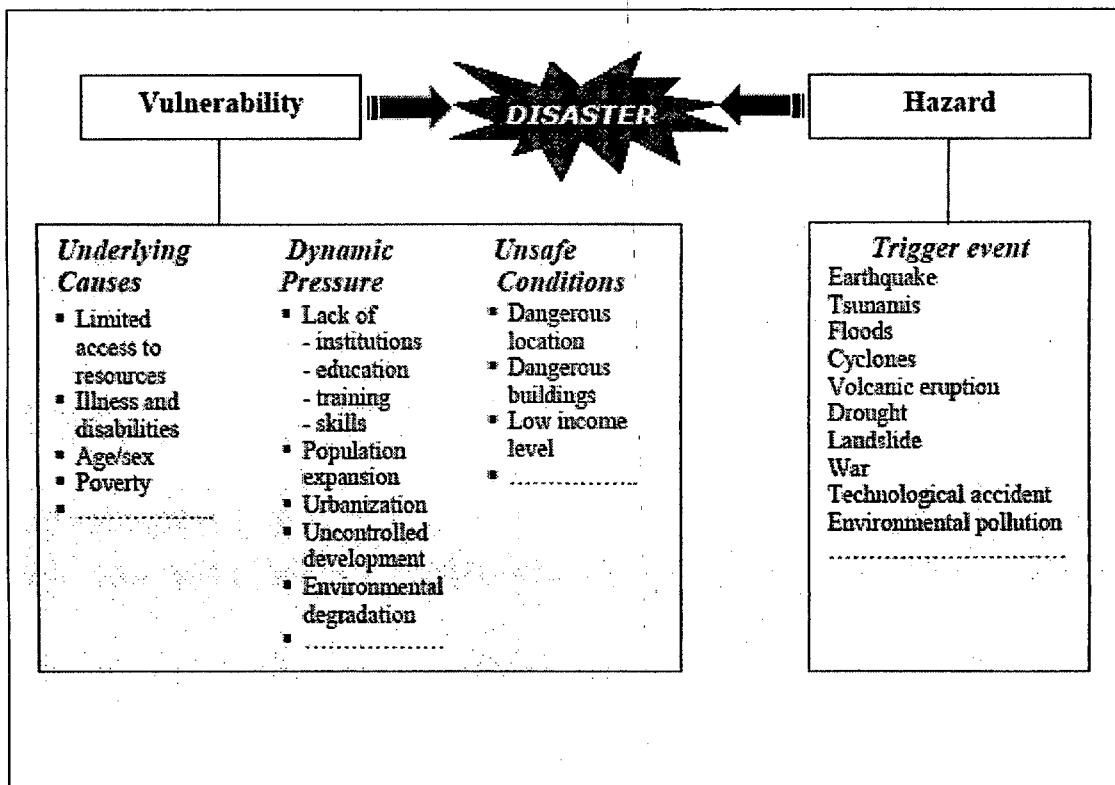
Note : The rows add to 100 Percent.

Asia, where 40.8 percent of the former and 41.8 percent of the latter occurred. The droughts were more prevalent in Africa (51.4 percent). Even within a region the significance of a particular natural calamity among others might not be same as the distribution of that type across regions. As previously discussed, among all the regions floods and windstorms were most frequent in Asia. However, within Asia floods (46.2 percent) were more significant than windstorms (45.5 percent). Similarly, though more floods occurred in Asia and Latin America than in Africa, within Africa floods (43.7 percent) remained the most frequent natural calamity.

1.3 Vulnerability to Natural Calamities:

The impact of natural calamities is not solely dependent on natural exposure but also on the vulnerability of a community (Kolmannskog, 2008). Vulnerability to natural calamities is the function of a number of factors that can be broadly divided into two groups, namely the climatic and non-climatic factors. The former includes frequency and intensity of the natural hazards while the latter incorporates awareness of the hazard, demographic pressure, settlement type, availability of infrastructure and amenities, socio-economic condition of people, level of development, political situation, administrative efficiency and

Figure 1.1 The Interlinkages between Hazard, Vulnerability and Disaster



Source : Ministry of Home Affairs, Government of India

organizational capability regarding disaster and risk management (McLeman cited in Brown, 2008). Vulnerability is further modified by inequalities of gender, society, economic status, race or ethnic divisions (Department of Economic and Social Affairs, 2002). The interaction between environmental changes, population growth and unequal resource distribution creates socio-economic stress and

increases human vulnerability (Alam, 2003). The lack of awareness among the administrators as well as the public, poor understanding of the functions of a natural calamity among decision – makers, unscrupulous individuals seeks quick profit, corruption and human activities aggravate the vulnerability of a community to natural calamities (Arya et al., n.d.).

The vulnerability to natural calamities can be either assessed from the perspective of an individual or a community. Such crises would intensify marginalisation of the less advantageous sections (namely women, children, aged, disabled people, certain socially or economically disadvantaged groups) of the society, in the developed as well as developing countries (UNITAR, 2008). Social inequality, economic pressure, poverty, biased land tenure practices will compel people to live in calamity prone areas, time and again in unsafe dwellings because they could not afford a better place or shelter (Department of Economic and Social Affairs, 2002). According to Goffman (2006 : 6), “one classification may cause the other, or more likely, each drives the other in a vicious cycle of reinforcing degradation.” The economic and ecological marginalisation particularly accentuates the vulnerability of the less advantageous sections of the society to episodic changes (Alam, 2003). Rapid and unplanned urbanisation along with influx of migrants from rural areas increase the vulnerability of the towns and cities to natural calamities across the world by overwhelming the available infrastructure and amenities on one hand and ecological transformation of the locality, like encroachment onto wetlands, clogging of the natural drainage system, deforestation, increase in the volume and speed of runoff on the other (Arya et al., n.d.). The mountainous areas, coastal zones including the island countries are mainly at risk. Almost 97 percent of the deaths due to natural disasters occur in developing countries (Department of Economic and Social Affairs, 2002). However economic losses outweigh human losses in the developed countries. (Hunter 2005)

The aftereffect of the natural calamities differ widely in terms of population and area affected. Annually millions of people lose their homes and property in natural calamities, either directly destroyed by the natural hazard or as a result of evacuation from the affected areas for safety (Kolmannskog, 2008).

Between 1975 and 2001, natural calamities affected 4,087 million people all over the world. Floods affected the highest proportion, 53.3 percent of people in the world, 53.3 percent. Droughts distressed 33.9 percent and windstorms battered another 11.3 percent. There was a distinct regional variation in the number of affected people. Asia again contributed an overwhelming 88.7 percent of the total affected population, followed by Africa (7.6 percent), Latin America (2.72 percent), Europe (0.6 percent), Oceania (0.4 percent) and North America (0.1 percent). The same natural calamity may have different magnitude in different regions. Highest share of people affected by drought, flood and windstorms were Asians, 79.5 percent, 96.4 percent and 89.87 percent respectively. Drought affected less than 0.1 percent of the people in North America. The proportion of people affected by any natural calamity varied within each region. The highest share of the affected people in Asia (58 percent) and Europe (31.4 percent) were victims of flood. In Africa (71.6 percent), Latin America (43.2 percent) and Oceania (58.8 percent) most of the affected people were victims of drought. Windstorms accounted for 75.8 percent of all the affected in North America.

Region	Drought	Famine	Flood	Windstorm
Asia	79.45	12.18	96.42	89.87
Africa	16.03	81.01	1.33	1.97
Latin America	3.46	1.62	1.84	4.75
Oceania	0.63	0.00	0.02	1.21
Europe	0.43	5.19	0.35	1.64
North America	0.002	0.00	0.04	0.56
World (In no.)	1384.5	61.6	2198.1	462.4

Source : Calculated from Reuveny, 2005

The vulnerability is not only restricted to human life and social relations but also affects the economy. The primary sector of economy is more vulnerable to natural calamity than the other sectors (Department of Economic and Social

Affairs, 2002). Hence, any country that is over reliant on primary sector is particularly vulnerable to natural calamity. In the developed countries absolute cost of losses regarding infrastructure, good and services are high because of denser and costlier infrastructure and production levels but the relative cost as a share of gross domestic product is low. At the household level, the loss of physical assets as well as loss or decline in income could seriously affect its economic standing, particularly among the vulnerable sections of the society. The economic loss varies with different natural calamities. For example, the impact of a flood may be extensive but losses may not be colossal while the effects of an earthquake contained within a small area, nevertheless, often the costs incurred is high (Arya et al., n.d.). The losses reported in the aftermath of a natural calamity is generally estimated from direct loss of assets, nonetheless several indirect (e.g. loss of possessions, lower output from damaged production facilities and termination of job, damage to the flow of goods and services, medical expenditure and decline in productivity from injuries, disease and death) and secondary (e.g. rise in trade and budget deficits, increase in poverty) effects on economic activities and environmental impacts of the natural disasters remain underestimated or at times even unassessed (Department of Economic and Social Affairs, 2002).

Region	Drought	Famine	Flood	Windstorm
Asia	30.36	0.21	57.96	11.48
Africa	71.63	16.11	9.33	2.94
Latin America	43.15	0.90	36.13	19.82
Oceania	58.78	0.00	3.38	37.84
Europe	24.49	13.06	31.43	31.02
North America	0.87	0.00	23.42	75.80
World	33.88	1.51	53.29	11.33

Source : Calculated from Reuveny, 2005.

Note : The rows add to 100 percent.

1.4 Human Response to Natural Calamity:

According to Hunter (2005), the residents may not be aware of the hazard or even if they are, they do not expect a calamity. Some may expect a calamity but do not anticipate loss or if they do, the loss may not be serious enough to endure the hardships of resettlement. Some may take precautionary measures if serious loss is anticipated. And there are others who would accept the loss as the cost of gaining locational benefits (Hunter, 2005). There are two ways in which human beings respond to natural hazards, either by adapting that requires huge capital investment and advanced technology, something common in the developed countries, or migrating away from the change, mostly witnessed in those societies where nature has wider control over human life, particularly on economic activities and food production (Reuveny, 2005). However, Chan (1995), based on his study in the Malaysia, had observed that migration to avoid floods, may be an option only for the wealthy. Such avenues are not feasible to others because of poverty, lack of education, low social mobility, insufficient government aid and preparedness. Morrow – Jones et al. (1991), on basis of their studies in the United States of America observed that the socio – economically disadvantaged, such as old, women, minority groups, low income groups, less educated are more likely to migrate following a natural calamities. Thus, the two studies represent the dichotomous response to the same situation in the developing and the developed countries. While in the former the socio – economically advantageous are more likely to move following a natural calamity, in the latter they are least likely to migrate. However, migration is never the first response to a natural hazard and is opted when other responses including governmental and community assistance fail to meet the necessities (Brown, 2008).

The link up between natural calamities and human migration is nothing new. In 1930s, the droughts in the Great Plains of USA forced thousands to migrate, many of whom went to California. Similar droughts in Sahel region of Africa during late 1960s and early 1970s induced migration towards cities (Piguet, 2008). The actual number of displacements due to natural calamities is

often disputed (Kolmannskog, 2008). A proxy for the magnitude of natural calamity migrants could be the number of internally displaced persons due to such calamities (Reuveny, 2005). The affects of natural calamities are severe in developing countries where a large proportion of the population depends on traditional livelihoods. Between 1975 and 2001, 15.12 million people in 5 continents were internally displaced by natural calamities of which 62.8 percent were in Asia and a mere 0.01 percent belonged to North America.

Table 1.5 Percentage Distribution of Internally Displaced People due to Natural Calamities 1975 - 2001		
Region	In Millions	In Percentage
Asia	9.5	62.83
Africa	4.7	31.08
Latin America	0.9	5.95
Europe	0.02	0.13
North America	0.001	0.01
Total	15.121	100.00

Source : Calculated from Reuveny, 2005

The affects of natural calamities are severe in developing countries where a large proportion of the population depend on traditional livelihoods, mainly agriculture, fishery and animal husbandry. Unlike in developed countries, the absolute cost of such losses is low in the developing countries, but the cost in relation to the gross domestic product is high. The sudden onset natural calamities like flash floods, earthquakes, windstorms and associated storm surges do not provide a reasonable warning period. They suddenly damage homes, physical and social infrastructure, production processes and resources (Arya et al, n.d.). This may compel people to temporarily migrate but the migrants might return home soon after (Kolmannskog, 2008). The normal floods give enough time to undertake mitigation procedures. The people would have some time to chalk out a response, either adaptation or migration. Even though this remains the overall picture but at regional or local level it may vary. In some places, as in

Bangladesh, the storm surges or destructive floods can wipe out wide expanses of land leaving the migrants stranded with no home to return (Suhrke, 2001). The drought is a slow onset process and usually manifests itself through declining productivity, reserves of people and livestock (Suhrke, 2001). It is difficult to demarcate the beginning of a slow onset process such as drought. The homes and other physical structure are not damaged by droughts but losses to crops and livestock piles up debt on agricultural households (Arya et al., n.d.). Migration seems to be one of the coping strategies in such scenario. It involves financial capital, family networks and contacts at the destination. Even those displaced by drastic natural disasters, given a choice, would move to places where there is an existing support network. Suhrke (1993) perceives that people forced to move due to sudden or extreme environmental events such as floods and famines become environmental refugees. Black (2001 : 7) believes that the notion of 'environmental migrants' is more justified "in the case of more dramatic and permanent changes to the environment associated with catastrophic events such as floods, volcanoes and earthquakes." Often natural calamities might force people to temporarily migrate but there are instances when such migrations have been long term (Castles, 2002).

1.5 Consequences of Migration in the aftermath of a Natural Calamity:

The natural calamity migrants increase the pressure on the local resource (physical, economic, social) base that may promote competition between the original inhabitants and the migrants each one striving to secure their share of the local resources. The natural calamity migrants might even adhere to non-sustainable utilization of resources at the destination as they try to survive, particularly when a considerable proportion among them are from less advantageous groups (UNITAR, 2008; Ketel, 2004). The natives could perceive the migrants as poaching on their rights (Reuveny, 2005). Particularly, in case of drastic natural calamities (floods, cyclones, earthquakes, volcanoes) the destination may not have enough time to prepare for the influx of migrants. This may

choke not only the emergency services but also overwhelm the infrastructure and disrupt civic amenities at the destination. An elastic urban economy could accommodate immigrants more easily than a subsistence landed economy (Suhrke, 1993). Further, if the natives and the migrants belong to different ethnic groups or races or social background or occupational setting or political leanings it could further aggravate the intensity of competition, sometimes even leading to conflict (Reuveny, 2005). The migrants could be afflicted by poverty, malnutrition, landlessness, unemployment, diseases and ethnic strife. Myer (1997) opines that deforestation, desertification, rising population, unplanned urbanisation, unemployment, poverty and extreme weather events will all but intensify such a crisis.

1.6 The Case Of India:

During the last four decades, January 1970 to March 2008, there were 466 natural calamities in India that include floods, droughts, earthquakes, windstorm and associated storm surges and slides (landslides, mudslides and avalanches). There were 231 floods during this period, 26 of them were reported in Assam, the most in any Indian state. In the stipulated period, various regions of India had accounted for 60 droughts with Rajasthan alone having 9 among them. There were 13 earthquakes in the 38 year period. Jammu and Kashmir experienced 3 earthquakes, highest for any Indian state. The windstorms and associated storm surges wreaked havoc across the country on 130 occasions of which 30 had battered Andhra Pradesh. States that did have any windstorms and associated storm surges during the specified period were Haryana, Arunachal Pradesh, Mizoram, Nagaland, Sikkim and Tripura. At least 32 calamitous slides had been confirmed all over India during the last few decades among which 7 slides were in Uttar Pradesh. If we consider all the five types of calamities (floods, droughts, windstorm and associated storm surge and slide) together, most number of calamities have occurred in Andhra Pradesh, in all 47 natural

Table 1.6 Distribution of Natural Disasters in India January, 1970 to March, 2008						
State	Flood	Drought	Earthquake	Windstorms and Storm Surges	Slide	Total
Andhra Pradesh	12	4	0	30	1	47
Arunachal Pradesh	11	0	0	0	0	11
Assam	26	0	1	2	2	31
Bihar	16	1	1	3	0	21
Goa	2	0	0	1	0	3
Gujarat	16	6	1	11	0	34
Haryana	8	4	0	0	1	13
Himachal Pradesh	13	6	2	1	6	28
Jammu and Kashmir	5	3	3	3	4	18
Karnataka	6	4	0	2	1	13
Kerala	8	2	0	3	0	13
Madhya Pradesh	6	3	1	2	0	12
Maharashtra	13	4	1	4	2	24
Manipur	3	2	0	1	0	6
Meghalaya	4	0	0	1	0	5
Mizoram	3	2	0	0	2	7
Nagaland	4	2	0	0	0	6
Orissa	6	2	0	20	0	28
Punjab	9	0	0	2	0	11
Rajasthan	7	9	0	1	0	17
Sikkim	2	0	1	0	3	6
Tamil Nadu	11	0	0	14	1	26
Tripura	7	2	0	0	1	10
Uttar Pradesh	21	4	2	6	7	40
West Bengal	12	0	0	23	1	36
India	231	60	13	130	32	466

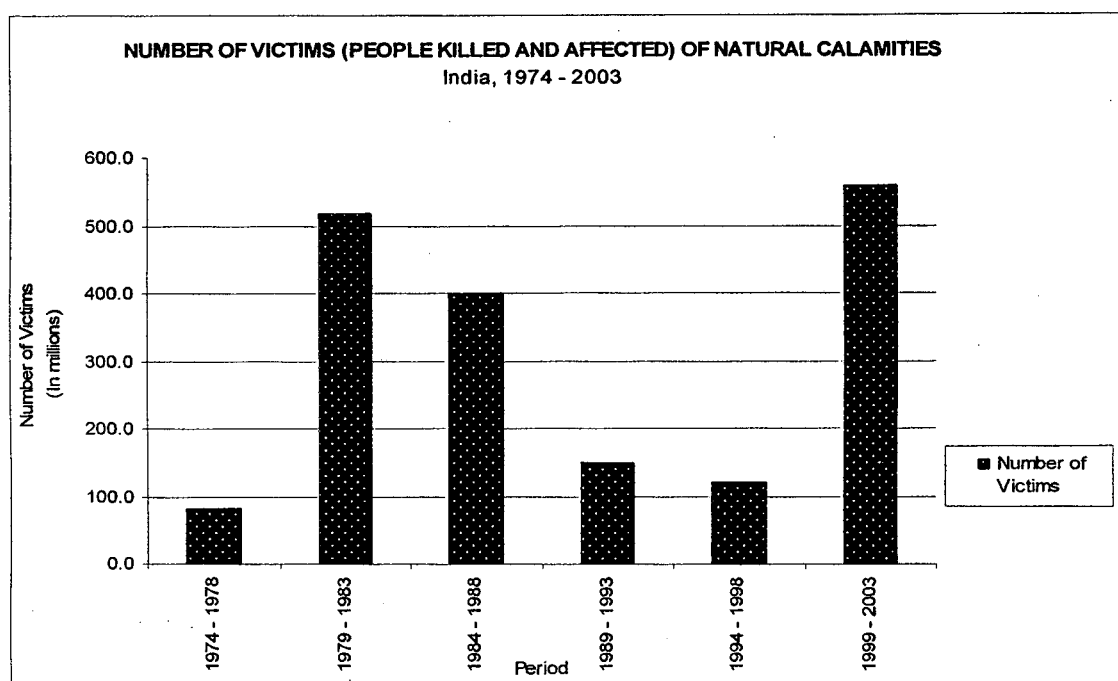
Source: EM – DAT : The OFDA / CRED; NIDM, India;

USGS; IMD; Bilham (2004), Dasgupta (2007);

www.adrc.or.jp

calamities. Andhra Pradesh accounted for 10.1 percent of all natural calamities in India since January, 1970. Uttar Pradesh stands next with 40 natural calamities, that is approximately 8.6 percent of all natural calamities in India between January, 1970 and March, 2008. On the other hand, Goa had experienced only 3 natural calamities during the last four decades, least among all the Indian states.

Graph 1.1 Distribution of Victims (People Killed And Affected) By Natural Calamities, India, 1974 – 2003



Source : Guha – Sapir et al., 2004

A total of 1,832 million Indians had been victims, either killed or affected, of natural calamities between 1974 and 2003. During the specified period 7,432 persons out of every 100,000 people had been a victim, either killed or affected, of natural calamities. The hydrometeorological disasters, that include floods, droughts, windstorms, slides, wildfires and extreme temperatures, affected 7275 persons of every 100,000 people. The geological disasters, namely earthquakes, volcanic eruptions, tsunamis and tidal waves affected 138 persons of every 100,000 people (Guha – Sapir et al., 2004).

According to the Census of India of 1991, there were 844 million people living in 26 states. The internal migrants accounted for 26.8 percent of the total population. Natural calamity migrants (NCMs) accounted for a mere 0.49 percent of the internal migrants in the country, but this small share translated into 1.12 million people. To put the NCM population into perspective, consider an important city of central India Bhopal, according to Census of India of 1991, had a population of 1.06 million. Among the NCMs 89.6 percent were intra – state migrants. The inter – state NCMs constituted the remaining 10.4 percent. Among the intra – state NCMs, those who resettled within the district of enumeration accounted for 67.1 percent and the rest, around 10.4 percent, moved to another district within the state of enumeration. Only 1.15 percent of the male migrants were NCMs but that was approximately 7 lakh men. The NCMs accounted for 0.25 percent of all female migrants, that was more than 4 lakh women. Therefore, out of every hundred thousand male migrants 1150 were NCMs while of every hundred thousand female migrants 250 were NCMs. The proportion of NCMs among all migrants, for all durations of migration, were similar in all the levels.

1.7 The Looming Danger of Natural Calamities:

The effects of climate change are evident across the world, be it rising temperature in the middle latitudes or frequent floods in Europe or regular cyclones or droughts in the tropics or altered precipitation patterns or more frequent violent storms or erratic weather phenomena elsewhere. The frequency of the natural calamities has been increasing progressively (Kolmannskog, 2008; IPCC, 2007; Ketel, 2004; Department of Economic and Social Affairs, 2002;). Kondratyev et al (2002 cited in Hunter : 2005) estimated that there was a 5 – 7 percent annual rise in natural calamities between 1972 and 1995. They predicted that the trends would continue into the future and might even be augmented. The modified rainfall pattern and the intensified hydrological cycles would culminate in recurrent and severe natural calamities such as droughts, storms and floods (Brown, 2008). There is, however, no evidence of rise in the frequency and

intensity of the earthquakes and volcanoes (Department of Economic and Social Affairs, 2002). The decade from 1990 – 1999 was promoted as the International Decade for Natural Disaster reduction (IDNDR) with the aim to develop a culture of preparation and preparedness through an untied initiative from governments, United Nations agencies, regional bodies, private sector and civil societies. The Secretariat of the International Strategy for Disaster Reduction (UNISDR) and the United Nations Inter – Agency Task Force (IATF) were established to coordinate the global effort. There has been an increasing awareness about the environmental issues among the academics, politicians, statesmen and popular media. Projections show by the year 2050 annually 1 lakh lives will be lost and the annual economic losses will be over \$300 billion due to natural disasters. Though several indirect and secondary effects on economic activities and environmental impacts of the natural disasters remain underestimated or at times even unassessed (Department of Economic and Social Affairs, 2002).

In the recent years, the frequency of natural calamities and the number of people on whom it has taken a toll has increased (Red Cross and Red Crescent, 2004). Though there is spatial difference in the occurrence, frequency and significance of natural hazards across the world, the implications are somewhat similar across the globe, including the loss of habitat. However, the population of the developed and developing countries, each respond to this transitory phase differently but there is no doubt that migration due to natural calamities is growing in significance. Therefore, there is need for an appraisal of the relationship between natural calamities and migration. Fortunately, data pertaining to natural calamity is available in the Census of India. This has provided an opportunity to carry out an India specific study to investigate the role of natural calamities in human migration.

The main objective of this study is to understand the extent of natural calamity induced migration in India. There have been some studies on natural calamities in India but its relationship to migration has been scarcely explored. A regional picture of natural calamity induced migration will show the areas that are prone to such effects and those regions that are not. Migration studies in

India has often ignored the Natural Calamity Migrants (NCMs) and an estimate of the NCMs will reveal their significance among the internal migrants in the country. We will also analyse the sex and urban – rural differentials among the NCMs. In addition, we will analyse the streams of migration with regards to NCMs in India. These analysis have been done for the country as a whole and also separately for the states. This will be complemented by a study of the NCMs at two levels, that is intra – state and inter - state. Lastly, we will try to estimate influence of some of the determinants of natural calamity migration.

1.8 Research Questions:

Through this study we would like to seek the answer to some questions : What is the significance of natural calamity migration in India relative to other reasons for migration? What is the magnitude of natural calamity migration in India? Is there a regional differential in the distribution of NCMs because the frequency and the magnitude of the natural calamities are not uniformly distributed across time and space? Whether there are urban – rural and sex differentials among the NCMs? Is there differences in pattern between the intra – state and inter – state levels? Has the number of NCMs increased over the years? Is there a distance function in natural calamity migration in general and the inter – state stream in particular? Are there any distinctive regional patterns in the flow of inter – state NCMs? What is the relationship between the frequency of natural calamities and the volume of natural calamity migrants (NCMs) since the latter is dependent on the former?

CHAPTER-2: REVIEW OF LITERATURE

The issue of human migration due to natural calamities has been a source of concern as well as contention over the last three decades among academics, policy-makers, aid organizations, legal experts and activists. More precisely, it has been a part of the broader debate about the existence of 'environmental refugees' and 'environmental migrants' that had cropped up in early 1970s but gained popularity since mid 1980s. Subsequently, the debate turned to several other issues such as human responses to environmental hazards, decision making in migration, definition of 'environmental refugees' and 'environmental migrants', their classification, legal recognition, policy implications and measurement aspects of the term. Since natural calamity is one of the several causes of environmental migration, the relationship between natural calamity and human migration has been mostly studied as a part of the overall process. In order to understand the influence of natural calamity on human migration, its significance among other causes of environmental migration and the consequent debate over the existence of environmental migrants, that invariably questions the relevance of natural calamity as a determinant of human migration, it is necessary to perceive natural calamity induced migration as an integral part of the all encompassing process of environmental migration. Following is a brief outline of the literature on environmental migration with special focus on migration due to natural calamities. First, the aspects of decision making in environmental migration would be explored. Second, the evolution of the concepts of 'environmental refugees' and 'environmental migrants' would be studied by reviewing various definitions of the terms. Third, several classification of environmental migrants had been conceptualised over the years, these needs to be studied to locate natural calamity migration in the broader spectrum. Fourth, the concept of environmental migration is not unanimously accepted by the academics, legal experts, policy makers, activists and has resulted in a schism and it is important to recognise the views. Fifth, the legal and policy implications of the term 'environmental migrant' has been briefly discussed.

2.1 Environmental Migration:

It is logical to enquire about the reason that provokes a man to ultimately migrate away from his place of residence. Billsborrow (1991, cited in Henry et al. 2004) proposed that environmental changes could induce migration by income effects (i.e. decline in average income) or risk effects (i.e. rise in income instability) or social effects (i.e. positive or negative externalities). Usually people should move if the benefits from migrating are more than staying. In cases where there are more than one destination in question, the one with the largest benefit is selected that may lie within or outside the country of origin (Reuveny, 2005). In recent years more and more people are being displaced from their homes by environmental hazards (Brown, 2004). In the context of a push–pull migration model, certain cases of environmental migration may seem indistinguishable from those induced by economic motives but there are instances where the people moved only when immediate migration was necessary for survival. However, it is not as simple, Greenberg and Schneider (1996), Lein (2000) found out that inspite of heavy odds people have not moved. The cost–benefit model has two shortcomings, its assumptions that an individual’s decision making is voluntary and it does not differentiate between the internal and international movements (Reuveny, 2005). That means there are factors other than environmental hazards which influence ‘decision making process’.

There is actually a wide difference between ‘desire to move’ and ‘actually moved’. Societies differ from each other based on their resource base (social, physical and financial) which determines their resilience to withstand external shocks, in this case the environmental hazards. In addition, the individual – household – community perceptions are significant in the decision making procedure (Brown, 2008). Environmental factors interact with these perceptions to mould household migration decision making (Hunter, 2007). The forces that promote migration can be grouped into three categories, namely, the push forces (undesirable environmental change often stimulate the affected to seek shelter elsewhere), the pull forces (attraction of the destination) and the network forces (generated by earlier emigrants who supply information and provide initial

support to the new emigrants) (Reuveny, 2005, Ketel, 2004, Moore et al., 1995). Brown (2008) believes migration, barring that induced by drastic extreme environmental events, is not the outcome of an environmental 'push' alone but some kind of 'pull', environmental, social or economic also plays an important part in the decision making process. These forces are supplemented by the economic (information and financial assistance) and sociopolitical (legal or illegal help) network forces (Reuveny, 2005)

The displacement may not always be precipitated by environmental factors directly but the environmental stress may intensify the resource competition, impoverishment, habitation of ecologically fragile areas (Castles, 2002). When this overwhelms the local socio – economic set up and administrative support system people would possibly move away. Suhrke (1993) considers cases from Sahel, India, Thailand and Guatemala to find environmental degradation as proximate determinant of out – migration. Henry (2006) in his Burkina Faso study finds environment to set a limit, within which economic and ecological factors moulded the household decisions. The 'push' to leave a disaster affected area and economic 'pull' of the destination work in unison to influence the decision to move (see UNU – EHS, 2005). The economic and demographic pressures created stress on the local environmental settings that resulted into degradation. The relationship among the determinants are far from being simple or one – way. The environmental degradation in turn affects the economy and local population – resource balance (Suhrke, 1993). The environmental, economic, social, political and administrative reasons are interlaced (Goffman, 2006). The factors such as political instability, unemployment, lack of resource or access to it in the country of origin and better employment opportunity, higher wages, social networks in the country of destination play important role in the decision making process (UNITAR, 2008). To understand the role of environmental degradation in population displacement the phenomena has to be studied in the broader cultural and political context of the particular region (Suhrke, 1993; Brown, 2008).

Though the developed countries may have more resources at their disposal, yet certain calamities can generate mass exodus. For instance, the displacement in the aftermath of the Chernobyl nuclear disaster in the former Soviet Union or more recently due to Cyclone Katrina in United States of America (Hunter, 2005; Goffman, 2006; Rebert, 2006). On one hand environmental changes can induce migration but on the other, migration can expedite environmental vulnerability of a place. In the former environmental change acts as a determinant for migration, while in the latter migration influences the scale of the imminent environmental hazard. The sustainable utilisation of environmental resources may be jeopardised by sudden influx of persons at the place of destination (UNITAR, 2008). Sometimes weaker sections of the society may be displaced to the ecologically sensitive regions, such as hill tracts, coastal regions, flood plains and river banks. This is known as ecological or spatial marginalisation (Alam, 2003).

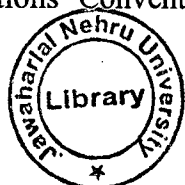
Migration due to environmental hazards can be either forced or voluntary. The sudden onset processes usually leads to short distance and often temporary displacement, (Kolmannskog, 2008). However, in certain cases, for example in Bangladesh, sudden onset natural calamities could cause long distance and long term displacement (Piguet, 2008). Also, there is a difference between 'refugees' and 'evacuees' based on the permanence of displacement (UNU – EHS, 2005). The 'evacuation' prior or after a calamity is a type of forced migration, though it is of a temporary nature as the evacuees usually return to their original place of residence except in extreme cases. On the other, though in principle the repatriation of 'refugees' remains a primary concern yet the return to their original home takes long, if at all, for 'refugees'. The 'community relocations' also come under the folds of forced migration (Hunter, 2007). The town of Tehri (Uttaranchal) offers an example. The entire community was relocated following the submergence of the original town in the reservoir of the Tehri dam. Such wholesale community relocations have come to be closely associated with developmental projects. Apart from these, certain local displacements may occur due to regular and frequent floods and cyclones. Such residential disruption does not represent 'migration' because of the absence of long term relocation

but may acquire significance in less developed regions due to their regularity (Hunter, 2007). Further, migration in the wake of environmental change might not always be an alternative to adaptation but in itself an adaptation or coping strategy (UNITAR, 2008). The loss of livelihood opportunities due to slow onset calamities such as drought could generate gradual migration, often the last alternative among several coping strategies (Black, 2001; Kolmannskog, 2008). Particular household members, usually the young adults would migrate while the others stay behind and migrants financially help the family members (Hunter, 2007).

2.2 Defining Environmental Refugees and Environmental Migrants:

Lester Brown from the Worldwatch Institute was the first person to introduce the term 'Environmental Refugee' in the 1970s (Black, 2001). But a formal definition of 'Environmental Refugee' was given by El - Hinnawi (1985, cited in Bates 2002 : 466), as "those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and / or triggered by people) that jeopardised their existence and / or seriously affected the quality of their life. By 'environmental disruption' in this definition is meant any physical, chemical and / or biological changes in ecosystem (or resource base) that render it temporarily or permanently unsuitable for life" (Myers 1997 : 167) defined them as "people who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental problems. In their desperation, these environmental refugees feel they have no alternative but to seek sanctuary elsewhere, however hazardous the attempt. Not all of them have fled their country, many being internally displaced. But all have abandoned their homelands on a semi - permanent if not permanent basis, having little hope of a foreseeable return."

Some scholars such as McGregor (1993) and Kibreab (1994) criticised El - Hinnawi's definition for its ambiguity. The term "refugee" had been defined by the 1951 United Nations Convention on Refugees and its 1967 amendment as



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“someone with a well founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his or her nationality and is unable to or, owing to such fear, is unwilling to avail him or herself of the protection of that country” (UNHCR, 2006). Repatriation of the refugees or the return to their original homes remain the primary concern. If such a possibility is ruled out then the refugees are temporarily resettled, initially at the place to that they have fled or in some third party location until a permanent refuge has been decided. In the meantime, United Nations, assisted by Non – Governmental Organisations (NGOs), provide food, shelter and other basic amenities to the refugees (Goffman, 2006). It implies a cross border movement, that may not be the case in most of the situations where people are displaced due to environmental hazards, instead internal migration is more common. A majority of the environmental migrants resettle within their own country (Brown, 2008). Though, the term ‘environmental refugee’ had been introduced prior to the recognition of rights to protection and assistance of the internally displaced persons (IDPs) (Kolmannskog, 2008). Moreover, the term ‘refugee’ as defined above has a “forced” connotation to it, that may not be appropriate in situations where the “decision to leave” are entirely taken by the victims themselves (Bates, 2002). The ‘refugee’ has the right to return once their persecution has come to an end. But in cases such as sea level rise, where their home is lost forever there is no chance of a return and thus the expression misrepresents the problem itself. There have been concerns that the expansion of the term ‘refugee’ to incorporate environmental stressors may overwhelm the already overstretched mechanism that caters to the existing refugees (Brown, 2008). To infuse realism to the issue a distinction between refugee and migrant was proposed (Suhrke, 1993). Hence, wherever migration resulted from environmental and non – environmental factors working together the expression ‘environmental migrant’ is applied, whereas ‘environmental refugee’ continues to designate those who are forced to migrate as a consequence of environmental hazards (Bates, 2002; Reuveny, 2005). Thus, environmental refugees react mainly to environmental push while the environmental migrants respond to a combination of push and pull factors

(Suhrke, 1993). Hugo (1996) had proposed a continuum of control over migration decisions in situations of environmental change, wherein the environmental disaster induced refugees occupied the involuntary end while the expropriation migrants were considered voluntary migrants. The environmental refugees, compared with the environmental migrants, usually have fewer resources to react with and are therefore more vulnerable. Even the term ‘migrant’ is contentious because it entails a voluntary move towards a more attractive lifestyle. The international community has certain commitments towards the refugees under the United Nations Convention on Refugees and its 1967 amendment, and for that reason the definition acquires such significance (Brown, 2008). The need of recognising environmental refugees as a new category of refugee is supported by the United Nations University Institute for Environment and Human Security (UNU – EHS, 2005). The International Organisation for Migration defined environmental migrants as “persons or groups of persons, who, for compelling reason of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or chose to do so, either temporarily or permanently, and who move either within their country or abroad.” (McKinley, 2008) A universally accepted definition is crucial as it guides the response and policies of governments and international agencies towards the migrants (Castles, 2002).

Figure 2.1 Hugo’s Continuum of Control Over Migration Decisions

INVOLUNTARY	COMPELLED	VOLUNTARY
ENVIRONMENTAL REFUGEES	ENVIRONMENTAL EMIGRANTS	MIGRANTS

Source : Bates, 2002

2.3 Classification of Environmental Refugees and Environmental Migrants:

Several schemes of classification for environmental refugees have been put forth. El – Hinnawi (1985, cited in Bates 2002) categorised the ‘environmental refugees’ into three major classes, namely, temporarily displaced due to natural or

man – made disasters, permanently displaced due to drastic environmental changes, migrated due to gradual deterioration of environmental conditions and one minor class, to be precise, displaced due to destruction of environment during warfare. Jacobson (1988) incorporated persons displaced by development projects or industrial accidents into an expanded definition. International Organisation for Migration (1992, cited in Black, 2001) distinguished between emergency and slow onset movements, temporary and permanent movements and internal and international movements. Surkhe (1993) identified five forms of environmental degradation, namely deforestation, rising sea levels, desertification and drought, land degradation and water and air degradation that would result in outflows of environmental migrants or environmental refugees. Bates (2002) proposed a scheme of classification based on the nature of environmental disruption. It included three major categories and six sub – categories, namely, disaster (natural and technological), expropriation (development and ecocide) and deterioration (pollution and depletion). (see Table 2.1). Later Jacobson (1988) suggested a separate category for those displaced owing to disasters precipitated by a combination of natural and technological factors. UNISDR (2001 cited in Department of Economics and Social Affairs 2001) dubbed it as the ‘domino effect’ where the natural hazards trigger technological hazards that ultimately leads to humanitarian crisis. Mcguire et al (2002) referred to this category as ‘na – tech hazards’. McLeman (cited in Brown, 2008) divided the meteorological impact of climate change into two separate drivers of migration, namely climate processes, the slow onset changes and the climatic events, that are sudden and drastic in nature. The former encompasses processes such as sea – level rise, salinisation, desertification while floods, storms, hurricanes, typhoons characterise the latter. He also reminded the significance of the non – climatic drivers such as government policy, population growth and community level resilience to natural disasters. Alam (2003) distinguished between everyday changes (e.g. soil erosion, salinisation, deforestation, pollution) and the episodic changes (e.g. floods, droughts and other such disasters). Goffman (2006) identified natural disasters, land degradation, pollution (including the toxic events) and global climate change as some of the obvious environmental hazards that may force people to migrate.

Wood (2001) proposed the use of term 'ecomigrant' to encompass anyone who migrates due to environmental factors. He further points out that the ambiguity of the prefix 'eco' could account for both environmental and economic factors that were inseparable in many instances of migration. For migratory movements where environmental factor is decisive but may not be unique terms such as EIPM (Environmentally Induced Population Movements) and EDP (Environmentally Displaced Person) are used (Piguet, 2008). EDP has been defined as "persons who are displaced within their own country of habitual residence or who have crossed an international border and for whom environment degradation, deterioration or destruction is a major cause of their displacement, although not necessarily the sole one." (IOM, 1996 cited in Kolmannskog 2008 : 9) Four categories of environmental disruption were identified : less advanced stages of gradual environment change, advanced stages of gradual environment change, quick onset environmental effects and the effects of large scale development and land conservation projects (UNITAR, 2008).

Table 2.1 Classification of Environmental Refugees

	Disaster		Expropriation		Deterioration	
	An unintended, catastrophic event triggers human migration.		The willful destruction of Environment renders it unfit for human habitation.		An incremental deterioration of environment compels migration as constraints to human survival increase.	
Sub Category	Natural	Technological	Development	Ecocide	Pollution	Depletion
Origin	Natural	Anthropogenic	Anthropogenic	Anthropogenic	Anthropogenic	Anthropogenic
Intention of Migration	Unintentional	Unintentional	Intentional	Intentional	Unintentional	Unintentional
Duration	Acute	Acute	Acute	Acute	Gradual	Gradual
General Example	Volcano	Meltdown	Dam Building	Defoliation	Global Warming	Deforestation
Real World Example	Montserrat	US-TMI	China 3 G	Vietnam	Bangladesh	Ecuador – Amazon
Estimated No. of Displacements	7000	144000	1.3 million	7 million	15 million	115000

Source : Bates, 2002

Estimates suggest that there were 10 million environmental refugees in the world (Jacobson, 1988). Others appraised a higher figure, for instance Myers

(1997) considered that there were almost 25 million environmental refugees in the world, that makes it 1 person in every 225 people worldwide. Myers projected that the environmental migrants would reach 200 million by 2050. The United Nations Environmental Programme (UNEP) projections show that in the near future the environmental hazards will displace anything between 50 to 150 million people (Myers, 1997). Nicholls (2004) suggested that 50 to 200 million people could be displaced by climate change by 2080. A more recent projection by the UN University's Institute of Environment and Human Security in 2005 estimated the environmental refugees to reach 50 million by 2010 (Brown, 2008). However, these estimates have been widely debated (Black, 2001). Care should be exercised while publicising these figures as general public may be shocked by inflated numbers over a short period of time but such statistics are berated as trifle by academicians (Suhrke, 1993).

2.4 The Maximalist and Minimalist Perspectives of Environmental Migration:

Suhrke (1993) had observed two opposing perspectives among scholars regarding the relationship between environmental change and population movement : the 'maximalist' view, where environmental change is the direct cause of the displacement and the 'minimalist' view, where environmental change is a contextual factor of migration (Suhrke , 1993). A similar dichotomy in the literature on environmental hazard and migration still persists.

The 'maximalist' camp counts among it supporters academicians (such as Piguet, 2008; Goffman, 2006; Stojanov, 2006; Reuveny, 2005; Brown; 2004, Conisbee et al., 2003; Bates, 2002; Cairns, 2002; Myers, 1997), international organisations (such as UNEP, UNU-EHS) and NGOs (such as Friends for Earth, New Economics Forum, Living Space for Environmental Refugees). Myers (1997) believes that millions of people are being forced by the environmental changes to leave their homes and seek shelter elsewhere. Even when the environmental changes are not directly related to displacement they are intensifying resource competition, impoverishment, environmental degradation and encroachment on

ecologically fragile areas that would jeopardise the lives and livelihood of those involved and finally inducing them to migrate. The increasing impoverishment and stress may sometimes trigger political or ethnic violence that may blow into low intensity conflict or full scale war. The environmental refugees would either end up in urban slums or camps for internally displaced people or in extreme cases leave their own country and seek refuge in neighboring developing countries or faraway developed countries. Environmental refugees has the potential of becoming one of the foremost human crises of present times (Myers, 1997). The environmental refugees are a manifestation of the imbalance between modern civilization and earth's resource systems (Brown, 2004). The people could adapt to drastic environmental changes either by defending against them or by moving away from the area. The intensity of the change and the level of technological development of the involved society acting as the deciding factor between the two. The climate change is likely to strengthen migration, especially in the less developed and developing countries and that may initiate conflict. The relationship between environmental change, migration and conflict might not be linear or static. Reuveny (2005) In China the environment related population displacements had increased along with the rise in speed of environmental degradation (Tan et al., 2007). Although at global level those displaced by hurricanes and torrential rains are most likely to migrate temporarily over a short distance migration, there would be places mainly from developing countries, one example being Bangladesh, where the same natural hazards would force people to migrate (Piguet, 2008). Overall, the impact of natural disasters on migration will remain regional and short term. The concept of climate or environmental refugee should be utilised carefully as misuse could incite xenophobia (Piguet, 2008).

Nevertheless, not everyone is convinced about the environment – migration inter - linkage. The “top – down approach” to environmental migration research, wherein an area affected by environmental hazards and climate change are first identified followed by an estimation of people likely to move based on the population of the region, had been often criticised (UNITAR, 2008). Black (2001 : 1) argued “although environmental degradation and catastrophe may be

important factors in the decision to migrate, and issues of concern in their own right, their conceptualisation as a primary cause of forced displacement is unhelpful and unsound intellectually, and unnecessary in practical terms.” For him its a distraction from central issues of development and conflict resolution (Castles, 2002). There had been as many typologies of environmental refugees and environmental migrants as there had been works on them, but seldom have they agreed with each other (Black, 2001). Others (Castle, 2002; Haug, 2002; Rebert, 2006) have concluded that the concept of environmental refugee is of little help to understand a process in which environmental factors are closely linked to economic, social and political ones. Some (Henry, 2006; Henry et al., 2004; Ketel, 2004; Suhrke, 1993) agree that environment interacts with other factors to cause migration. Black (2001) expressed concern that the excitement concerning environmental migrants and environmental refugees may be bureaucratic agenda of international organisations and academics. Yet, he cautions that environmental change may induce migration, sometimes forcing people to leave their homes and such displacements have been recorded all throughout history. Still, without an unanimous definition of ‘environmental refugee’ it would not be possible to gauge the change in their ranks. In conclusion Black (2001) wonders whether we address the issue of protection and assistance needed by those displaced by environmental disasters or the root cause for reducing such displacement.

2.5 International Law and Protection:

The term “refugee” had been defined by the 1951 United Nations Convention on Refugees and its 1967 amendment as “someone with a well founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his or her nationality and is unable to or, owing to such fear, is unwilling to avail him or herself of the protection of that country” (UNHCR, 2006). Repatriation of the refugees or the return to their original homes remain the primary concern. If such a possibility is ruled out then the refugees are

temporarily resettled, initially, at the place to that they have fled or in some third party location until a permanent refuge has been decided. In the meantime, United Nations, assisted by NGOs, provide food, shelter and other basic amenities to the refugees (Goffman, 2006). The mandate of protecting refugees is with the United Nations Commissioner for Refugees (UNHCR). The international law is yet to recognise the environmental refugees and hence they are bereft of any financial grants, material assistance or legal support from any international organisation including the UNHCR or governments (UNU – EHS, 2005). It is for the same reason the international agencies or governmental organisations never collected any information on environmental refugees or environmental migrants.

Many refugee advocates and non – governmental organisations opine that the 1951 Convention definition is Eurocentric and fails to meet the needs of those displaced in the developing realm and hence there is a need to extend the ambit of the definition (Castles, 2002). On the other hand, the receiving countries, mostly belonging to the developed countries, want to restrict it. Immigration issues are increasingly becoming contentious in most developed countries and the political will to accept refugees and sponsor their protection has steadily declined (Rebert, 2006). Those fleeing natural calamity have been refused ‘refugee’ status on the ground that natural calamities are cyclic occurrences and those displaced by them usually return or should return after the calamity subsides (Ahmed, 2004). Black (2001) believes that a notion such as ‘environmental refugee’ could be used by the receiving nations to restrict the asylum claim of refugees by pointing out that they are fleeing environmental hazards and are not victims of persecution. Furthermore its broad categorisations make it ineffective from policy perspective (Suhrke, 1993).

In spite of the bureaucratic obstacles and the issue of pending recognition some efforts have been made to accommodate the environmental refugees. For instance, those displaced by sea level rise in west Pacific have been included in the Pacific Access Category (PAC). It is an immigration agreement signed by the governments of the island countries of Tuvalu, Fiji, Kiribati, Tonga and New Zealand to enable the islanders displaced by sea level rise to resettle in New Zealand. But there are certain prerequisite conditions to be fulfilled by the

potential immigrant that excludes the elderly and the less advantaged (Friends of the Earth, 2007). The PAC does not refer to the displaced islanders as environmental refugees (Kolmannskog, 2008). Recently, the entire population of Tuvalu, 11 thousand people, have been accepted by New Zealand after Australia refused to do so (Friends of the Earth, 2007).

It has been already noted that a majority of persons displaced by environmental hazards would remain within their own country and would hence become IDPs (Brown, 2008). The IDP itself is not a legal term but rights and laws have been identified that are relevant to it. The 1998 Guiding Principles on Internal Displacement defined IDPs as “persons or group of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid effects of armed conflict, situation of generalized violence, violations of human rights or natural and human – made disasters, and who have not crossed an internationally recognised state border.” (UNHCR, 2008) These principles hold national governments responsible for protecting people on their territory. But it is possible that the same government is unwilling or unable to protect the IDPs. The governments or aid agencies may not come to the rescue of the displaced and in such circumstances they either die or violence breaks out. The national or international relief may prevent social conflict and disorder. The affected population is too weak or marginalised to make such demands (Suhrke, 1993). In such special cases the UNHCR has the responsibility of protecting them (Kolmannskog, 2008). In case of those displaced by natural disasters there has been progressive rise in political will and financial resources necessary to provide assistance (IMDC, 2007). The International Red Cross and Red Crescent also constantly monitors the plight of the IDPs. However, other environmental factors, particularly slow onset changes and development displacement, seldom receive the due assistance (Kolmannskog, 2008). If not outright support, the UNHCR (1992) had delved into the issue relating environmental degradation with people seeking ‘refuge’. A universally accepted glossary of terms in the broad area of environment and security is being conceptualised by UNU – EHS (UNU – EHS, 2005).

In the preceding sections an attempt has been made to briefly discuss the issue of environmental migration including definitions, classifications, legal implications, estimation and the ongoing debate regarding its recognition and usefulness in order to set up the theoretical framework within which the phenomenon of natural calamity migration in India would henceforth be studied. Having located the issue of natural calamity migration in the midst of this debate, we now proceed to seek whether a relation exists between natural calamities and migration in the context of India. This remains the primary objective of this study. In the subsequent chapters, the methodologies that have been adopted to perform the analysis would be briefly outlined. This is followed by an in – depth analysis of natural calamity migration in India.

CHAPTER-3: DATA AND METHODOLOGY

3.1 Data:

The data on natural calamities, namely floods, droughts, windstorms and associated storm surges, earthquakes and slides have been obtained from EM – DAT : The OFDA / CRED International Disaster Database – www.emdat.be, Universite Catholique de Louvain, Brussels (Belgium); National Institute of Disaster Management, India; United States Geological Survey; Asian Disaster Reduction Center and various other secondary sources. The data on state – wise total population, rural population and urban population of India has been obtained from Census of India of 1981 and Census of India of 1991. The data on per capita Net State Domestic Product in 1981 – 1982 and 1991 – 1992 at 1980 – 1981 constant prices have been obtained from www.indiastat.com.

In most of the developing countries the data on migration is less than sufficient. Reliable environmental and demographic indicators are in short supply. Henry (2006 : 2) points out, “Censuses are highly aggregated and only give information on spatial mobility at the times of the census.” The magnitude of displacement can be estimated when it is closely associated with a distinct environmental change (Suhrke, 1993). The overlapping causes of the migration streams and absence of an unequivocal definition are major obstacles in generating statistics on environmental migration (Black, 2001). The lack of recognition of the environmental migrants under the international laws means no institution is responsible for collecting data on their numbers (Reuveny, 2005; Kolmannskog, 2008). The Environmental Change and Forced Migration Project (EACH – FOR) was launched in 2007 by the European Commission to overcome the shortage of statistical data regarding climate migrants (Brown, 2008).

However, some data on natural calamity migration are available in the ‘Migration Tables’ of the Census of India of 1991. According to the Census of India of 1991, there were seven reasons for migration, namely ‘employment’, ‘business’, ‘family moved’, ‘marriage’, ‘education’, ‘natural calamity like drought,

floods etc.’ and ‘others’. In the Census of India of 2001, reasons for migration that have been enquired about are ‘employment’, ‘business’, ‘family moved’, ‘marriage’, ‘education’, ‘moved after birth’ and ‘others’. It had excluded ‘natural calamity’ as one of the reasons for migration. Hence, no data on the topic were available from the recent edition of Census. Therefore, the Census of India of 1991, Series 1 – India, Part V – D Series, Migration Tables, Volume 3 Part 1, Table D – 3 remains the sole source of data on NCMs at the national level. According to it the NCMs are those migrants who had cited “natural calamity like drought, flood, etc.” as their reason for migration from their last place of residence to the place of enumeration during the census operation (Census of India, 1991 : 15). The types of natural calamity that have been considered remains ambiguous, except for drought and flood. This study has considered three other types of commonly occurring natural calamity in India along with flood and drought, namely earthquake, windstorms and slides (includes landslides and avalanches). The duration of residence at the village or town of enumeration is “the period in completed years of continuous residence in the village or town where the person is being enumerated” (Census of India, 1991 : 16). These migrants come under the ambit of ‘natural disaster migrants’ according to Bates’s classification (2002). Although National Sample Surveys (NSS) have provided data on internal migration in its different rounds, unfortunately they did not consider natural calamity as a reason for migration (Bhende et al., 2006).

The Census of India of 1991, other than providing the absolute figures for the different reasons for migration, tabulates the data according to different levels, such as the inter – state, intra – state, inter district, intra – district levels, that is further segregated by sexes, male or female and urban or rural status of the place of last residence and the place of enumeration. The data had been separately provided for five distinct categories of durations of residence at the place of last residence, namely, ‘all durations’, ‘less than 1 year’, ‘between 1 to 4 years’, ‘between 5 to 9 years’ and ‘10 years and beyond’. Some of these durations have been readjusted to create time periods required by the study. The ‘all durations of residence’ is an aggregate of all the durations and has been used for the first level of analysis. However, it masks the change in magnitude

of migration due to natural calamity in the intermittent period. Natural calamities do not occur regularly over space and time and even when they occur regularly, for instance floods or cyclones in certain parts of India, their magnitudes may vary widely. Hence, to capture these variations the durations of residence 'less than 5 years' and '5 to 9 years' have been created. Most people would correctly recollect the recent events and their effect. Longer the duration between the occurrence of a natural calamity and its eventual recording in a census, facts and figures could not only become vague but also incorrect. Apart from the three preceding durations, the 'duration of residence 0 to 9 years' has been generated to compare the magnitude and flow of NCMs with occurrence of natural calamities during the inter – censal period.

3.2 Methodology:

The methodology adopted for analysis of the data is as follows : First, we have estimated the percentage of Indian citizens who had a place of last residence within (P_I) and outside (P_{IT}) India according to the Census of India of 1991. These would give us an approximation of the internal migrants and international migrants in India for the stipulated period.

$$P_I = (\text{Number of People with a last place of residence within India} / \text{Total Population of India}) * 100$$

$$P_{IT} = (\text{Number of People with a last place of residence outside India} / \text{Total Population of India}) * 100$$

Second, we have estimated the share of each state in the total number of internal migrants and the total number of NCMs in India. This has also been calculated separately to analyse rural – urban differential and sex differential.

$$\text{Share of state A in the total internal migrants in India} = (\text{Migrants with a place of last residence in state A} / \text{Total migrants with a place of last residence within India}) * 100$$

Share of state A in the total NCMs in India = (Number of NCMs with a place of last residence in state A / Total NCMs with a place of last residence within India) * 100

Third, we have estimated the percentage of migrants citing the various reasons for migration at different levels and time periods from the expression,

Percentage of migrants citing reason 'A' = (Number of migrants citing reason 'A' / Total number of migrants) * 100

This would situate the NCMs among other motives of migration. It would give us significance of NCMs within the broader canvas of internal migration in India. If there has been any change in their numerical significance it is here we would first identify it. The rural – urban and sex differential has also been analysed in context of the reasons for migration in an attempt to identify any pattern and changes therein.

Fourth, since there are data on the total number of migrants (TMs) we have calculated Natural Calamity Migration Ratio (NCMRO), defined as the number of NCMs among the total migrants (TMs) from the following expression,

$$\text{NCMRO} = (\text{Number of NCMs} / \text{TMs}) * K$$

where K is a constant, here it is 100000

The NCMRO is calculated for the entire country and the individual states with regards to sex, rural (RNCMRO) and urban (UNCMRO) differentials. The ratios covered all the levels and streams of migration for different durations of residences.

Fifth, in order to investigate the male – female differential among NCMs in India we have calculated the sex ratio among the NCMs for the country as a whole, separately for the states and also for rural migrants (RNCMSR) and urban migrants (UNCMSR). The sex ratios covered the different levels and streams of migration for various durations of residences. The NCMSR is defined as the number of female NCMs per thousand of male NCMs. It is expressed as,

$$\text{NCMSR} = (\text{Number of female NCMs} / \text{Number of male NCMs}) * 1000$$

The definition of the NCMSR has been kept similar to the general definition of sex ratio in India, that estimate females per thousand males, for the ease of comparison with the sex ratio among TMs.

Sixth, the regional differential within India regarding NCMRO and the NCMSR has been illustrated through choropleth maps created with ArcGIS software. India is a vast country, seventh largest in the world in terms of area and second only to China in population size. Besides, the frequency of natural calamities is not uniform throughout the length and breadth of the country. Moreover, the type of natural calamity affecting different geographical regions vary spatially. The aftereffects of the natural calamities vary widely in terms of population or area affected. It also differs in terms of response time a population has for precautions against such calamity. Also, the same natural calamity may have different magnitude in different parts of India. Therefore, the choropleth maps would help recognise the regional differentials within India.

Seventh, matrices were created to study the flow of NCMs between states. We studied inter – state movement for different streams of migration over various durations of residence at the place of last residence. The matrices were separate for male NCMs, female NCMs and total NCMs. A total of 63 matrices were available for the study of inter – state movement of the NCMs. In this context India was divided into three regions, North (Haryana, Himachal Pradesh, Punjab, Delhi, Bihar, Orissa, West Bengal, Uttar Pradesh, Madhya Pradesh, Rajasthan, Gujarat,); South (Karnataka, Maharashtra, Goa, Andhra Pradesh, Tamil Nadu, Kerala) and Northeast (Assam, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Tripura, Nagaland, Sikkim)

Eighth, A flow distribution was created that showed the number of inter – state NCM flows of the four different streams that originated from any one of the 26 places of last residence for the durations of residence 5 to 9 years and less than 5 years. This would help to identify if the inter – state flows of the four streams had increased or decreased in between the two quinquennial periods. To gain further insight, within each quinquennial period of any stream the flows to ‘neighboring states’ and ‘other states’ were separately identified in

order to find whether the NCMs were moving to the former or latter and also, if there was an increase or decrease in the flows to either between the two quinquennial periods.

Ninth, we have also made use of correlation analysis to understand relationship between the dependent variable, viz. percentage distribution of NCMs and the three independent variables, viz. frequency of natural calamity, population size of the state and state's resilience to a natural calamity. It would also test the significance of these variables. The Pearson's correlation coefficient is estimated from the expression,

$$P_{xy} = \text{cov}(x, y) / P_x P_y$$

where x and y are random variables.

The P is a measure of linear association between two variables and lies between -1 and +1, -1 indicating perfect negative association and =1 indicating perfect positive association (Gujarati, 2007).

Tenth, the spatial unit for the analysis of the determinants of natural calamity migration is the state. The 16 major states of India had been taken into account. The time period is March, 1981 and February, 1991, that is the period between the Census of India of 1981 and that in 1991. The percentage distribution (N) of NCMs among the 16 major states in India is the dependent variable. The primary objective was to estimate the differential influence of three independent variables, namely the frequency of natural calamity, population size of the state and state's resilience to a natural calamity on the natural calamity migration. The natural calamity induces a person to migrate and its likely that higher the frequency of natural calamities in a place more number of people would become natural calamity migrants. The percentage distribution of natural calamities (P_n) between February, 1981 and February 1991 among the states in India would be indicator for the frequency of natural calamities. It has been estimated from the formulae,

$$P_{nc} = (\text{Number of natural calamities in a state} / \text{Number of natural calamities in India}) * 100$$

Previous studies have shown that greater the size of population at the origin, higher is the probability of a person to migrate due to natural calamity. The growth rate of population in the states in India between 1981 and 1991 would be used as an indicator of the population size. The population growth rate (PGR) was estimated from the following formulae,

$$PGR = [\ln (P_t / P_0)] * (1 / t)$$

where P_0 is the population of the state in 1981

P_t is the population of the state in 1991

t is the time

The vulnerability of a community to a natural calamity is also dependent on the community's resilience to withstand such an event. Such resilience is a function of the state's ability to mobilise resources in order to undertake mitigation procedure. The compound annual growth rate of per capita Net State Domestic Product (NSDP) between 1981 – 1982 and 1991 – 1992 at 1980 – 1981 constant prices had been used as a proxy for estimating the community's resilience. The compound annual growth rate (NSDP_{rt}) has been calculated from the formulae,

$$NSDP_{rt} = (N_t / N_0)^{1/t} - 1$$

where N_0 is the per capita NSDP in 1981 – 1982

N_t is the per capita NSDP in 1991 – 1992

t is the time

Therefore, the NCMs in a state is the function of the frequency of natural calamity, population size of the state and state's resilience to a natural calamity on the natural calamity migration that is expressed as,

$$N = f(P_{nc}, PGR, NSDP_{rt})$$

A positive relation between the dependent and the independent variable implies that a rise in the latter would induce an increase in the former. A negative relation between the two would have the exact opposite effect (Greenwood, 1971). It had been separately analysed for total NCMs, total male

NCMs, total female NCMs, RNCMs, male RNCMs, female RNCMs, UNCMs, male UNCMs and female UNCMs. In case of RNCMs and UNCMs the rural population growth rates (overall, male, female) and urban population growth rates (overall, male, female) were respectively used.

Eleventh, in case of natural calamities, we have simply aggregated the frequency of occurrence of such events as floods and heavy rains, droughts, cyclones, earthquakes, cold waves, landslides, avalanches and tsunamis during the 'durations of residence' already explained above. This periodical frequency of natural calamities has been compared with the volume of NCMs, aggregate as well as the state - wise distribution, to find if there is any inter - linkage between the two.

CHAPTER-4: ANALYSIS

According to the Census of India of 1991, there were 844 million people living in 26 states. Among them 232 million had a previous place of residence, they accounted for roughly 27.5 percent of the total population. During the same period the number of internal migrants in India was approximately 226 million. The internal migrants accounted for 26.8 percent of the total population while the percentage of international migrants was less than 1 percent. Henceforth whenever the word 'migrant' is mentioned it will imply internal migrants only.

The following is a brief outline of the organisation of this chapter. The chapter is divided into three broad sections. The first section deals with the internal migrants in India. The regional, urban – rural and sex differentials of the internal migrants for all durations of residence would be discussed. This would provide an overview of internal migration in India. The migrants move from one place to another with particular motives. The reasons for migration in India would be discussed in the second section. The urban – rural and sex differentials of the reasons for migration among the migrants would also be analysed. As mentioned earlier, the main objective of this study is to understand the extent of natural calamity migration in India. The third section of this chapter is entirely devoted to the natural calamity migrants (NCMs). These are the migrants who had cited natural calamity as the reason for migration. This section is divided into four sub – sections. The first sub – section deals with all NCMs, analysing their regional, rural – urban and sex differentials and natural calamity migration ratio for all durations of residence, duration of residence 5 to 9 years and duration of residence less than 5 years. The second and the third sub – sections separately analyse the same characteristics for intra – state and inter – state migrant. In addition the sub – section on inter – state NCMs analyses the flow of migrants with help of migration matrices. The fourth section analyses the determinants of natural calamity migration.

4.1 Internal Migration in India:

4.1.1 Regional Differentials in Internal Migration:

Among the 26 states, for all durations of residence, Uttar Pradesh accounted for the largest percentage of migrants, 13.07 percent. Another 11.24 percent was from Maharashtra. On the other hand, only 0.04 percent of the migrants had the last place of residence in Mizoram. Maharashtra (15.56 percent) accounted for the largest percentage of the male migrants, followed by Andhra Pradesh (10.33 percent).

Table 4.1 Percentage Distribution of Internal Migrants by Place of Last Residence, India, All Durations of Residence, 1991

Place of Last Residence	Internal Migrants (Percent)		
	Persons	Male	Female
Andhra Pradesh	8.70	10.33	8.10
Arunachal Pradesh	0.13	0.24	0.08
Assam	2.29	3.20	1.96
Bihar	9.48	3.86	11.56
Delhi	1.52	3.02	0.96
Goa	0.23	0.35	0.19
Gujarat	6.03	6.83	5.74
Haryana	2.18	1.81	2.32
Himachal Pradesh	0.80	0.82	0.80
Karnataka	5.93	7.56	5.33
Kerala	3.61	4.80	3.17
Madhya Pradesh	9.57	9.59	9.56
Maharashtra	11.24	15.56	9.64
Manipur	0.05	0.07	0.04
Meghalaya	0.11	0.23	0.07
Mizoram	0.04	0.08	0.03
Nagaland	0.05	0.12	0.03
Orissa	3.72	3.12	3.94
Punjab	2.88	2.84	2.89
Rajasthan	5.57	4.16	6.09
Sikkim	0.05	0.09	0.04
Tamil Nadu	5.81	7.34	5.25
Tripura	0.19	0.28	0.16
Uttar Pradesh	13.07	7.08	15.29
West Bengal	6.73	6.64	6.77
India	100.00	100.00	100.00

Source : Calculated from ORGCC, 1991

Manipur (0.07 percent) had the least mobile male population. Uttar Pradesh (15.29 percent) had the largest percentage of female migrants, followed by Bihar (11.56 percent). Mizoram (0.03 percent) and Nagaland (0.03 percent) had the least mobile female population. According to the Census of India of 1991, for all durations of residence, there were 184.5 million rural migrants making up 82 percent of all migrants while urban migrants accounting for the remaining 18 percent cumulated into 39.5 million people.

4.1.2 Rural – Urban Differentials in Internal Migration:

The rural migrants, who decisively contributed the major percentage of migrants in India, comprised 24.1 percent male migrants and 75.9 percent female migrants. The overwhelming participation of women in the rural stream was mainly because of the prevalence of marital migration among women in India, where tradition beckon women to leave their parental home and move into their spouse's household after marriage. For all durations of residence, among all the rural migrants in India 13.8 percent belonged to Uttar Pradesh, 10.8 percent hailed from Bihar and another 10.6 percent had their last place of residence in Maharashtra. Among all the states Mizoram (0.04 percent) had the least mobile rural population. A distinct sex differential regarding migration was observed among the Indian states. In a major departure from the overall pattern, most of the male rural migrants were contributed by Maharashtra (15.54 percent), followed by Andhra Pradesh (10.95 percent) and Madhya Pradesh (10.05 percent). On the other hand, Manipur (0.07 percent) had the least mobile male rural population. Uttar Pradesh (15.90 percent) provided the largest percentage of female migrants along with Bihar accounting for 12.87 percent of the same. On the reverse, rural women from the states of Mizoram (0.03 percent) and Nagaland (0.03 percent) were least migratory.

Women comprised 59.8 percent of the urban migrants while men accounted for the remaining 40.2 percent of the same. While marriage remained the predominant reason for migration among urban women, a considerable number of women moved along with their family. For instance, in

Table 4.2 Percentage Distribution of Rural Internal Migrants by Place of Last Residence, India, All Durations of Residence, 1991

Place of Last Residence	Rural Internal Migrants (Percent)		
	Persons	Male	Female
Andhra Pradesh	8.79	10.95	8.10
Arunachal Pradesh	0.13	0.26	0.09
Assam	2.49	3.78	2.09
Bihar	10.82	4.37	12.87
Delhi	1.02	2.39	0.59
Goa	0.14	0.21	0.12
Gujarat	5.83	6.72	5.54
Haryana	2.11	1.69	2.24
Himachal Pradesh	0.84	0.80	0.85
Karnataka	5.42	7.04	4.90
Kerala	3.27	4.51	2.88
Madhya Pradesh	9.77	10.05	9.68
Maharashtra	10.62	15.54	9.06
Manipur	0.05	0.07	0.04
Meghalaya	0.11	0.25	0.06
Mizoram	0.04	0.08	0.03
Nagaland	0.05	0.12	0.03
Orissa	4.12	3.50	4.31
Punjab	2.69	2.68	2.69
Rajasthan	5.70	4.23	6.16
Sikkim	0.05	0.09	0.03
Tamil Nadu	4.93	6.21	4.52
Tripura	0.19	0.29	0.16
Uttar Pradesh	13.78	7.11	15.90
West Bengal	7.05	7.08	7.05
India	100.00	100.00	100.00

Source : Calculated from ORGCC, 1991

the inter – state level of the urban stream family moved was the foremost reason for mobility among women. The percentage of male migrants was comparatively higher in the urban areas than in the rural areas. For all durations of residence 14.3 percent of the urban migrants belong to Maharashtra, followed by Tamil Nadu with 10 percent. Manipur (0.05 percent) had the least mobile urban population. In the case of male urban migrants, once again Maharashtra (15.9

percent) accounted for the largest share. Tamil Nadu (10.6 percent) had the second largest urban male migrant population. The lowest male mobility was recorded in Manipur (0.05 percent). As in the previous cases of urban migration, once more Maharashtra (13.3 percent) accounted for the highest percentage of female urban migrants. Uttar Pradesh with 11.3 percent of the female urban migrants came in next. The states of Mizoram (0.04 percent) and Sikkim (0.04) provided the lowest percentage of female urban migrants.

Table 4.3 Percentage Distribution of Urban Internal Migrants by Place of Last Residence, India, All Durations of Residence, 1991

Place of Last Residence	Urban Internal Migrants (Percent)		
	Persons	Male	Female
Andhra Pradesh	8.48	8.79	8.27
Arunachal Pradesh	0.12	0.17	0.08
Assam	1.26	1.51	1.10
Bihar	3.27	2.42	3.83
Delhi	3.86	4.84	3.19
Goa	0.65	0.76	0.58
Gujarat	7.02	7.13	6.95
Haryana	2.52	2.17	2.76
Himachal Pradesh	0.66	0.88	0.51
Karnataka	8.19	8.87	7.73
Kerala	5.27	5.67	4.99
Madhya Pradesh	8.66	8.35	8.86
Maharashtra	14.30	15.86	13.26
Manipur	0.05	0.05	0.05
Meghalaya	0.12	0.16	0.09
Mizoram	0.06	0.08	0.04
Nagaland	0.09	0.13	0.06
Orissa	1.86	2.03	1.74
Punjab	3.78	3.30	4.10
Rajasthan	4.87	3.88	5.53
Sikkim	0.06	0.08	0.04
Tamil Nadu	10.01	10.60	9.61
Tripura	0.21	0.23	0.20
Uttar Pradesh	9.51	6.79	11.34
West Bengal	5.15	5.27	5.07
India	100.00	100.00	100.00

Source : Calculated from ORGCC, 1991

4.1.3 Sex Differentials in Internal Migration:

Among the internal migrants in India 27.0 percent were males and 73.0 percent were female. At all levels the percentage of female internal migrants was higher than the male internal migrants. The rural and urban internal migrants also had the same pattern as the total migrants. The internal migrant sex ratio was 2707 female internal migrants per thousand male internal migrants. The rural internal migrant sex ratio was 3150 female rural internal migrant per thousand male rural internal migrant. Among the urban internal migrants the sex ratio was 1488 female urban internal migrants per thousand male urban internal migrants.

Table 4.4 Percentage Distribution of Male and Female Migrants in Different Levels, All Durations of Residence, India, 1991

Levels	Internal Migrants (Percentage)	
	Male	Female
Internal Migrants	26.98	73.02
Intra – State Migrant	24.71	75.29
Inter – State Migrants	44.36	55.64

Source : Calculated from ORGCC, 1991

Thus, though both rural and urban internal migrant sex ratios were female biased, the former was higher than the latter indicating that more rural women migrated compared to urban women. The sex ratio for the total migrants was female biased at intra – state level as well as inter – state level but it was higher at the intra – state level than the inter – state level. It indicates that more female migrants remained within state of enumeration than outside it. Same pattern was observed among the urban and rural migrants of the intra – state and inter – state levels.

Table 4.5 Internal Migrant Sex Ratio, All Durations of Residence, India, 1991

Levels	Internal Migrant Sex Ratio (Female Per Thousand Males)		
	Total	Male	Female
Internal Migrants	2707	3150	1488
Intra – State Migrants	3047	3480	1624
Inter – State Migrants	1254	1326	1154

Source : Calculated from ORGCC, 1991

4.2 Reasons for Migration in India :

The census of 1991 collected data on seven reasons for migration, namely employment, business, education, family moved, marriage, natural calamity and others. For all durations of residence most of the internal migrants moved because of marriage (57.2 percent), followed by family moved (15 percent), others (14.2 percent), employment (8.8 percent), business (2.3 percent), education (2 percent) and natural calamity (0.5 percent). The pattern remained same for the inter – district level. At the intra – state level, the pattern differed slightly. In here marriage, was followed by others, family moved, employment, education, business and natural calamity. Among the inter - state migrant, once again marriage (34.1 percent) remained the predominant reason for migration, followed by family moved (24.1 percent), employment (21.4 percent), others (12 percent), business (5.8 percent), education (2.2 percent) and natural calamity (0.4 percent). For durations of residence 5 to 9 years, the overall pattern as well as that for the inter – state level remained same as that for all durations of residence. In the intra – state level, the only change had been the replacement family moved by others as the second significant reason for migration. For duration of residence less than 5 years, the overall pattern had only changed regarding those who had cited business or education as the motive behind migration. During the five years prior to the census, more people had moved for educational purpose (5.8 percent) than for business (2.9 percent). All through the same period and at all levels marriage

remained the most potent reason to resettle except at the inter – state level where it had been surpassed by those who had moved with the family. At the intra – state level, for the durations of residence less than 5 years, family moved had replaced others as the second most important reason for migration.

4.2.1 Rural – Urban Differentials in the Reasons for Migration:

Within the rural stream, for all durations of residence, marriage dominated the reasons for migration. It was followed by others, family moved, employment, business, education and natural calamity. Same pattern was observed at the intra – state level. However, at the inter - state level marriage (38 percent) was followed by employment (21.8 percent), family moved (21.3 percent), others (10.8 percent), business (5.7 percent), education (1.8 percent) and natural calamity (0.5 percent). For duration of residence 5 to 9 years, family moved had become the second most significant reason for mobility at all the levels. Also, for the same period, at the intra – state level more rural folks had been migrating for education than business. Compared to all durations of residence, the importance of employment among rural migrants had declined at the inter – state level. For duration of residence less than 5 years, family moved remained the second most significant reason for mobility at all the levels except at the inter – state level where it was cited as the motive to move by the largest percentage of migrants. Also, during the same period, at all levels except at the interstate level education accounted for more migrants than business. At the inter – state level, among the migrants with duration of residence less than 5 years, marriage was the third most significant reason for migration after family moved and employment.

As in the rural stream, for all durations of residence, marriage (34.6 percent) remained the predominant reason for migration in the urban stream as well. It is followed by family moved (25.4 percent), others (18.4 percent), employment (15.1 percent), business (3.6 percent), education (2.6 percent) and natural calamity (0.24 percent). The pattern remained the same at intra – state level. Unlike in any other stream and level, in the urban inter – state stream family moved (28.6 percent) was the dominant reason for migration, followed by

marriage (28.1 percent), employment (20.8 percent), others (13.7 percent), business (5.8 percent), education (2.8 percent) and natural calamity (0.27 percent). For duration of residence 5 to 9 years, the overall pattern for the urban migrants remained same as that for all durations of residence barring others being surpassed by those moved because of employment motives. During the same period family moved was the second most significant reason for mobility at all the levels except at the inter – state level where it was cited as the motive to move by the largest percentage of migrants. Marriage remained the predominant reason for migration among urban migrants at all levels except at inter – state level. There was some changes in the importance of the reasons for migration among the urban migrants during the five years prior to the 1991 Census. At all levels, those people who had moved with family accounted for the largest percentage of urban migrants. Marriage remained the next most significant reason among urban migrants at all levels except at the inter – state stream where it occupied the third position. Reversing the pattern for the 5 to 9 year period, at all the levels of the less than 5 year period educational migrants surpassed those who moved for business. Between the 5 to 9 years and less than 5 years periods almost nothing had changed in case of other reasons for migration.

4.2.2 Sex Differentials in the Reasons for Migration:

Overall, among the Indian male migrants, for all durations of residence, ‘Others’ remains the predominant motive behind migration accounting for 28.4 percent. About 27.8 percent migrated because of ‘employment’, 26.5 percent moved along with the family, ‘business’ compelled another 7.1 percent, students accounted for 5.0 percent and only 4.1 percent did so because of marital reasons. According to the study, 1.2 percent of the male migrants were NCMs. At the intra – state, the pattern remains almost same as that for the overall level, except that more men, 27.1 percent, moved along with the family than for employment, 24.0 percent. However, unlike in the other levels, at the inter – state levels most men migrate because of employment, followed by family moved, others, business, education and natural calamity. For all durations of residence, the

pattern among rural male migrants at different levels is same as that among all migrants. Overall, employment (31.9 percent) predominates the motive of the urban male migrant. The urban males who accompany their families constituted 28.5 percent. About 25.2 percent migrate because of 'others', 7.6 percent for business, 4.3 percent for education, 2.3 percent for marital reasons and only 0.3 percent moved due to natural calamity. The pattern among the urban male migrants at the inter – state level is same as that for all and rural migrants of that level. In the intra – state level, employment is ranked third in the order of significance among the reasons to migrate, followed by business, education, marriage and natural calamity.

Table 4.6 Distribution of Male Internal Migrants in different levels by Reasons for Migration, India, All Durations of Residence, 1991

Levels	Male Internal Migrants (Percent)						
	Reasons for Migration						
	Employment	Business	Education	Family Moved	Marries	Natural Calamities	Others
Internal Migrants	27.79	7.06	5.02	26.46	4.13	1.15	28.39
Intra – State Migrants	24.02	5.99	5.39	27.13	4.72	1.28	31.47
Inter – State Migrants	43.42	11.49	3.48	23.68	1.67	0.61	15.65

Source: Calculated from ORGCC, 1991

Among female migrants, for all durations of migration, marriage (77 percent) remains the primary reason for migration, followed by those that resettled with the family, about 10.7 percent. Employment and business accounted for 1.79 percent and 0.54 percent respectively while 0.82 percent of the female migrants reported education as the motivation. The female NCMs comprised 0.25 percent of the female migrants. The pattern of sex ratio was same as that for all migrants for intra – state and inter – state levels. For all durations of residence, the pattern among rural female migrants at different levels was same as that among all migrants for particular levels except for the intra – state level, where unlike

the pattern of the same level for all migrants more migrants moved because of 'others' than along with the family. The pattern of sex ratio for all urban female migrants was same as that for the particular level for all migrants and rural migrants. In case of the intra – state level, although the pattern of sex ratio differed slightly than that for the same levels in context of all migrants and rural migrants, mainly regarding the significance of family moved and others in the intra – state level, the pattern for the intra – state level was same as that of the overall pattern of sex ratio for urban female migrants.

Table 4.7 Distribution of Female Internal Migrants in different levels by Reasons for Migration, India, All Durations of Residence, 1991

Levels	Female Internal Migrants (Percent)						
	Reasons for Migration						
	Employment	Business	Education	Family Moved	Marries	Natural Calamities	Others
Internal Migrants	1.79	0.54	0.82	10.68	76.97	0.25	8.85
Intra – State Migrants	1.60	0.48	0.79	9.32	78.63	0.25	8.94
Inter – State Migrants	3.76	1.17	1.11	24.46	60.11	0.29	9.06

Source: Calculated from ORGCC, 1991

From the above discussion it is quite clear that the people who have migrated because of natural calamities form a small percentage of the total internal migrants in India. However, in absolute terms they account for 1.12 million people which by no means is a small number. These NCMs have been induced to leave their original homes and resettle elsewhere because of natural calamities that had disrupted their normal way of life, rendering their uninhabitable. It is obvious, that like other migrants who have migrated for different motives, the NCMs would also affect the place of origin, the place of destination and themselves.

4.3.1 NATURAL CALAMITY MIGRATION IN INDIA:

According to the Census of India of 1991, with regards to all durations of residence, the NCMs accounted for a mere 0.49 percent of the internal migrants in the country, but this small share translated into 1.12 million people. Among the NCMs 89.6 percent belonged to the intra – state level while NCMs of the inter – state level composed the remaining 10.4 percent. The distribution of NCMs in the different levels was same as the overall distribution for both the sexes. Only 1.15 percent of the male migrants were NCMs but that added upto approximately 7 lakh men. The NCMs accounted for 0.25 percent of all female migrants, that is more than 4 lakh women. Therefore, out of every hundred thousand male migrants 1150 were NCMs while of every hundred thousand female migrants 250 were NCMs. The percentage of NCMs among all migrants, for all durations of migration, were similar in all the levels.

Table 4.8 Percentage of Natural Calamity Migrants among All Migrants in the Different Levels of Migration, India, All Durations of Residence, 1991

Stream	Natural Calamity Migrants (Percent)		
	Person	Male	Female
Internal Migrants	0.49	1.15	0.25
Intra – State Migrants	1.50	1.28	0.25
Inter – State Migrants	0.44	0.61	0.29

Source : Calculated from ORGCC, 1991

4.3.1.a Regional Differentials in Natural Calamity Migration:

All durations of Residence :

For all durations of residence, among the states Assam (24.9 percent), West Bengal (9.9 percent), Andhra Pradesh (8.8 percent), Maharashtra (8.3 percent) and Karnataka (7.7 percent) together accounted for 59.6 percent of the NCMs. On the other hand 12 states, each contributed less than 1 percent of the all NCMs in India. The male NCMs accounted for 62.9 percent of all NCMs. Among the states Assam (27.9 percent), West Bengal (10.4 percent), Andhra

Pradesh (7.8 percent), Karnataka (8.1 percent) and Madhya Pradesh (7.6 percent) together accounted for 61.7 percent of all male NCMs. Once again in 12 states the percentage of NCMs was less than 1 percent. The female NCMs constituted 37.1 percent of all NCMs. 5 states, namely Assam (19.9 percent), Andhra Pradesh (10.4 percent), Maharashtra (9.7 percent), West Bengal (9.0 percent) and Uttar Pradesh (8.3 percent) together accounted for 57.3 percent of all female NCMs. (see Table A.1)

Duration of Residence 5 to 9 Years:

For duration of residence 5 to 9 years, 5 states Assam (23.6 percent), Andhra Pradesh (10.4 percent), West Bengal (10.0 percent), Maharashtra (7.9 percent) and Uttar Pradesh (7.6 percent) together constituted 59.4 percent of all NCMs in India. The percentage of NCMs was less than 1 percent in 12 states. The percentage of male NCMs among all NCMs was 57.9 percent. The pattern among male NCMs was same as that for all NCMs. The female NCMs accounted for 42.1 percent of all NCMs in India. Assam (19.1 percent), Andhra Pradesh (11.5 percent), West Bengal (9.6 percent), Maharashtra (8.4 percent) and Uttar Pradesh (8.3 percent) accounted for 56.8 percent of all female NCMs in India. The percentage of female NCMs was less than 1 percent in 11 states. (see Table A.4)

Duration of Residence Less Than 5 Years:

For duration of residence less than 5 years, Assam (24.3 percent), Andhra Pradesh (10.9 percent), West Bengal (9.3 percent), Maharashtra (8.7 percent) and Uttar Pradesh (7.7 percent) accounted for 60.8 percent of all NCMs. The percentage of NCMs was less than 1 percent in 11 states. The male NCMs accounted for 58.6 percent of all NCMs. The pattern among male NCMs was same as that for all NCMs. The female NCMs accounted for 41.4 percent of all NCMs. Among the states, Assam (21.5 percent), Assam (11.7 percent), Maharashtra (9.6 percent), West Bengal (9.4 percent) and Uttar Pradesh together

contributed 60.4 percent of all female NCMs. On the other hand the percentage of female NCMs was less than 1 percent in 10 states. (see Table A.7)

The NCMs increased by 19.3 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male NCMs and female NCMs increased by 20.9 percent and 17.2 percent respectively.

4.3.1.b Rural – Urban Differentials in Natural Calamity Migration:

All Durations of Residence:

The RNCMs accounted for 91.3 percent of all NCMs in India. The remaining 8.7 percent were UNCMs. In context of the RNCMs, Assam (26.8 percent), West Bengal (10.2 percent), Andhra Pradesh (8.5 percent), Maharashtra (7.9 percent) and Madhya Pradesh (7.7 percent) together accounted for 61.1 percent of all RNCMs in India. The percentage of RNCMs was less than 1 percent in 12 states. The male RNCMs comprised 63.6 percent of all RNCMs. Among the states, Assam (29.8 percent), West Bengal (10.7 percent), Madhya Pradesh (7.8 percent), Andhra Pradesh (7.5 percent) and Karnataka (7.6 percent) together contributed 63.4 percent of all male RNCMs. The percentage of male RNCMs was less than 1 percent in 12 states. The female RNCMs accounted for 36.4 percent of all RNCMs. Assam (21.7 percent), Andhra Pradesh (10.2 percent), West Bengal (9.4 percent), Maharashtra (9.2 percent) and Uttar Pradesh (8.4 percent) together accounted for 58.9 percent of all female RNCMs. The percentage of female RNCMs was less than 1 percent in 12 states. (see Table A.2)

Among the UNCMs, for all durations of residence, Maharashtra (13.4 percent), Karnataka (13.0 percent) Tamil Nadu (12.6 percent), Andhra Pradesh (11.9 percent), and Uttar Pradesh (6.9 percent) together contributed 57.8 percent of all UNCMs. The percentage of UNCMs was less than 1 percent in 9 states. The male UNCMs constituted 55.5 percent of all UNCMs. Karnataka (14.6 percent), Maharashtra (13.1 percent), Tamil Nadu (12.3 percent), Andhra Pradesh

(11.5 percent) and West Bengal (7.2 percent) together accounted for 58.8 percent of all male UNCMs. The percentage of male UNCMs was less than 1 percent in 9 states was less than 1 percent. The female UNCMs were 44.5 percent of all UNCMs. Among the states, Maharashtra (13.8 percent), Tamil Nadu (13.0 percent), Andhra Pradesh (12.3 percent), Karnataka (11.0 percent) and Uttar Pradesh (7.8 percent) together contributed 57.9 percent of all female UNCMs. The percentage of female UNCMs was less than 1 percent in 9 states. percent. (See Table A.3)

Duration of Residence 5 to 9 Years:

The RNCMs and UNCMs accounted for 90.5 percent and 9.5 percent of all NCMs respectively. In case of RNCMs, Assam (25.6 percent), West Bengal (10.7 percent), Andhra Pradesh (10.2 percent), Uttar Pradesh (7.7 percent) and Maharashtra (7.3 percent) together accounted for 61.4 percent of all RNCMs. The percentage of RNCMs was less than 1 percent in 12 states. The male RNCMs comprised 58.5 percent of all RNCMs. Among states, Assam (28.8 percent), West Bengal (10.9 percent), Andhra Pradesh (9.4 percent), Uttar Pradesh (7.2 percent) and Madhya Pradesh (6.9 percent) together constituted 63.1 percent of all male RNCMs. The percentage of male RNCMs was less than 1 percent in 12 states. The female RNCMs formed 41.5 percent of all RNCMs in India. The states of Assam (21.1 percent), Andhra Pradesh (11.3 percent), West Bengal (10.4 percent), Maharashtra (8.8 percent) and Uttar Pradesh (8.4 percent) accounted for 59.9 percent of all female RNCMs. The percentage of female RNCMs was less than 1 percent in 11 states. (see Table A.5)

In case of UNCMs, the states of Maharashtra (13.6 percent), Andhra Pradesh (12.9 percent), Tamil Nadu (12.5 percent), Karnataka (10.3 percent) and Punjab (8.9 percent) together accounted for 58.2 percent of all UNCMs. The percentage of UNCMs was less than 1 percent in 9 states. The male and female UNCMs constituted 52.0 percent and 48.0 percent of all UNCMs. The states of Maharashtra (12.7 percent), Karnataka (12.3 percent), Andhra Pradesh (12.1 percent), Tamil Nadu (12.0 percent) and Punjab (9.9 percent) together constituted

59.0 percent of male UNCMs. The percentage of male UNCMs was less than 1 percent in 9 states. The pattern for female UNCMs was same as all UNCMs. (see Table A.9)

Duration of Residence Less Than 5 Years:

The RNCMs and UNCMs accounted for 90.6 percent and 9.4 percent of all NCMs respectively. The states of Assam (26.4 percent), Andhra Pradesh (10.6 percent), West Bengal (9.8 percent), Maharashtra (8.2 percent) and Uttar Pradesh (7.8 percent) together constituted 62.7 percent of all RNCMs. The percentage of RNCMs was less than 1 percent in 12 states. The male RNCMs and female RNCMs comprised 59.1 percent and 40.9 percent of all RNCMs respectively. In case of male RNCMs Assam (28.4), Andhra Pradesh (9.9 percent), West Bengal (9.6 percent), Maharashtra (7.6 percent) and Karnataka (7.4 percent) together accounted for 63.0 percent of all male RNCMs. The percentage of male RNCMs was less than 1 percent in 12 states. The pattern for female RNCMs was same as that for all RNCMs. (see Table A.8)

As for UNCMs, the states of Andhra Pradesh (14.7 percent), Maharashtra (13.9 percent), Karnataka (12.9 percent), Tamil Nadu (12.2 percent) and Uttar Pradesh (6.6 percent) together accounted for 60.3 percent of all UNCMs. The male and female UNCMs comprised 54.4 percent and 45.6 percent of all UNCMs respectively. The percentage of UNCMs was less than 1 percent in 9 states. Andhra Pradesh (14.7 percent), Karnataka (13.7 percent), Maharashtra (13.6 percent), Tamil Nadu (12.4 percent) and Uttar Pradesh (6.3 percent) together contributed 60.6 percent of all male UNCMs. The percentage of male UNCMs was less than 1 percent in 9 states. The pattern among female UNCMs was same as that for all UNCMs. (see Table A.9)

The RNCMs increased by 19.6 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male RNCMs and female RNCMs increased by 20.8 percent and 17.9 percent respectively. On the other hand, the UNCMs increased by 17.9 percent between duration of residence 5 to 9 years and duration of residence less than

5 years. During the same period the male UNCMs and female UNCMs increased by 23.2 percent and 12.0 percent respectively.

4.3.1.c Natural Calamity Migration Ratio for all Natural Calamity Migrants:

All Durations of Residence:

The NCMRO of India for all durations of residence was 496 NCMs per hundred thousand migrants that was moderately low. Among the states Assam had the highest NCMRO, 5392 NCMs per hundred thousand of migrants. The neighboring states of Arunachal Pradesh (1546) and Meghalaya (1346) had a high NCMRO. Moderately low NCMRO was recorded by Orissa (777), West Bengal (729), Nagaland (701), Karnataka (648), Tripura (542), Andhra Pradesh (499), Goa (484), Tamil Nadu (460) and Sikkim (456). The lowest NCMRO, only 83 NCMs per hundred thousand migrants, was in Kerala. The male NCMRO of India for all durations was 1156 male NCMs per hundred thousand male migrants. The pattern also differed in context of the male NCMs. Although Assam (10073) had the highest male NCMRO, Arunachal Pradesh (2288), West Bengal (2131) and Orissa (1831) were the other states where it was high. Kerala (100) had the lowest male NCMRO. The female NCMRO of India, 252 female NCMs per hundred thousand female migrants, was lower than the male NCMRO. Among the states Assam (2566) had the highest female NCMRO. It was also high in Meghalaya (1119). Of the 25 states the female NCMRO was low in 13 states. (see Map no. M.1, Table A.10)

India had a moderately low RNCMRO of 549 RNCMs per hundred thousand rural migrants. Assam, 5911 RNCMs per hundred thousand rural migrants, had the highest RNCMRO for all durations of migration. On the other hand, Kerala, 85 RNCMs per hundred thousand rural migrants, had the lowest RNCMRO. Once again, Arunachal Pradesh (1764) and Meghalaya (1579) had a high RNCMRO. The RNCMRO was moderately low in Nagaland (819), Orissa (812), West Bengal (795), Goa (785), Karnataka (735), Tripura (595), Andhra Pradesh (531), Tamil Nadu (522), Sikkim (509), Manipur (453) and Mizoram (453). The male RNCMRO of India for all durations was 1449 male RNCMs

per hundred thousand male rural migrants. The pattern also differed in context of the male rural NCMs. Although Assam (11417) had the highest male RNCMRO, Arunachal Pradesh (2704), Orissa (2525), West Bengal (2182) and Orissa (1831) were the other states where it was high. Delhi (102) had the lowest male RNCMRO. The female RNCMRO of India for all durations of residence was 264 female RNCMs per hundred thousand female rural migrants. The regional pattern for female RNCMRO was same as female NCMRO. (See Map No. M.4, Table A.11)

The UNCMRO of India, 245 UNCMs per hundred thousand urban migrants, was moderately high. The highest UNCMRO for all durations of residence was recorded in Assam, 818 UNCMs per hundred thousand urban migrants. The UNCMRO was high in Arunachal Pradesh (439), Meghalaya (426), Orissa (415), Nagaland (402), Karnataka (389) and Andhra Pradesh (343). Kerala, 78 UNCMs per hundred thousand urban migrants, had the lowest UNCMRO. The states of Tripura (325), Sikkim (323), Tamil Nadu (310), West Bengal (305), Punjab (291), Haryana (245) and Maharashtra (230) had a moderately high UNCMRO. The male UNCMRO of India for all durations of residence was 338 male UNCMs per hundred thousand male urban migrants. The male UNCMRO was highest in Assam (1069). It was also high in Karnataka (558), Orissa (540), Arunachal Pradesh (523), Punjab (485), Meghalaya (466) and West Bengal (463). Both Kerala (92) and Mizoram (107) had a low male UNCMRO. The female UNCMRO of India for all durations of residence was 182 female UNCMs per hundred thousand female urban migrants. Among states Assam (587) had the highest female UNCMRO. The lowest female UNCMRO was recorded in Kerala (67). (See Map No. M.7, Table A.12)

Duration of Residence 5 to 9 years:

For duration of residence 5 to 9 years the NCMRO for India was 559 NCMs per hundred thousand migrants. It was low. Among the states Assam, 5314 NCMs per hundred thousand migrants, had the highest NCMRO. Goa (1693) had a high NCMRO. The states of Meghalaya (1333) and Arunachal Pradesh (1253)

had a moderately high NCMRO. It was lowest in Kerala, just 105 NCMs per hundred thousand migrants. The male NCMRO of India for duration of residence 5 to 9 years is 1156 male NCMs per hundred thousand male migrants. Assam (10213) had the highest male NCMRO. It was high in Goa (1960), West Bengal (1925), Bihar (1733), Orissa (1880), Arunachal Pradesh (1792) and Meghalaya (1504). The lowest male NCMRO was recorded in Kerala (123). For duration of residence 5 to 9 years, the female NCMRO was 296 female NCMs per hundred thousand female migrants. Assam (2970) had the highest female NCMRO among 25 states. It was also high in Goa (1495) and Meghalaya (1112). The female NCMRO was lowest in Kerala (95). (see Map No. M.2, Table A.13)

In case of RNCMRO for duration of residence 5 to 9 years, Assam, 5811 RNCMs per hundred thousand rural migrants, had the highest, followed by Goa (3437) and Meghalaya (1576). On the other hand, Delhi (111) and Kerala (111) had the lowest RNCMRO. For India (631), unlike NCMRO, the RNCMRO was moderately low. The male RNCMRO of India was 1467 male RNCMs per hundred thousand male rural migrants. Assam (11572) had the highest male RNCMRO. It was also high in Goa (4461). The lowest male RNCMRO was in Delhi (103). In India, female RNCMRO for the duration of residence 5 to 9 years was 350 female RNCMs per hundred thousand female rural migrants. It was also high in Goa (2800), Meghalaya (1322) and Nagaland (1140). Kerala (95) had the lowest female RNCMRO. (See Map No. M.5, Table A.14)

The UNCMRO of India for durations of residence 5 to 9 years was 266 UNCMs per hundred thousand urban migrants. Assam (764) had the highest NCMRO during the period, followed by Nagaland (620) and Punjab (581). Among the rest of the states Orissa (442), Andhra Pradesh (370), Meghalaya (341), Karnataka (334), Tamil Nadu (332) and Tripura (316) had moderately high NCMRO. The UNCMRO was lowest in Kerala, 90 UNCMs per hundred thousand urban migrants. The male UNCMRO of India for duration of residence 5 to 9 years was 352 male UNCMs per hundred thousand male urban migrants. Assam (1107) had the highest male UNCMRO. It was lowest in Mizoram, only 42 male UNCMs per hundred thousand male urban migrants. The female

UNCMRO of India for duration of residence 5 to 9 years was 210 female UNCMs per hundred thousand female urban migrants. (See Map No. M.8, Table A.15)

Duration of Residence Less than 5 years:

The NCMRO of India for duration of residence less than 5 years was 502 NCMs per hundred thousand migrants. It was moderately low. Assam (4961) had the highest NCMRO. Conversely, Kerala (95) had the lowest NCMRO. The NCMRO was high in Meghalaya (1398) and moderately high in Arunachal Pradesh (818) and West Bengal (801). The male NCMRO of India for duration of residence less than 5 years was 806 male NCMs per hundred thousand male migrants. Assam (7263) had the highest male NCMRO among the 25 states. It was also high in Meghalaya (1540), West Bengal (1484) and Bihar (1135). The lowest male NCMRO was of Kerala (116). The female NCMRO of India for duration of residence less than 5 years was 327 female NCMs per hundred thousand female migrants. Assam (3201) had the highest female NCMRO. It was lowest in Kerala (82). (see Map no. M.3, Table A.16)

India, 591 RNCMs per hundred thousand rural migrants, had a moderately low RNCMRO. Among the states Assam (5578) had the highest RNCMRO. It was high in Meghalaya (1766) and moderately high in Arunachal Pradesh (958) and West Bengal (923). The RNCMRO was lowest in Kerala, only 100 RNCMs per hundred thousand rural migrants. The male RNCMRO of India was 1032 male rural NCMs per hundred thousand male rural migrants. Assam (8414) had the highest male RNCMRO. It was also high in Meghalaya (1943), West Bengal (1888) and Bihar (1590). Delhi (114) had the lowest male RNCMRO. The female RNCMRO of India was 366 female RNCMs per hundred thousand female rural migrants. Among the 25 states it was highest in Assam (3517). Meghalaya (1538) also had a high female RNCMRO. It was lowest in Kerala (88). (See Map No. M.6, Table A.17)

The UNCMRO, like the NCMRO and RNCMRO, was moderately low in case of India, 204 UNCMs per hundred thousand urban migrants. As before

Kerala had the lowest UNCMRO, only 83 NCMs per hundred thousand migrants. On the other hand, UNCMRO was highest in Assam, 479 UNCMs per hundred thousand urban migrants. It was also high in Andhra Pradesh (309), Karnataka (284), Haryana (282) and Nagaland (277). The UNCMRO was moderately high in Tamil Nadu (257), Punjab (233), Mizoram (222), Arunachal Pradesh (214) and Sikkim (213). The male UNCMRO of India for duration of residence less than 5 years was 244 male UNCMs per hundred thousand male urban migrants. Assam (543) had the highest male UNCMRO among the states. It was lowest in Tripura (100). The female UNCMRO of India for duration of residence less than 5 years was 170 female UNCMs per hundred thousand female urban migrants. Assam (410) had the highest female UNCMRO. It was also high in Nagaland (373) and Mizoram (352). Manipur (52) had the lowest female UNCMRO. (See Map No. M.9, Table A.18)

4.3.1.d Sex Differentials in Natural Calamity Migration:

All Durations of Residence:

The NCM sex ratio (NCMSR) in India, for all durations of residence, was 591 female NCMs per thousand male NCMs. Among the states the NCMSR was female biased only in Kerala, 1316 females per thousand males. The NCMSR though male biased but was high in Gujarat (990), Goa (989), Mizoram (961) and Haryana (921). In Arunachal Pradesh the NCMSR was only 334 female NCMs per thousand male NCMs, lowest in India. It was also low in Karnataka (518), West Bengal (512) and Assam (422). (See Map No. M.10, Table A.19)

The sex ratio of the RNCMs (RNCMSR) in India for all durations of residence was 573 female RNCMs per thousand male RNCMs. The RNCMSR was female biased in Kerala (1457) and Goa (1014). It was lowest in Arunachal Pradesh (329). In Gujarat (930) and Mizoram (859) although the RNCMSR was comparatively high yet it was male biased. (See Map No. M.13, Table A.19)

The sex ratio of the NCMs from urban (UNCMRSR) India was 802 female UNCMs per thousand male UNCMs. Mizoram (2231), Gujarat (1309),

Haryana (1218) and Uttar Pradesh (1012) had a female biased UNCMSR. It was low in Arunachal Pradesh (426) and Himachal Pradesh (544) and in Kerala (952), Nagaland (930), Manipur (900), Bihar (885), Goa (881), Rajasthan (881) and Andhra Pradesh (861) it was high but male biased. (See Map No. M.16, Table A.19)

Duration of Residence 5 to 9 years:

The NCMSR in India for duration of residence 5 to 9 years was 658 female NCMs per thousand male NCMs. Six states, namely Kerala (1433), Himachal Pradesh (1072), Sikkim (1043), Goa (1034), Manipur (1032) and Maharashtra (1011) had a female biased NCMSR. In Gujarat (996), Tamil Nadu (883), Andhra Pradesh (873) and Mizoram it was high, though male biased. Haryana had a NCMSR of 1000 females per thousand males. The lowest NCMSR was recorded in Arunachal Pradesh, 356 females per thousand males. It was also low in Assam (519). (See Map No. M.20)

For the duration of residence 5 to 9 years, the RNCMSR for India was 710 female RNCMs per hundred thousand male RNCMs. In six states, Kerala (1383), Himachal Pradesh (1201), Sikkim (1071), Haryana (1038) and Goa (1008), the RNCMSR was female biased. It was high but male biased in Gujarat (942), Delhi (920), Punjab (900) and Andhra Pradesh (853). Both Maharashtra and Manipur had 1000 female RNCMs for every thousand male RNCMs. The RNCMSR was low in Arunachal Pradesh (356) and Assam (350). (See Map No. M.14, Table A.20)

The UNCMSR of India for duration of residence 5 to 9 years was 922 female UNCMs per thousand male UNCMs. Mizoram (4000), Manipur (2000), Kerala (1615), Goa (1526), Gujarat (1343), Rajasthan (1280), Maharashtra (1058), Bihar (1048), Andhra Pradesh (1043), Uttar Pradesh (1015) and Tamil Nadu (1009), had a female biased UNCM sex ratio. Although it was high in Tripura (958), Haryana (926), Delhi (907), Orissa (900) and Madhya Pradesh (868) yet in these states the UNCMSR was male biased as in the rest of the states.

Arunachal Pradesh (333), Meghalaya (500) and Assam (524) had a low UNCMSR. (See Map No. M.17, Table A.20)

Duration of Residence Less Than 5 years:

The NCMSR in India for duration of residence less than 5 years 705 female NCMs per thousand male NCMs. It was low. Haryana (1107), Kerala (1100), Mizoram (1097), Tripura (1070) and Gujarat (1049) had a female biased NCMSR. In Himachal Pradesh (917) although it was male biased still it was high. Arunachal Pradesh, 428 female NCMs per thousand male NCMs, had the lowest NCMSR. The NCMSR in Nagaland (528) was also low. (See Map No. M.12, Table A.21)

For the duration of residence less than 5 years, the RNCMSR for India was 693 female RNCMs per thousand male RNCMs. Kerala (1295), Himachal Pradesh (1036), Gujarat (1026) and Tripura (1023) had a female biased RNCMSR. In Haryana (1000) the sex ratio was unbiased. It was low in Arunachal Pradesh (425) and Nagaland (446). (See Map No. M.15, Table A.21)

The UNCMSR in India among UNCMs with duration of residence less than 5 years was 838 female UNCMs per thousand male UNCMs. In 6 states, Tripura (1917), Mizoram (1857), Haryana (1394), Sikkim (1250), Gujarat (1160) and Nagaland (1133) the UNCMSR was female biased. It was unbiased in Bihar (1000). In Uttar Pradesh (932), West Bengal (930), Madhya Pradesh (896) and Maharashtra (881), although the UNCMSR was high, it was male biased. Low UNCMSR was recorded in Manipur (200), Arunachal Pradesh (455), Himachal Pradesh (526) and Goa (543). (See Map No. M.18, Table A.21)

Table 4.9 Natural Calamity Migrant Sex Ratio by Duration of Residence, India, 1991

Durations Of Residence	Natural Calamity Migrant Sex Ratio (Females Per Hundred Thousand Males)		
	Total	Rural	Urban
5 to 9 Years	658	710	922
Less Than 5 Years	705	693	838

Source : Calculated from ORGCC, 1991

In the 9 years prior to the Census of 1991, the total NCMSR has increased from 658 female NCMs per thousand male NCMs among those with duration of residence 5 to 9 years to 705 female NCMs per thousand male NCMs among the NCMs in the 5 years prior to the census. However, both the RNCMSR and the UNCMSR has declined through the same period. Thus, although the NCM sex ratio is still male biased, the participation of women has steadily increased in the context of all NCMs but has declined in both the rural and urban streams.

Table 4.10 Comparison between All Migrants Sex Ratio and Natural Calamity Migrant Sex Ratio, India, 1991

Durations Of Residence	Category	Sex Ratio (Females Per Hundred Thousand Males)		
		Total	Rural	Urban
All Durations	All Migrants	2707	3150	1488
	Natural Calamity Migrants	591	573	802
5 to 9 Years	All Migrants	2571	2974	1541
	Natural Calamity Migrants	658	710	922
Less Than 5 Years	All Migrants	1739	1956	1201
	Natural Calamity Migrants	705	693	838

Source: Calculated from ORGCC, 1991

The sex ratio for all migrants was 2707 females per thousand males, that is it is female biased but for NCMs it was 591 female NCMs per thousand male NCMs, making it male biased. This clearly shows that migration in wake of natural calamities is a male dominated process. Also, while the rural sex ratio for all migrants is higher than urban sex ratio, in case of NCMs, although both UNCMSR and RNCMSR are male biased, yet the former was higher than the latter. Thus, mobility among women due to natural calamities were higher in urban areas than rural areas. Same pattern was observed among the migrants with duration of residence 5 to 9 years and less than 5 years.

4.3.2 Intra – State Natural Calamity Migration in India:

4.3.2.a Regional Differentials in Intra – State Natural Calamity Migration:

All Durations of Residence:

According to the Census of India of 1991, for all durations of residence, there were approximately 1 million intra – state NCMs in India, that constitutes 89.6 percent of all NCMs in India. Among the states Assam (27.2 percent), West Bengal (10.0 percent), Andhra Pradesh (9.3 percent), Maharashtra (7.8 percent) and Madhya Pradesh (7.4 percent) together accounted for 61.7 percent of intra – state NCMs in India. The percentage of intra – state NCMs was less than 1 percent in 12 states. The percentage of male and female intra - state NCM was 62.9 percent and 37.1 percent respectively. The states of Assam (30.9 percent), West Bengal (10.5 percent), Andhra Pradesh (8.3 percent), Madhya Pradesh (7.6 percent) and Karnataka (7.2 percent) together contributed 64.5 percent of all male intra – state NCMs. The percentage of male intra – state NCMs was less than 1 percent in 12 states. In case of female NCMs, the states of Assam (21.8 percent), Andhra Pradesh (11.1 percent), Maharashtra (9.2 percent), West Bengal (9.1 percent) and Uttar Pradesh (7.8 percent) together accounted for 58.9 percent of all female intra – state NCMs. The percentage of female intra – state NCMs was less than 1 percent in 12 states (see Table A.22)

Duration of Residence 5 to 9 Years:

The states of Assam (25.7 percent), Andhra Pradesh (11.1 percent), West Bengal (10.2 percent), Maharashtra (7.4 percent) and Madhya Pradesh (6.8 percent) together contributed 61.0 percent of all intra – state NCMs. The percentage of intra – state NCMs was less than 1 percent in 12 states. The male and female intra – state NCMs comprised 57.8 percent and 42.2 percent of all intra – state NCMs respectively. The states of Assam (29.2 percent), West Bengal (10.5 percent), Andhra Pradesh (10.2 percent), Madhya Pradesh (6.8 percent) and Maharashtra (6.3 percent) together accounted for 63.1 percent of all male intra – state NCMs. The percentage of male intra – state NCMs was less than 1 percent

in 13 states. In case of female intra – state NCMs, Assam (20.7 percent), Andhra Pradesh (12.3 percent), West Bengal (9.7 percent), Maharashtra (8.9 percent) and Uttar Pradesh (7.6 percent) together contributed 59.2 percent of all female intra – state NCMs. The percentage of female intra – state NCMs was less than 1 percent in 11 states (see Table A.25).

Duration of Residence Less Than 5 Years:

For durations of residence less than 5 years Assam (26.9 percent), Andhra Pradesh (11.6 percent), West Bengal (9.8 percent), Maharashtra (7.9 percent) and Karnataka (7.2 percent) together accounted for 63.4 percent of all intra – state NCMs in India. The percentage of intra – state NCMs was less than 1 percent in 12 states. The male intra – state NCMs comprised 58.7 percent of intra – state NCMs, of which the states of Assam (29.1 percent), Andhra Pradesh (11.0 percent), West Bengal (9.8 percent), Karnataka (7.5 percent) and Maharashtra (7.2 percent) together accounted for 64.5 percent. The percentage of male intra – state NCMs was less than 1 percent in 12 states. The female intra – state NCMs were 41.3 percent of all intra – state NCMs. The states of Assam (23.7 percent), Andhra Pradesh (12.6 percent), West Bengal (9.9 percent), Maharashtra (8.8 percent) and Uttar Pradesh (7.0 percent) constituted 62.0 percent. The percentage of female intra – state NCMs was less than 1 percent in 12 states. (see Table A.26)

The intra – state NCMs increased by 18.1 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male intra – state NCMs and female intra – state NCMs increased by 19.8 percent and 15.7 percent respectively.

4.3.2.b Rural – Urban Differentials in Intra – State Natural Calamity Migration:

All Durations of Residence:

The intra – state RNCMs constituted 93.1 percent of the intra – state NCMs in India, of which 63.5 percent were male and 36.5 percent were female. The states of Assam (28.8 percent), West Bengal (10.3 percent), Andhra Pradesh

(8.9 percent), Madhya Pradesh (7.5 percent) and Maharashtra (7.4 percent) together accounted for 63.0 percent of all intra – state RNCMs. The percentage of intra – state RNCMs was less than 1 percent in 12 states. The pattern for male intra – state RNCMs was same as that for all intra – state RNCMs. In case of female intra – state RNCMs, the states of Assam (23.3 percent), Andhra Pradesh (10.7 percent), West Bengal (9.4 percent), Maharashtra (8.8 percent) and Uttar Pradesh (7.9 percent) together accounted for 60.1 percent of all female intra – state RNCMs. The percentage of female intra – state RNCMs was less than 1 percent in 12 states. (see Table A.23)

The percentage of intra – state UNCM to intra – state NCMs was 6.9 percent, of which male and female UNCMs comprised 54.1 percent and 45.9 percent respectively. The states of Tamil Nadu (16.7 percent), Andhra Pradesh (14.7 percent), Maharashtra (13.7 percent), Karnataka (11.5 percent) and Uttar Pradesh (6.3 percent) together contributed 62.9 percent of all intra – state UNCMs in India. The percentage of intra – state UNCMs was less than 1 percent in 11 states. The male and female intra – state UNCMs comprised 54.1 percent and 45.9 percent of all intra – state UNCMs. The states of Tamil Nadu (16.8 percent), Andhra Pradesh (14.5 percent), Maharashtra (13.5 percent), Karnataka (12.8 percent) and West Bengal (6.4 percent) together accounted for 64.0 percent of all male intra – state UNCMs. The percentage of male intra – state UNCMs was less than 1 percent in 11 states. The pattern for intra – state female UNCMs was same as that of all UNCMs. (see Table A.24)

Duration of Residence 5 to 9 Years:

The intra – state RNCMs constituted 92.5 percent of the intra – state NCMs in India, of which 58.5 percent were male and 41.6 percent were female. The states of Assam (27.3 percent), Andhra Pradesh (10.7 percent), West Bengal (10.7 percent), Maharashtra (6.7 percent) and Madhya Pradesh (6.8 percent) together accounted for 62.4 percent of all intra – state RNCMs. The percentage of intra – state RNCMs was less than 1 percent in 13 states. The states of Assam (30.8 percent), West Bengal (11.0 percent), Andhra Pradesh (9.9 percent), Madhya Pradesh (6.9 percent) and Bihar (6.1 percent) together accounted for

64.6 percent of all male intra – state RNCMs. The percentage of male intra – state RNCMs was less than 1 percent in 13 states. In case of female intra – state RNCMs, the states of Assam (22.4 percent), Andhra Pradesh (11.9 percent), West Bengal (10.3 percent), Maharashtra (8.4 percent) and Uttar Pradesh (7.6 percent) together accounted for 60.7 percent of all female intra – state RNCMs. The percentage of female intra – state RNCMs was less than 1 percent in 11 states. (see Table A.26)

The intra – state UNCM comprised 7.5 percent of the intra – state NCMs, of which male and female UNCMs comprised 50.1 percent and 49.9 percent respectively. The states of Tamil Nadu (16.8 percent), Andhra Pradesh (15.6 percent), Maharashtra (14.3 percent), Karnataka (10.3 percent) and Uttar Pradesh (7.3 percent) together contributed 64.2 percent of all intra – state UNCMs in India. The percentage of intra – state UNCMs was less than 1 percent in 10 states. The pattern for male and female intra – state UNCMs was same as that of all intra – state UNCMs. (see Table A.27)

Duration of Residence Less Than 5 Years:

The intra – state RNCMs constituted 92.5 percent of the intra – state NCMs in India, of which 59.1 percent were male and 40.9 percent were female. The states of Assam (28.7 percent), Andhra Pradesh (11.1 percent), West Bengal (10.2 percent), Maharashtra (7.4 percent) and Karnataka (6.8 percent) together accounted for 64.2 percent of all intra – state RNCMs. The percentage of intra – state RNCMs was less than 1 percent in 12 states. The states of Assam (30.9 percent), Andhra Pradesh (10.5 percent), West Bengal (10.1 percent), Karnataka (7.0 percent) and Bihar (6.9 percent) together accounted for 65.3 percent of all male intra – state RNCMs. The percentage of male intra – state RNCMs was less than 1 percent in 12 states. In case of female intra – state RNCMs, the states of Assam (25.6 percent), Andhra Pradesh (12.1 percent), West Bengal (10.4 percent), Maharashtra (8.2 percent) and Uttar Pradesh (7.0 percent) together accounted for 63.4 percent of all female intra – state RNCMs. The percentage of female intra – state RNCMs was less than 1 percent in 12 states. (see Table A.29)

The intra – state UNCMs comprised 7.5 percent of the intra – state NCMs. The pattern among UNCMs slightly differed with Andhra Pradesh (18.1 percent), Tamil Nadu (15.7 percent), Maharashtra (14.1 percent), Karnataka (12.8 percent) and Uttar Pradesh (6.1 percent) contributed 66.85 percent of the intra – state UNCMs in India. The percentage of intra – state UNCMs was less than 1 percent in 11 states. The male and female intra – state UNCMs comprised 53.0 percent and 47.0 percent respectively. The pattern for male intra – state UNCMs was same as that of all intra – state UNCMs. On the other hand, the states of Andhra Pradesh (18.0 percent), Tamil Nadu (14.9 percent), Maharashtra (14.8 percent), Karnataka (12.1 percent) and Gujarat (7.0 percent) accounted for 66.7 percent of female intra – state UNCMs. The percentage of female intra – state UNCMs was less than 1 percent in 10 states. (see Table A.30)

The RNCMs increased by 18.1 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male RNCMs and female RNCMs increased by 19.5 percent and 16.1 percent respectively. On the other hand, the UNCMs increased by 18.7 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male UNCMs and female UNCMs increased by 25.6 percent and 11.8 percent respectively.

4.3.2.c Natural Calamity Migration Ratio among Intra – State Natural Calamity Migrants:

All Durations of Residence:

The NCMRO of India for the intra – state NCMs was 503 intra – state NCMs per hundred thousand intra – state migrants. Among the states, Assam (5845) had the highest NCMRO. It was also high in Arunachal Pradesh (1490). The NCMRO of the intra – state NCMs in Kerala (68) was the lowest among the states. The male NCMRO of India for the intra – state NCMs was 1280 male intra – state NCMs per hundred thousand male intra – state migrants. Assam (11536) had the highest male NCMRO. It was also high in Arunachal Pradesh (2358) and West Bengal (2260). Among the states, Kerala (78) had the lowest male NCMRO. The female NCMRO of India for the intra – state NCMs was 248

female intra – state NCMs per hundred thousand female intra – state migrants. It was highest in Assam (2693). On the other hand, the female NCMRO in Kerala (64), Haryana (85) and Rajasthan (91) was below 100 female intra – state NCMs per hundred thousand female intra – state migrants. (See Map No. M.28, Table A.31)

The RNCMRO of India for the intra – state RNCMs was 550 intra – state RNCMs per hundred thousand rural intra – state migrants. Assam (6277) had the highest RNCMRO among the states. It was lowest in Kerala (72). The male RNCMRO of India for the intra – state RNCMs was 1567 male intra – state RNCMs per hundred thousand male intra – state rural migrants. Once again it was highest in Assam, 12724 male intra – state RNCMs per hundred thousand male intra – state rural migrants. It was also high in Arunachal Pradesh (2739), West Bengal (2715) and Orissa (2478). Among the states Kerala (83) had the lowest male RNCMRO. The female RNCMRO of India for the intra – state migrants was 258 female intra – state RNCMs per hundred thousand female intra – state rural migrants. Kerala (2838) had the highest female RNCMRO among the states. It was also high in Nagaland (773) and Arunachal Pradesh (759). The lowest female RNCMRO was in Kerala (67). (See Map No. M.31, Table A.32)

The UNCMRO of India for the intra – state UNCMs was 233 intra – state UNCMs per hundred thousand intra – state urban migrants. The male UNCMRO of India was 331 male intra – state UNCMs per hundred thousand male intra – state urban migrants. The female UNCMRO of India was 173 female intra – state UNCMs per hundred thousand female intra – state urban migrants. In all the three cases Assam had the highest UNCMRO and on the other hand, Kerala and Rajasthan had a UNCMRO below 100 female intra – state UNCMs per hundred thousand female intra – state urban migrants. (See Map No. M.34, Table A.33)

Duration of Residence 5 to 9 Years:

The NCMRO of India for the intra – state NCMs was 578 intra – state NCMs per hundred thousand intra – state migrants. Among the states Assam (5687) had the highest NCMRO. It was also high in Goa (2315). The NCMRO was lowest in Kerala (94). The male NCMRO of India was 1299 male intra –

state NCMs per hundred thousand male intra – state migrants. Apart from Assam (11481), which had the highest male NCMRO, it was also high in Goa (2962) and West Bengal (2291). It was lowest in Kerala (107). The female NCMRO of India was 329 female intra – state NCMs per hundred thousand female intra – state migrants. Same as the overall pattern Assam (2881) had the highest female NCMRO. It was high in Goa (1894) and Nagaland (1129) too. On the contrary, in Kerala (88) and Rajasthan (94) it was less than 100 female intra – state NCMs per hundred thousand female intra – state migrants. (See Map No. M.29, Table A.34)

The RNCMRO of India for the intra – state NCMs was 645 intra – state RNCMs per hundred thousand intra – state rural migrants. Assam (6116) had the highest RNCMRO and Kerala (102) had the lowest RNCMRO. The male RNCMRO of India was 1622 male intra – state RNCMs per hundred thousand male intra – state rural migrants. The pattern of male RNCMRO was same as the overall RNCMRO pattern. The female RNCMRO of India was 350 female intra – state RNCMs per hundred thousand female intra – state rural migrants. For the female RNCMs, although Assam (3054) once again had the highest female RNCMRO but instead of Kerala (90), the lowest female RNCMRO was of Haryana (80). (See Map No. M.32, Table A.35)

The UNCMRO of India for the intra – state NCMs was 252 intra – state UNCMS per hundred thousand intra – state urban migrants. Once more Assam (818) had the highest UNCMRO and Kerala (72) had the lowest UNCMRO. It was also high in Orissa (410), Delhi (391), Meghalaya (391), Nagaland (371), Andhra Pradesh (370) and Tamil Nadu (360). The male UNCMRO of India was 335 male intra – state UNCMS per hundred thousand male intra – state urban migrants. The female UNCMRO of India was 202 intra – state UNCMS per hundred thousand female intra – state urban migrants. (See Map No. M.35, Table A.36)

Duration of Residence Less Than 5 Years:

The NCMRO of India for the intra – state NCMs was 522 intra – state NCMs per hundred thousand intra – state migrants. Among the states Assam (5403) had the highest NCMRO. It was also high in West Bengal (868). The lowest NCMRO was of Kerala (65). The male NCMRO of India was 890 male intra – state NCMs per hundred thousand male intra – state migrants. Among the states Assam (8232) had the highest male NCMRO. It was high in West Bengal (1776) and Bihar (1444). The lowest male NCMRO was of Kerala (72). The female NCMRO of India was 329 female intra – state NCMs per hundred thousand female intra – state migrants. In Kerala it was 3381 female intra – state NCMs per hundred thousand female intra – state migrants, the highest in India. It was high in Meghalaya (649) too. Kerala (60) had the lowest female NCMRO. (See Map No. M.30, Table A.37)

The RNCMRO of India for the intra – state RNCMs was 604 intra – state RNCMs per hundred thousand intra – state rural migrants. Among the states the highest RNCMRO was of Assam (5942) and Kerala (71) had the lowest RNCMRO. It was high in West Bengal (985), Arunachal Pradesh (786) and Meghalaya (761). The male RNCMRO of India was 1114 male intra – state RNCMs per hundred thousand male intra – state rural migrants. Besides Assam (9289) which had the highest male RNCMRO, it was also high in West Bengal (2184) and Bihar (1675). Once again it was lowest in Kerala (78). The female RNCMRO of India was 363 female intra – state rural NCMs per hundred thousand female intra – state rural migrants. It was highest in Assam (3651). The female RNCMRO was high in Meghalaya (722). It was lowest in Kerala (67). (See Map No. M.33, Table A.38)

The UNCMRO of India for the intra – state UNCMs was 196 intra – state UNCMs per hundred thousand intra – state urban migrants. Among the states the UNCMRO was highest in Assam (584). It was also high in Andhra Pradesh (320) and Meghalaya (32). The UNCMRO was less than 100 UNCMs per hundred thousand urban migrants in Manipur (32), Kerala (48), Rajasthan (76) and Goa (89). The male UNCMRO of India was 236 male intra – state UNCMs per hundred thousand male intra – state urban migrants. Apart from

Assam (677) which had the highest male UNCMRO, it was also high in Andhra (370), Meghalaya (348), Tamil Nadu (338) and Karnataka (319). On the other hand the male UNCMRO was zero in Manipur. It was below 100 male intra – state UNCMs per hundred thousand male intra – state urban migrants in Nagaland (52), Kerala (59), Rajasthan (82) and Haryana (71). The female UNCMRO of India was 165 female intra – state UNCMs per hundred thousand female intra – state urban migrants. Besides Assam (486), which was the highest, it was high in Mizoram (408). It was below 100 female intra – state UNCMs per hundred thousand female intra – state urban migrants in Kerala (40), Manipur (59), Goa (62) and Rajasthan (71). (See Map No. M.36, Table A.39)

4.3.2.d Sex Differentials among the Intra – state Natural Calamity Migrants:

All Durations of Residence:

The NCMSR of India for the intra – state NCMs was 590 female NCMs per thousand male NCMs. Among the states it was female biased in Kerala (1163), Haryana (1600), Manipur (1106) and Mizoram (1005). The NCMSR was male biased but high in Goa (989) and Gujarat (983). The state of Arunachal Pradesh (349) had the lowest NCMSR. The RNCMSR of India was 574 female RNCMs per thousand male RNCMs. However, the states of Kerala (1660), Haryana (1103) and Manipur (1078) had a female biased RNCMSR. It was male biased but high in Goa (992). The lowest RNCMSR was in Arunachal Pradesh (347).

The UNCMSR of India 847 female UNCMs per thousand male UNCMs was higher than the RNCMSR. In eight states, namely Mizoram (2333), Haryana (1591), Manipur (1500), Gujarat (1366), Kerala (1341), Nagaland (1240), Uttar Pradesh (1132) and Rajasthan (1061) it was female biased. In Goa (953) the UNCMSR was female biased but high. It was lowest in Arunachal Pradesh (435).

Table 4.11 Natural Calamity Migrant Sex Ratio, Intra – State, All Durations of Residence, India, 1991

Last Place of Residence	Intra – State Natural Calamity Migrant Sex Ratio (Females Per Thousand Males)		
	Total	Rural	Urban
Andhra Pradesh	789	779	872
Arunachal Pradesh	349	347	435
Assam	421	418	606
Bihar	698	697	796
Delhi	525	508	529
Goa	989	992	953
Gujarat	983	921	1366
Haryana	1163	1103	1519
Himachal Pradesh	731	748	537
Karnataka	526	511	658
Kerala	1600	1660	1341
Madhya Pradesh	553	537	869
Maharashtra	769	756	866
Manipur	1106	1078	1500
Meghalaya	769	760	800
Mizoram	1005	895	2333
Nagaland	781	736	1240
Orissa	589	583	780
Punjab	650	629	752
Rajasthan	614	588	1061
Sikkim	660	648	750
Tamil Nadu	710	680	836
Tripura	668	647	929
Uttar Pradesh	814	797	1132
West Bengal	508	501	722
India	590	574	847

Source: Calculated from ORGCC, 1991

Duration of Residence 5 to 9 Years:

The NCMSR of India for the intra – state NCMs was 730 female NCMs per thousand male NCMs. Among the states it was female biased in Kerala (1583), Haryana (1464), Himachal Pradesh (1293), Mizoram (1107), Punjab (1049), Manipur (1036) and Maharashtra (1027). In Gujarat and Sikkim the NCMSR was 1000 females per thousand males. Goa (984) and Delhi (964) had a male biased but high NCMSR. It was lowest in Arunachal Pradesh, only 368 female NCMs per thousand male NCMs. The RNCMSR of India was 712 female RNCMs per thousand male RNCMs. In Kerala (1500), Himachal Pradesh (1442),

Haryana (1250), Maharashtra (1035) and Sikkim (1025) it was female biased. The RNCMSR of Mizoram (1000) and Manipur (1000) was unbiased. In Goa (966), Gujarat (958) and Punjab (958) the RNCMSR was male biased but high. Once again Arunachal Pradesh (369) had the lowest RNCMSR. The UNCMSR of India was 997 female UNCMs per thousand male UNCMs. It was high. Among the states, 15 of the 25 states had a female biased UNCMSR. In Maharashtra (968) it was male biased but high. The UNCMSR of Arunachal Pradesh, only 200 female UNCMs per thousand male UNCMs, was the lowest.

Table 4.12 Natural Calamity Migrant Sex Ratio, Intra – State, Duration of Residence 5 to 9 years, India, 1991

Last Place of Residence	Intra – State Natural Calamity Migrant Sex Ratio (Females Per Thousand Males)		
	Total	Rural	Urban
Andhra Pradesh	881	860	1082
Arunachal Pradesh	368	369	200
Assam	518	518	576
Bihar	761	757	1133
Delhi	964	600	1044
Goa	984	966	1500
Gujarat	1000	958	1310
Haryana	1464	1250	2750
Himachal Pradesh	1293	1442	500
Karnataka	666	649	740
Kerala	1583	1500	2000
Madhya Pradesh	707	698	857
Maharashtra	1027	1035	968
Manipur	1036	1000	2000
Meghalaya	486	480	556
Mizoram	1107	1000	4000
Nagaland	916	898	1143
Orissa	739	741	750
Punjab	1049	958	1500
Rajasthan	729	689	1200
Sikkim	1000	1025	800
Tamil Nadu	874	832	1009
Tripura	780	739	1059
Uttar Pradesh	926	914	1043
West Bengal	671	667	917
India	730	712	997

Source : Calculated from ORGCC, 1991

Duration of Residence Less Than 5 Years:

The NCMSR of India for the intra – state NCMS was 705 female NCMS per thousand male NCMS. It was female biased in Haryana (1676), Kerala (1380), Mizoram (1192), Himachal Pradesh (1117), Tripura (1055), Gujarat (1039) and Goa (1031). The NCMSR in Manipur was 1000 female NCMS per thousand male NCMS. It was lowest in Arunachal Pradesh (491).

Table 4.13 Natural Calamity Migrant Sex Ratio, Intra – State, Duration of Residence Less Than 5 Years, India, 1991

Last Place of Residence	Intra – State Natural Calamity Migrant Sex Ratio (Females Per Thousand Males)		
	Total	Rural	Urban
Andhra Pradesh	806	796	873
Arunachal Pradesh	491	482	667
Assam	575	574	686
Bihar	655	654	857
Delhi	500	409	532
Goa	1031	1342	577
Gujarat	1039	1011	1159
Haryana	1676	1559	3000
Himachal Pradesh	1117	1252	553
Karnataka	649	628	793
Kerala	1380	1568	846
Madhya Pradesh	688	667	1000
Maharashtra	857	840	973
Manipur	1000	950	0
Meghalaya	719	716	667
Mizoram	1192	800	2167
Nagaland	745	679	2500
Orissa	744	748	631
Punjab	639	599	1000
Rajasthan	552	522	1250
Sikkim	689	711	571
Tamil Nadu	803	801	807
Tripura	1055	1029	1545
Uttar Pradesh	859	859	863
West Bengal	714	710	971
India	705	692	887

Source : Calculated from ORGCC, 1991

The RNCMSR of India was 692 female RNCMs per thousand male RNCMs. In 6 states, namely Kerala (1568), Haryana (1559), Himachal Pradesh (1552), Goa (1342), Tripura (1029) and Gujarat (1011) it was female biased. It was lowest in Delhi, only 409 female RNCMs per thousand male NCMs. As in the preceding durations, the UNCMSR of India was higher than the RNCMSR. The UNCMSR of India was 887 female UNCMs per thousand male UNCMs. It was female biased in Haryana (3000), Nagaland (2500), Mizoram (2167), Tripura (1545), Rajasthan (1250) and Gujarat (1159). In Punjab (1000) and Madhya Pradesh (1000) the UNCMSR was unbiased. In Maharashtra (973) it was male biased but high. The UNCMSR in Manipur was 0 because there were only female UNCMs but no male UNCMs.

Table 4.14 Comparison between Natural Calamity Migrant Sex Ratio by Durations of Residence, Intra – State, India, 1991

Durations Of Residence	Natural Calamity Migrant Sex Ratio (Females Per Hundred Thousand Males)		
	Total	Rural	Urban
5 to 9 Years	730	712	997
Less Than 5 Years	705	692	887

Source : Calculated from ORGCC, 1991

In the 9 years prior to the Census of India of 1991 the NCMSR had declined from 730 female NCMs per thousand male NCMs among NCMs with duration of residence 5 to 9 years to 705 female NCMs per thousand male NCMs among those with duration of residence less than 5 years. In a similar manner the RNCMSR had declined from 712 female RNCMs per thousand male RNCMs to 692 female RNCMs per thousand male RNCMs. The UNCMSR had also decreased from 997 female UNCMs per thousand male UNCMs to 887 female UNCMs per thousand male UNCMs.

4.3.3 Inter-State Natural Calamity Migration in India:

4.3.3.a Regional Differentials among Inter – State Natural Calamity Migrants:

All Durations of Residence:

According to the Census of India of 1991, for all durations of residence, there were approximately 115 thousand inter – state NCMs in India, that constituted 10.3 percent of all NCMs in India. Among the states Karnataka (15.2 percent), Maharashtra (12.7 percent), Uttar Pradesh (12.5 percent), West Bengal (9.0 percent) and Madhya Pradesh (8.5 percent) together accounted for 57.8 percent of inter – state NCMs in India. The percentage of inter – state NCMs was less than 1 percent in 7 states. The percentage of male and female inter – state NCMs was 62.6 percent and 37.4 percent respectively. The states of Karnataka (16.3 percent), Uttar Pradesh (12.5 percent), Maharashtra (12.0 percent), West Bengal (9.3 percent) and Madhya Pradesh (8.6 percent) together accounted for 58.8 percent of all male inter – state NCMs. The percentage of male inter – state NCMs was less than 1 percent in 7 states. In case of female inter – state NCMs, the states of Maharashtra (13.9 percent), Karnataka (12.5 percent), Uttar Pradesh (13.3 percent), West Bengal (8.4 percent) and Madhya Pradesh (8.2 percent) together accounted for 56.3 percent of all female inter – state NCMs. The percentage of female inter – state NCMs was less than 1 percent in 8 states. (see Table A.40)

Duration of Residence 5 to 9 Years:

Among the states Uttar Pradesh (16.1 percent), Maharashtra (12.3 percent), Karnataka (11.0 percent), Punjab (9.0 percent) and West Bengal (9.0 percent) together accounted for 56.6 percent of inter – state NCMs in India. The percentage of inter – state NCMs was less than 1 percent in 7 states. The percentage of male and female inter – state NCMs was 58.7 percent and 41.3 percent respectively. The states of Uttar Pradesh (17.3 percent), Karnataka (12.9 percent), Maharashtra (10.9 percent), Punjab (9.4 percent) and West Bengal (7.7 percent) together accounted for 58.2 percent of all male inter – state NCMs. The percentage of male inter – state NCMs was less than 1 percent in 7 states. In

case of female inter – state NCMs, the states of Uttar Pradesh (14.4 percent), Maharashtra (14.4 percent), West Bengal (8.6 percent), Karnataka (8.4 percent) and Punjab (8.4 percent) together accounted for 54.2 percent of all female inter – state NCMs. The percentage of female inter – state NCMs was less than 1 percent in 7 states. (See Table A.43)

Duration of Residence Less Than 5 Years:

Among the states Uttar Pradesh (19.9 percent), Maharashtra (16.1 percent), Karnataka (11.2 percent), Haryana (6.5 percent) and Madhya Pradesh (6.2 percent) together accounted for 59.9 percent of inter – state NCMs in India. The percentage of inter – state NCMs was less than 1 percent in 6 states. The percentage of male and female inter - state NCMs was 58.5 percent and 41.5 percent respectively. The pattern among the male inter – state NCMs and female inter – state NCMs was same as that for all inter – state NCMs. (see Table A.46)

The inter – state NCMs increased by 31.1 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male inter – state NCMs and female inter – state NCMs increased by 30.5 percent and 32.0 percent respectively.

4.3.3.b Rural – Urban Differentials in Inter – State Natural Calamity Migration:

All Durations of Residence:

The inter – state RNCMs constituted 75.4 percent of the inter – state NCMs in India, of which 63.8 percent were male and the remaining 36.2 percent were female. The states of Karnataka (14.9 percent), Uttar Pradesh (13.9 percent), Maharashtra (12.9 percent), West Bengal (9.1 percent) and Madhya Pradesh (8.5 percent) together accounted 59.4 percent of all inter – state RNCMs. In 7 states the percentage of inter – state RNCMs was less than 1 percent. In case of the male RNCMs, the states of Karnataka (15.8 percent), Uttar Pradesh (13.9 percent), Maharashtra (12.2 percent), Madhya Pradesh (9.1 percent) and

West Bengal (9.1 percent) together contributed 60.1 percent of all male inter – state RNCMs. In 10 states the percentage of male inter – state RNCMs was less than 1 percent. About 59.2 percent of the female inter – state RNCMs was accounted by 5 states, namely Maharashtra (14.1 percent), Uttar Pradesh (13.9 percent), Karnataka (13.3 percent), West Bengal (9.2 percent) and Madhya Pradesh (8.6 percent). In 7 states the percentage of female inter – state RNCMs was less than 1 percent. (see Table A.41)

The inter – state UNCMS comprised 24.6 percent of the inter – state NCMs of which 58.8 percent were male and 41.2 percent were female. The states of Karnataka (16.6 percent), Maharashtra (12.9 percent), Punjab (8.5 percent), Uttar Pradesh (8.1 percent) and West Bengal (7.6 percent) together contributed 53.7 percent of the inter – state UNCMS in India. In 9 states the percentage of inter – state UNCMS was less than 1 percent. The states of Karnataka (18.6 percent), Maharashtra (12.2 percent), West Bengal (9.1 percent), Punjab (8.6 percent) and Uttar Pradesh (7.6 percent) together contributed 56.1 percent of the male inter – state UNCMS in India. The percentage of male inter – state UNCMS was less than 1 percent in 8 states. On the other hand, the states of Maharashtra (13.8 percent), Karnataka (13.7 percent), Uttar Pradesh (8.9 percent), Punjab (8.3 percent) and Delhi (7.7 percent) together accounted for 52.3 percent of female inter – state UNCMS. The percentage of female inter – state UNCMS less than 1 percent in 9 states. (see Table A.42)

Duration of Residence 5 to 9 Years:

The inter – state RNCMs constituted 71.2 percent of the inter – state NCMs of which 59.3 percent were male and 40.7 percent were female. The states of Uttar Pradesh (20.1 percent), Maharashtra (12.8 percent), Karnataka (11.3 percent), West Bengal (10.3 percent) and Madhya Pradesh (6.7 percent) together accounted 61.3 percent of all inter – state RNCMs. In 10 states the percentage of inter – state RNCMs was less than 1 percent. The states of Uttar Pradesh (22.0 percent), Karnataka (12.7 percent), Maharashtra (12.0 percent), West Bengal (9.4 percent) and Madhya Pradesh (6.9 percent) together contributed 63.1 percent of

all inter – state male RNCMs. In 9 states the percentage of inter – state RNCMs was less than 1 percent. In case of the female inter – state RNCMs, the states of Uttar Pradesh (17.4 percent), Maharashtra (13.9 percent), West Bengal (11.7 percent), Karnataka (9.4 percent) and Madhya Pradesh (6.3 percent) together accounted 58.6 percent of all female inter – state RNCMs. In 9 states the percentage of female inter – state RNCMs was less than 1 percent. (see Table A.44)

The inter – state UNCMs comprised 28.8 percent of the inter – state NCMs of which 57.0 percent were male and 43.0 percent were female. The states of Punjab (23.6 percent), Maharashtra (11.9 percent), Karnataka (10.4 percent), Delhi (7.3 percent) and Uttar Pradesh (7.1 percent) together contributed 60.3 percent of the inter – state UNCMs in India. The percentage of inter – state UNCMs was less than 1 percent in 8 states. The states of Punjab (26.3 percent), Karnataka (13.5 percent), Maharashtra (8.8 percent), Haryana (7.8 percent) and Delhi (7.8 percent) together contributed 63.1 percent of the male inter – state UNCMs in India. The percentage of male inter – state UNCMs was less than 1 percent in 8 states. On the other hand, the states of Punjab (20.1 percent), Maharashtra (16.1 percent), Uttar Pradesh (8.1 percent), Delhi (7.9 percent) and Karnataka (6.3 percent) together accounted for 58.3 percent of female inter – state UNCMs. The percentage of female inter – state UNCMs was less than 1 percent in 8 states. (see Table A.45)

Duration of Residence Less Than 5 Years:

The inter – state RNCMs constituted 74.8 percent of the inter – state NCMs of which 58.7 percent were male and 41.2 percent were female. The states of Uttar Pradesh (24.1 percent), Maharashtra (17.1 percent), Karnataka (10.6 percent), Madhya Pradesh (6.1 percent) and West Bengal (5.0 percent) together accounted 62.8 percent of all inter – state RNCMs. In 6 states the percentage of inter – state RNCMs was less than 1 percent. The states of Uttar Pradesh (24.8 percent), Maharashtra (16.7 percent), Karnataka (10.9 percent), Madhya Pradesh (5.6 percent) and Haryana (5.1 percent) together contributed 63.0 percent of all

inter – state male RNCMs. In 7 states the percentage of inter – state RNCMs was less than 1 percent. The patter for female inter – state RNCMs was same as that for all inter – state RNCMs. (see Table A.47)

The inter – state UNCMs comprised 25.2 percent of the inter – state NCMs of which 58.1 percent were male and 41.9 percent were female. The states of Maharashtra (13.3 percent), Karnataka (17.0 percent), Haryana (11.1 percent), Delhi (10.5 percent) and Punjab (8.3 percent) together contributed 60.2 percent of the inter – state UNCMs in India. The percentage of inter – state UNCMs was less than 1 percentage in 8 states. The states of Karnataka (14.3 percent), Maharashtra (13.7 percent), Delhi (10.5 percent), Punjab (9.4 percent) and Haryana (8.6 percent) together contributed 56.5 percent of the male inter – state UNCMs in India. The percentage of male inter – state UNCMs was less than 1 percent in 9 states. On the other hand, the states of Haryana (14.7 percent), Maharashtra (12.7 percent), Karnataka (11.1 percent), Delhi (10.5 percent) and Uttar Pradesh (9.9 percent) together accounted for 58.9 percent of female inter – state UNCMs. The percentage of female inter – state UNCMs was less than 1 percent in 10 states. (see Table A.48)

The inter – state RNCMs increased by 38.7 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male inter – state RNCMs and female inter – state RNCMs increased by 37.2 percent and 40.9 percent respectively. On the other hand, the inter – state UNCMs increased by 15.7 percent between duration of residence 5 to 9 years and duration of residence less than 5 years. During the same period the male inter – state UNCMs and female inter – state UNCMs increased by 18.0 percent and 12.6 percent respectively.

4.3.3.c Natural Calamity Migration Ratio among Inter – State Natural Calamity Migrants:

All Durations of Residence:

The inter – state NCMRO of India for the inter – state NCMs was 444 inter – state NCMs per hundred thousand inter – state migrants. Among the states

it was highest in Meghalaya (3140). The NCMRO was also high in Arunachal Pradesh (1652) and Orissa (1293). It was lowest in Gujarat (106). The male NCMRO of India was 627 male inter – state NCMs per hundred thousand male inter – state migrants. It was highest in Meghalaya (3792) and was also in high in Orissa (2207) and Arunachal Pradesh (2129). Gujarat (97) had the lowest male NCMRO. The female NCMRO of India was 298 female inter – state NCMs per hundred thousand female inter – state migrants. (See Map No. M.19, Table A.49).

The RNCMRO of India for the inter – state RNCMs was 538 inter – state RNCMs per hundred thousand inter – state rural migrants. Meghalaya (4620) had the highest RNCMRO. It was high in Arunachal Pradesh (2040) and moderately high in Orissa (1555), Karnataka (1539), Manipur (1401) and Assam (1307). It was lowest in Delhi (98). The male RNCMRO of India was 799 male inter – state RNCMs per hundred thousand male inter – state rural migrants. Its pattern among the states was same as that for overall RNCMRO. In India the female RNCMRO was 342 female inter – state RNCMs per hundred thousand female inter – state rural migrants. As in the cases, once again it was highest in Meghalaya (3308). On the other hand, the female RNCMRO was below 100 female inter – state RNCMs per hundred thousand female inter – state rural migrants in Delhi (98) and Rajasthan (89). (See Map No. M.22, Table A.50)

The UNCMRO of India for the inter – state UNCMs was 281 inter – state UNCMs per hundred thousand inter – state urban migrants. Among the states it was highest in Karnataka (846). It was also high in Orissa (544), Arunachal Pradesh (543), Nagaland (507), Punjab (501), Tripura (470), Manipur (452), West Bengal (428) and Assam (416). The UNCMRO of India was lowest in Mizoram (44). The male UNCMRO was 356 male inter – state UNCMs per hundred thousand male inter – state urban migrants. Karnataka (846) had the highest male UNCMRO among the states. It was high in Punjab (699), Orissa (668) and Arunachal Pradesh (644). It was lowest in Mizoram (33). The female UNCMRO of India was 216 female inter – state UNCMs per hundred thousand female inter – state urban migrants. Among the states it was highest in Nagaland (618). The female UNCMRO was also high in Manipur (451), Orissa (426) and Karnataka

(407). On the other hand, it was below 100 female RNCMs per hundred thousand female rural migrants in Mizoram (64) and Rajasthan (83). (See Map No. M.25, Table A.51)

Duration of Residence 5 to 9 Years:

The NCMRO of India for the inter – state NCMs was 426 inter – state NCMs per hundred thousand inter – state migrants. Among the states it was highest in Meghalaya (3081). It was high in Arunachal Pradesh (1585). The NCMRO was lowest in Gujarat (99). The male NCMRO of India was 570 male inter – state NCMs per hundred thousand male inter – state migrants. Meghalaya (3432) had the highest male NCMRO. It was high in Uttar Pradesh (2517) and Arunachal Pradesh (2011). On the other hand Gujarat (100) had the lowest male NCMRO. In India the female NCMRO was 313 female inter – state NCMs per hundred thousand female inter – state migrants. Its pattern among the states was same as that of NCMRO. (See Map No. M.20, Table A.52)

The RNCMRO of India for the inter – state RNCMs was 495 inter – state RNCMs per hundred thousand inter – state rural migrants. Among the states it was highest in Meghalaya (4425). The RNCMRO was also high in Arunachal Pradesh (1973) and Mizoram (1525). It was lowest in Gujarat (92). The male RNCMRO of India was 675 male inter – state RNCMs per hundred thousand male inter – state rural migrants. Apart from Meghalaya (4964) that had the highest male RNCMRO among the states, it was high in Uttar Pradesh (4170). Once again it was lowest in Gujarat (92). The female RNCMRO of India was 357 female inter – state RNCMs per hundred thousand female inter – state rural migrants. It was highest in Meghalaya (3773) and lowest in Gujarat (55). (See Map No. M.23, Table A.53)

The UNCMRO of India for the inter – state UNCMs was 308 inter – state UNCMs per hundred thousand male inter – state urban migrants. Among the states it was highest in Punjab (1255). It was also high in Nagaland (890). In three states, namely Sikkim, Mizoram and Manipur the UNCMRO was zero because they did not have any inter – state UNCM with duration of residence 5

to 9 years. The male UNCMRO and the female UNCMRO of India were 396 male inter – state UNCMs per hundred thousand male inter – state urban migrants and 238 female inter – state UNCMs per hundred thousand female inter – state urban migrants respectively. For both the sexes the UNCMRO was highest in Punjab (1823 and 815 respectively). (See Map No. M.26, Table A.54)

Duration of Residence Less Than 5 Years :

The NCMRO of India for the inter – state NCMs was 375 inter – state NCMs per hundred thousand inter – state migrants. Among the states Meghalaya (2844) had the highest NCMRO. It was also high in Uttar Pradesh (1627) and Arunachal Pradesh (1251). It was lowest in Gujarat (77). The male NCMRO and the female NCMRO of India were 446 male inter – state NCMs per hundred thousand male inter – state migrants and 307 female inter – state NCMs per hundred thousand female inter – state migrants respectively. The pattern for either sex was same as the pattern of the overall NCMRO for the duration. (See Map No. M.21, Table A.55)

The RNCMRO of India for the inter – state RNCMs was 482 inter – state RNCMs per hundred thousand inter – state rural migrants. Meghalaya (4450) had the highest RNCMRO. Besides, it was also high in Uttar Pradesh (1683) and Assam (1288). The lowest RNCMRO was of Gujarat (73). The male RNCMRO of India was 578 male inter – state RNCMs per hundred thousand male inter – state rural migrants. In case of female RNCMs, it was 390 female inter – state RNCMs per hundred thousand female inter – state rural migrants. The pattern of RNCMRO for either sex was same as that of the overall RNCMRO for the duration. (See Map No. M.24, Table A.56)

The UNCMRO of India for the inter – state UNCMs was 225 inter – state UNCMs per hundred thousand inter – state urban migrants. Among the states it was highest in Manipur (589). Nagaland (523) also had a high UNCMRO. On the other hand, it was below 100 inter – state UNCMs per hundred thousand inter – state urban migrants in Meghalaya (57), Mizoram (57) and Gujarat (79). The male UNCMRO of India was 263 male inter – state UNCMs per hundred

thousand male inter – state urban migrants. Besides Manipur (838), it was also high in Punjab (506), Karnataka (419), Nagaland (418) and Haryana (411). However, in Tripura (35), Sikkim (51), Gujarat (71), Manipur (79) and Meghalaya (79) it was less than 100 male inter – state UNCMs per hundred thousand male inter – state urban migrants. The female UNCMRO of India was 187 female inter – state UNCMs per hundred thousand female inter – state urban migrants. Apart from Nagaland (722), it was also high in Sikkim (433) and Haryana (412). In Meghalaya (32), Rajasthan (86), Gujarat (87) and Orissa (97) female UNCMRO was less than 100 female inter – state UNCMs per hundred thousand female inter – state urban migrants. Two states, Manipur and Mizoram had no female UNCMs with duration of residence less than 5 years. (See Map No. M.27, Table A.57)

4.3.3.d Sex Differential among the Inter – state Natural Calamity Migrants:

All Durations of Residence:

The NCMSR of India for the inter – state NCMs was 597 female NCMs per thousand male NCMs. Among the states it was female biased only in Gujarat (1095). In West Bengal (987), although the NCMSR was male biased still it was comparatively high. It was lowest in Manipur (141). The RNCMSR of India was 568 female RNCMs per thousand male RNCMs. In the states of Goa (1172) and Gujarat (1150) it was female biased. The RNCMSR was lowest in Manipur (109). The UNCMSR of India was 700 female UNCMs per thousand male UNCMs. In Bihar (1269), Haryana (1120), Gujarat (1061) and Tamil Nadu it was female biased. The UNCMSR was lowest in West Bengal (420).

**Table 4.15 Natural Calamity Migrant Sex Ratio, Inter – State,
All Durations of Residence, India, 1991**

Place of Last Residence	Inter – State Natural Calamity Migrant Sex Ratio (Females Per Thousand Males)		
	Total	Rural	Urban
Andhra Pradesh	745	706	782
Arunachal Pradesh	309	300	421
Assam	444	448	526
Bihar	745	688	1269
Delhi	775	754	798
Goa	987	1172	777
Gujarat	1095	1150	1061
Haryana	744	593	1120
Himachal Pradesh	615	657	551
Karnataka	486	479	513
Kerala	692	796	571
Madhya Pradesh	568	536	725
Maharashtra	686	656	786
Manipur	141	109	500
Meghalaya	504	501	508
Mizoram	571	550	1000
Nagaland	561	507	761
Orissa	487	472	673
Punjab	690	703	674
Rajasthan	611	600	605
Sikkim	511	412	818
Tamil Nadu	923	868	1028
Tripura	605	536	653
Uttar Pradesh	595	567	816
West Bengal	543	576	420
India	597	568	700

Source: Calculated from ORGCC, 1991

Duration of Residence 5 to 9 Years:

The NCMSR of India for the inter – state NCMs was 702 female NCMs per thousand male NCMs. It was female biased in Goa (2520), Sikkim (2000), Tamil Nadu (1167) and Rajasthan (1056). It was unbiased in Manipur (1000) and Bihar (1000). The NCMSR was lowest in Mizoram (308). The RNCMSR of

India was 685 female RNCMS per thousand male RNCMS. It was female biased in Goa (3727), Tamil Nadu (3000), Sikkim (2000) and Bihar (1130). In Manipur (1000) the RNCMSR was unbiased. Mizoram (308) had the lowest RNCMSR. The UNCMSR of India was 756 female UNCMS per thousand male UNCMS. Among the states in Rajasthan (1600), Goa (1571), Gujarat (1500), Orissa (1500) and Maharashtra (1385) it was female biased. In Kerala (1000) and Tamil Nadu (1000) it was unbiased. West Bengal (300) had the lowest UNCMSR. It could not be calculated in Sikkim, Mizoram and Manipur since there was no UNCMS with duration of residence 5 to 9 years.

Table 4.16 Natural Calamity Migrant Sex Ratio, Inter – State, Duration of Residence 5 to 9 Years, India, 1991

Place of Last Residence	Inter – State Natural Calamity Migrant Sex Ratio (Females Per Thousand Males)		
	Total	Rural	Urban
Andhra Pradesh	698	615	824
Arunachal Pradesh	344	342	375
Assam	581	710	333
Bihar	1000	1130	833
Delhi	907	933	876
Goa	2520	3727	1571
Gujarat	929	500	1500
Haryana	745	857	609
Himachal Pradesh	647	478	846
Karnataka	460	505	350
Kerala	833	714	1000
Madhya Pradesh	672	623	909
Maharashtra	924	793	1385
Manipur	1000	1000	0
Meghalaya	621	629	429
Mizoram	308	308	0
Nagaland	521	407	737
Orissa	830	750	1500
Punjab	627	708	577
Rajasthan	1056	846	1600
Sikkim	2000	2000	0
Tamil Nadu	1167	3000	1000
Tripura	765	875	714
Uttar Pradesh	583	542	947
West Bengal	783	847	300
India	702	685	756

Source : Calculated from ORGCC, 1991

Duration of Residence Less Than 5 Years :

The NCMSR of India for the inter – state NCMs was 710 female NCMs per thousand male NCMs. Among the states it was female biased in Tripura (1500), Sikkim (1250), Gujarat (1200) and Bihar (1034). In West Bengal (981) although the NCMSR was male biased still it was comparatively high. It was lowest in Manipur (125). The RNCMSR of India for the inter – state RNCMs was 704 female RNCMs per thousand male RNCMs. It was female biased only in Gujarat (1375). In West Bengal (957) although it was male biased still it was comparatively high. Among the states Nagaland (237) had the lowest RNCMSR.

Table 4.17 Natural Calamity Migrant Sex Ratio, Inter – State, Duration of Residence Less Than 5 Years, India, 1991

Place of Last Residence	Inter – State Natural Calamity Migrant Sex Ratio (Females Per Thousand Males)		
	Total	Rural	Urban
Andhra Pradesh	738	810	591
Arunachal Pradesh	361	363	333
Assam	750	783	667
Bihar	1034	846	2000
Delhi	720	720	724
Goa	674	790	527
Gujarat	1200	1375	1167
Haryana	857	642	1233
Himachal Pradesh	610	656	500
Karnataka	627	658	560
Kerala	750	875	563
Madhya Pradesh	798	834	708
Maharashtra	732	743	667
Manipur	125	333	0
Meghalaya	580	575	333
Mizoram	600	750	0
Nagaland	361	237	923
Orissa	727	815	333
Punjab	492	480	515
Rajasthan	538	609	438
Sikkim	1250	571	6000
Tamil Nadu	704	588	900
Tripura	1500	857	6000
Uttar Pradesh	684	654	1087
West Bengal	981	957	750
India	710	704	721

Source : Calculated from ORGCC, 1991

The UNCMSR of India was 721 female UNCMs per thousand male UNCMs. Among the states it was female biased in Sikkim (6000), Tripura (6000), Bihar (2000), Haryana (1233), Gujarat (1167) and Uttar Pradesh (1087). The lowest UNCMSR was in Arunachal Pradesh (333), Nagaland (333) and Orissa (333). In Manipur and Mizoram the UNCMSR could be calculated as there was no UNCM in the two states with duration of residence less than 5 years.

Table 4.18 Comparison between Natural Calamity Migrant Sex Ratio by Durations of Residence, Inter – State, India, 1991

Durations Of Residence	Natural Calamity Migrant Sex Ratio (Females Per Hundred Thousand Males)		
	Total	Rural	Urban
5 to 9 Years	702	685	756
Less Than 5 Years	710	704	721

Source: Calculated from ORGCC, 1991

In the 5 years prior to the Census of India of 1991 the NCMSR had increased from 702 female inter – state NCMS per thousand male inter – state NCMS among those with duration of residence 5 to 9 years to 710 female inter – state NCMS per thousand male inter – state NCMS among those with duration of residence less than 5 years. In a similar manner the UNCMSR had increased from 685 female inter – state RNCMS per thousand male inter – state RNCMS to 704 female inter – state RNCMS per thousand male inter – state RNCMS. On the other hand, the UNCMSR had decreased from 756 female inter – state UNCMs per thousand male inter – state UNCMs to 721 female inter – state UNCMs per thousand male inter – state UNCMs.

4.3.3.e Inter – State Natural Calamity Migration Matrix:

All Durations of Residence:

The natural calamity migration between states, for all durations of residence, was overwhelmingly restricted to neighboring states. By neighboring states we mean all those states with which a state shares land boundary, in

simple terms, these states are the adjacent to state in question. This is a reaffirmation of the distance decay function in the process of migration. To elucidate this point lets take the case of Tamil Nadu. Among NCIMs to Andhra Pradesh 26.8 percent belongs to Tamil Nadu. The same for Karnataka and Kerala are 42.6 percent and 66.2 percent. Another example would be of Assam. The Assamese NCOMs constitute 94.1 percent of the NCIMs in Arunachal Pradesh, 79.3 percent in Manipur, 86.5 percent in Meghalaya, 66.3 percent in Nagaland, 56.1 percent in Tripura, 36.4 percent in Mizoram and 10.26 percent to West Bengal. In a few cases a considerable portion the inter – state NCMs migrated to other states, one with which the state of origin does not share land boundary. For instance, NCOMs from Bihar constituted 23.2 percent of the NCIMs in Assam. Also, NCOMs from Uttar Pradesh formed 8.9 percent of the NCIMs in Assam, 10.5 percent in Gujarat, 8.5 percent in Maharashtra and 6.1 percent in Mizoram. A possible explanation of this could be the fact that many of these destination states have been an established getaway of migrants with other motives, such as economic, business, education for a long time and hence the strong network forces re – orient the NCM flows toward these states. A similar but slightly different scenario would involve the influence of cultural linkages. Bengali NCOMs accounted for 10.6 percent of the NCIMs in Tripura, a distant state but with cultural bonds to the state of origin. But such cases are few, and even then majority of the inter – state NCMs would move a short distance to a neighboring state. The network forces and cultural linkages could explain the migration to neighboring states as well. Apparently there seems to be a ‘North – South’ divide in context of the inter – state NCMs. This is obvious given that majority of the inter – state NCMs migrate to the neighboring states. In a similar fashion, most of the inter – state NCMs originating from the north – eastern states remained within the region. Only Tripura and Assam had a considerable flow to states outside the region. (see Tables A.58, A.59, A.60)

Most of the inter – state NCMs of the rural to rural stream resettled in the neighboring states and only small percentage continued onto other states. This reaffirmed the distance decay function in migration process. There were, however, a few states such as Bihar, Uttar Pradesh, Orissa, Punjab, Rajasthan and

Sikkim from where a small volume of RNCMs migrated to the rural areas of some other states, something that could be explained by network forces or cultural linkages. The network forces and cultural linkages could explain the migration to neighboring states as well. The north – south divide was distinct in the migrant flow. Large volume of RNCMs moved from one northern state to rural areas of another, and the same pattern was observed among the southern states too but only a small volume flowed between the northern and southern states. For instance, most of the inter – state RNCMs from Himachal Pradesh, Haryana, Bihar, West Bengal migrated to the rural areas of other northern states. Similarly most of the inter – state RNCMs from Kerala and Karnataka moved to the neighboring states. Only from Punjab, Uttar Pradesh, Rajasthan, Sikkim, some rural NCMs moved to the rural areas of the southern states. Conversely some rural NCMs from Andhra Pradesh and Tamil Nadu migrated to the rural areas of the northern states. Majority of the NCMs of the inter – state rural to rural stream originating from the northeastern states resettled in another within the same region. The pattern among male and female rural to rural inter – state NCMs was same as the overall pattern. (see Tables A.61, A.62, A.63)

The pattern of movement in the rural to urban stream of the interstate NCMs, for all durations of residence, was similar to that of the rural to rural stream with one major difference. Although most of the NCMs of this flow still resettled in the neighboring states but unlike a handful states sending out considerable volume of migrants to other states, it was observed in many states. The migration to urban areas is seldom restricted by distance. Nagaland was the only state without any outflow of rural to urban inter – state NCMs. Arunachal Pradesh recorded a negligible out – migration that was targeted towards other states, Delhi, Andhra Pradesh and Goa instead of any neighboring state. Except for Manipur, Assam and Sikkim, inter – state migration from the remaining northeastern states remained restricted within the region. The north – south divide still persisted but the barrier had considerably weakened. All the southern states recorded significant volume of migrants moving to northern states. Although, rural to urban out – migration from some northern states, like Haryana, Himachal Pradesh, Punjab and Delhi still remained limited to the northern states but more

and more states from north India were sending rural NCMs to the towns and cities of south India. The pattern among male and female rural to urban inter-state NCMs was same as the overall pattern. (see Tables A.64, A.65, A.66)

The all durations of residence urban to urban stream of the inter-state NCMs is distinctive from the other streams because, although the large scale migration to the neighboring states continue unabated, several flows reach the other states. The significance of distance as a crucial determinant in the process of migration declines in case of urban to urban streams. An explanation of this would be the fact that many of these destination states have been an established getaway of other migrants for a long time, particularly those with economic motives and such network forces re-orient the NCM flows towards these states. For instance, UNCMs from Bihar account for 11.4 percent of the NCIMs to the towns and cities of Assam, another 17.1 percent are from Uttar Pradesh. Further, the 24.7 percent of the urban calamity in-migrants to Punjab and 22.6 percent of those to Rajasthan had their last place of residence in Uttar Pradesh. Another explanation could be the influence of cultural linkages that might clarify the fact that 18.1 percent of the urban NCIMs in Tripura comes from urban areas of West Bengal. The network forces and cultural linkages could explain the migration to neighboring states as well. All the southern states had flow of NCMs from the urban areas of the southern state to those of the North yet there had been little or no such movement out of Bihar, Haryana, Himachal Pradesh, Delhi, Punjab, Madhya Pradesh and Jammu and Kashmir. In the northeast, NCOM from Manipur, Meghalaya, Nagaland and Tripura remain oriented toward states within the region. The remaining four states did show outflow of people to the urban areas of states beyond the region. The pattern among male and female urban to urban inter-state NCMs was same as the overall pattern. (see Tables A.70, A.71, A.72)

As in the previous three streams, large volume of the inter-state urban to rural NCMs for all durations of residence migrate to the neighboring states. The percentage of the distant states, though small remained noteworthy. The distinctive preference regarding destination among the out-migrants from many northern states for other states within the region persists. Same destination

preference was also noted among the NCMs from the northeast states. A similar bias was absent among NCMs originating from the southern states. Many of the migrants who were a part of this particular stream were mostly likely to have come to the state of origin to find employment, most probably in the informal sector or as landless labourers. The sudden stress on their jobs due to the natural calamity would have forced them to return to their rural homes. On the reverse there would be another group, natives of the state of origin, once again landless labourers and employees in the informal sector who would move to the rural areas of the neighboring states in search of employment. The main difference between this group and the migrants with economic motives would be the trigger effect of some natural calamity in the decision making process of the former. For instance, large volume of people moved from urban parts of West Bengal to Assam, Bihar, Orissa, Sikkim and Uttar Pradesh and to rural Arunachal Pradesh, Manipur, Nagaland and Tripura from Assam. Moreover, the reverse phenomenon, that is considerable movement of urbanites from Orissa and Bihar towards rural West Bengal, Uttar Pradesh to Punjab and Delhi, Madhya Pradesh to Maharashtra. These two opposing sub flows within the inter – state urban to rural stream lead us to this conclusion. The pattern among male and female urban to rural inter – state NCMs was same as the overall pattern. (see Tables A.67, A.68, A.69)

Durations of Residence 5 to 9 Years:

The pattern for the inter – state rural to rural stream of NCMs with duration of residence 5 to 9 years is similar to the overall pattern of this particular stream. Most of the NCMs resettle in a neighboring state that, once again, confirmed the distance decay function in migration. About 63.6 percent of NCIMs to Karnataka, 40.0 percent to Tamil Nadu, 10.9 percent to Orissa, 6.0 percent to Maharashtra were from Andhra Pradesh. Similarly, 31.3 percent of the NCIMs to Haryana, 40.0 percent to Himachal Pradesh and 11.8 percent to Rajasthan were from Punjab. Only a substantial percentage of inter – state NCMs from rural areas of Bihar, Delhi and Sikkim migrate to villages of other states. In other states this share was usually low. The north – south divide was rigid for

the northern states (Punjab, Rajasthan, Haryana, Himachal Pradesh, Bihar, Madhya Pradesh and West Bengal) with NCMs resettling in other states of the region. Only Uttar Pradesh had sent a substantial volume to Tamil Nadu, 20.0 percent of the NCIM in Tamil Nadu were from Uttar Pradesh. The divide was flexible for the southern states with flows from Andhra Pradesh, Kerala, Tamil Nadu, Maharashtra reaching the northern states. The rural to rural inter – state NCMs originating from the northeastern state, except Sikkim, mostly migrated to another state within the region. The pattern among male and female rural to rural inter – state NCMs was same as the overall pattern. (see Tables A.73, A.74, A.75)

The rural to urban stream of inter – state NCMs mainly migrated to the neighboring states, although the volume of inter – state rural NCMs moving to urban areas of other states was comparatively more than their compatriots who resettled in the rural areas of the distant state. Large volume of rural NCMs from Bihar, Gujarat, Madhya Pradesh, Sikkim, Uttar Pradesh and West Bengal migrated to urban areas of distant states. The distance is of less significance in urban oriented migration flows. The north – south divide still remained rigid for many northern states (Haryana, Himachal Pradesh, Punjab, Rajasthan Uttar Pradesh and West Bengal), except from Bihar which accounted for 5.9 percent of the NCIMs to Andhra Pradesh. On the other hand, of the six southern states flows of inter – state rural NCMs from three reached cities and towns of the north. Goa did not have any inter – state rural to urban NCMs. So did Manipur, Meghalaya and Nagaland. Arunachal Pradesh and Mizoram barely had any. Only Assam, Sikkim and Tripura registered considerable volume of NCOM. The migrants from former two states moved to states outside the northeast but those from Tripura remained confined within the region. The pattern among male rural to urban inter – state NCMs was same as the overall pattern. In case of female inter – state NCMs of this stream, the pattern remained same as the overall pattern, except that most women migrated to neighboring states. (see Tables A.76, A.77, A.78)

The urban to urban stream of the inter – state NCMs was in many cases oriented towards the neighboring states. The outflows to the other states were substantial as well. The north – south divide was weaker than in any other

stream. NCMs from Punjab, Rajasthan, Uttar Pradesh and Delhi migrated to southern states and those from Andhra Pradesh, Kerala, Maharashtra and Tamil Nadu resettled in the northern states. Even among northeastern states, considerable volumes of NCMs from Assam, Mizoram and Sikkim resettled outside the region but those originating from Manipur, Meghalaya and Tripura remained within it. The pattern among male rural to urban inter – state NCMs was same as the overall pattern. In case of female inter – state NCMs of this stream, the pattern remained same as the overall pattern, except that most women migrated to neighboring states. Unlike male NCMs, the distance decay was strong among female NCMs. (see Tables A.82, A.83, A.84)

The urban to rural stream on inter – state NCMs had a considerable volume flowing to the near as well as other states. As usual the north – south divide was observed in context of most northern states (Bihar, Haryana, Punjab, Rajasthan, Uttar Pradesh, West Bengal and Delhi). Himachal Pradesh did not have any inter – state urban to rural NCM. The divide was, however, less rigid in terms of the southern states. Andhra Pradesh, Kerala, Maharashtra and Tamil Nadu had flows oriented towards the northern states. Among the northeastern states NCMs from only Assam and Sikkim migrated outside the region; Arunachal Pradesh, Manipur and Tripura had no NCMs of this particular stream and those from the remaining states remained within the region. The pattern among male and female urban to urban inter – state NCMs was same as the overall pattern. (see Tables A.79, A.80, A.81)

Duration of Residence Less Than 5 Years:

The major percentage of the rural to rural stream of NCMs for duration of residence less than 5 years was oriented towards the neighboring states. For example, 96.1 percent of the NCIMs in Arunachal Pradesh, 80.0 percent in Manipur, 98.1 percent in Meghalaya, 68.1 percent in Nagaland, 69.3 percent in Tripura, 12.5 percent in Mizoram were from Assam. In the same manner, 31.9 percent of the NCIMs in Karnataka, 64.3 percent in Goa, 40.4 percent in Maharashtra, and 17.7 percent in Tamil Nadu had their last place of residence in Karnataka. Few rural to rural NCMs moved to other states, particularly along

long established migration routes that have a strong network pull. Among the NCIMs to rural areas, 22.5 percent in Assam, 22.2 percent in Tripura and 11.1 percent in Delhi were from rural Bihar. Similarly, 22.7 percent of rural NCIMs in Punjab, 12.5 percent in Mizoram, 7.4 percent in Tripura, 6.3 percent in Assam were from Uttar Pradesh. The north – south divide is apparent among the inter – state rural to rural NCIMs with duration of residence less than 5 years, more so among those migrants originating from the northern states, namely Bihar, Haryana, Jammu and Kashmir, Punjab, Rajasthan, West Bengal, Delhi and Himachal Pradesh. A further segregation was in context of the northeastern states, in 5 of the 8 states almost all the rural inter – state NCIMs migrated to the rural areas of another state in the region. The pattern among male and female rural to rural inter – state NCIMs was same as the overall pattern. (see Table A.85, A.86, A.87)

Among the inter – state rural to urban NCIMs with duration of residence less than 5 years although most settle in the urban area of a neighboring state, but unlike the rural to rural stream more states of origin were sending NCIMs to other states. Thus the distant decay function weakened in context of the rural to urban stream of inter – state NCIMs. The long distant movements were oriented towards states with long established network forces, like Bihari NCIMs in Arunachal Pradesh, Assam, Meghalaya, Haryana, Delhi or those from Uttar Pradesh in the northeastern states, West Bengal, Rajasthan, Maharashtra, Goa and those with cultural linkages, such as the Bengali NCIMs in Tripura and Nagaland. Even the north – south divide, though still present (as in Haryana, Himachal Pradesh, Punjab, West Bengal), was not as rigid as in the previous stream, that is NCIMs moved from the southern states to the northern states and vice versa. The flow of NCIMs from northeast was not distinct, except for Assam and Tripura. Among the 26 states, Arunachal Pradesh, Goa, Mizoram and Nagaland did not have any rural to urban inter – state NCM. The pattern among male rural to urban inter – state NCIMs was same as the overall pattern. In case of female inter – state NCIMs of this stream, the pattern remained same as the overall pattern, except that most women migrated to neighboring states. Unlike male NCIMs, the distance decay was strong among female NCIMs. (see Tables A.88, A.89, A.90)

Although the neighboring states remained the favored destinations for many of the NCMs of the inter – state urban to urban stream yet a considerable percentage of NCMs resettled in the urban areas of other states. Like in the urban to urban stream for other motives for migration, here too, the distance was of less importance than in other streams. For instance, urban NCMs migrated from Uttar Pradesh to cities and towns of Assam, Gujarat, Kerala, Punjab and Tamil Nadu, from West Bengal to Delhi, Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Punjab, Rajasthan and Tamil Nadu, from Rajasthan to Himachal Pradesh, Maharashtra and Manipur, from Maharashtra to Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal, from Bihar to Nagaland, Punjab and Maharashtra. The volume of NCM from southern states to northern states and vice versa was considerable. The movement of NCMs originating from northeast was not strictly restricted within the region. The pattern among male urban to urban inter – state NCMs was same as the overall pattern. In case of female inter – state NCMs of this stream, the pattern remained same as the overall pattern, except that most women migrated to neighboring states. Unlike male NCMs, the distance decay was strong among female NCMs. (see Tables A.94, A.95, A.96)

Arunachal Pradesh, Goa, Himachal Pradesh, Manipur and Mizoram did not contribute to the inter – state urban to rural stream NCMs with duration of residence less than 5 years. Unlike in the other streams, the flows between other states were limited as the rural areas of the neighboring states received the major volume of NCIMs. Still migration flows were observed Gujarat to Assam, Maharashtra to Assam and Orissa, Punjab to Assam, Orissa and Uttar Pradesh, Uttar Pradesh to Punjab, Maharashtra and Delhi, West Bengal to Haryana, Bihar to Punjab and Haryana. The movement of NCMs from southern states to northern states and vice versa was more pronounced. Mizoram, Nagaland and Arunachal Pradesh did not have any inter – state urban to rural NCMs; of the remaining states in the northeast, NCOMs from only Assam Manipur and Sikkim moved resettled outside the region. The pattern among male and female urban to rural inter – state NCMs was same as the overall pattern. (see Tables A.91, A.92, A.93)

Table 4.19 State – wise Distribution of Inter – State Natural Calamity Migrant Flows, India, 1991

Place of Last Residence	State – wise Distribution of Inter – State Natural Calamity Migrant Flows (Persons, India, 1991)							
	Rural To Rural		Rural To Urban		Urban To Urban		Urban To Rural	
	5 To 9 Years	Less Than 5 Years	5 To 9 Years	Less Than 5 Years	5 To 9 Years	Less Than 5 Years	5 To 9 Years	Less Than 5 Years
Andhra Pradesh	7	7	5	5	6	7	3	6
Arunachal Pradesh	2	2	0	0	0	0	0	0
Assam	6	9	6	7	6	7	6	7
Bihar	13	12	11	9	9	7	6	10
Goa	1	2	0	0	1	1	0	0
Gujarat	3	4	5	2	3	4	5	6
Haryana	5	6	3	3	4	6	5	5
Himachal Pradesh	2	2	2	4	2	2	0	0
Jammu and Kashmir	2	2	2	4	1	9	2	4
Karnataka	4	6	5	4	5	6	4	5
Kerala	3	2	4	5	4	5	3	4
Madhya Pradesh	5	8	8	6	6	6	5	7
Maharashtra	6	7	5	4	7	9	8	11
Manipur	1	2	0	2	1	1	0	0
Meghalaya	1	2	0	1	1	1	1	2
Mizoram	0	2	0	0	1	0	1	0
Nagaland	1	2	0	0	0	0	1	1
Orissa	6	4	3	4	1	3	3	3
Punjab	5	6	6	6	6	6	6	7
Rajasthan	7	7	8	9	9	8	5	7
Sikkim	2	3	2	0	1	1	1	2
Tamil Nadu	3	3	4	5	6	5	4	6
Tripura	2	2	2	2	1	1	0	1
Uttar Pradesh	11	11	12	13	10	10	7	9
West Bengal	5	5	7	8	7	11	5	10
Delhi	1	2	0	2	6	4	3	6

Source: Calculated from ORGCC, 1991

On comparing the distribution of inter – state NCM flows pertaining to the four different streams between durations of residence 5 to 9 years and duration of residence less than 5 years we found separate patterns emerging out. The number of inter – state NCM flow of the rural to rural stream had increased for Assam, Goa, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Sikkim and Delhi. In case of

Bihar, Kerala and Orissa it had declined. As for the rest of the states, it remained unchanged. In context of the rural to urban stream the number of flows had increased for Assam, Himachal Pradesh, Delhi, West Bengal, Tamil Nadu, Rajasthan, Orissa, Meghalaya, Manipur and Kerala. The flows of this particular stream had declined in Bihar, Gujarat, Uttar Pradesh, Sikkim, Maharashtra, Madhya Pradesh and Karnataka. For the remaining states it had remained unchanged. Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Orissa and West Bengal showed a rise in the number of urban to urban stream of inter state flows. Conversely, the flows had declined in Bihar, Mizoram, Rajasthan, Tamil Nadu and Haryana. The flow of the urban to rural stream of inter – state NCMs had increased in more number of states than that for the other three streams, a total of eighteen states. The decline in the number of flows of this stream had been observed only in Mizoram.

The previous discussion on the distribution of flows of inter – state NCMs of various streams had provided the overall picture that had cumulated the flows to neighboring and distant states. However, there were changes in the pattern for neighboring and other states and hence, it is necessary to identify those changes. First, in the rural to rural stream of inter – state NCMs the number of flows to neighboring states increased for Delhi, Punjab, Manipur, Nagaland, Mizoram, Maharashtra, Madhya Pradesh, Karnataka, Gujarat, Assam and Andhra Pradesh. It had declined in Uttar Pradesh and Orissa. However, for other states Assam, Uttar Pradesh, Goa, Karnataka, Haryana, Madhya Pradesh, Meghalaya and Sikkim showed an increase in the number of flows. The flows out of Andhra Pradesh, Bihar, Kerala and Orissa had declined. Second, in the rural to urban stream of inter – state NCMs the number of flows to neighboring states had increased from Andhra Pradesh, Manipur and Meghalaya. It had declined from Bihar, Gujarat, Maharashtra, Punjab, Rajasthan, Sikkim and Uttar Pradesh. On the other hand, the flows to other states had increased from Assam, Himachal Pradesh, Kerala, Manipur, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal and Delhi. The flows out of Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh and Sikkim had declined. Third, Assam, Madhya Pradesh, Orissa, Sikkim, Tamil Nadu and Uttar Pradesh showed a rise in the number of urban to urban

flows to neighboring states. The flows had declined from Himachal Pradesh, Maharashtra, Manipur, Meghalaya and Delhi. The urban to urban flows to other states had increased for Andhra Pradesh, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Orissa and West Bengal. They had decline out of Assam, Bihar, Madhya Pradesh, Mizoram, Rajasthan, Sikkim, Tamil Nadu, Delhi and Uttar Pradesh. Fourth, the urban to rural flow to neighboring states had increased from Gujarat, Kerala, Madhya Pradesh, Meghalaya, Rajasthan, Tripura and West Bengal. It had decreased only in Mizoram. In contrast, no states recorded any decline in the number of urban to rural outflows to other states instead it had increased in 13 states. In the rest it had remained unchanged. (see Table A.97)

4.3.4 Analysis of the Determinants of Natural Calamity Migration in India:

Correlation:

Percentage distributions of total NCMs, total male NCMs, total female NCMs, RNCMs, male RNCMs and female RNCMs were positively correlated to the percentage distribution of natural calamity and population growth rate. Though both the correlations were weak, the former was comparatively stronger than the latter. Conversely, percentage distributions of total NCMs, total male NCMs, total female NCMs, RNCMs, male RNCMs and female RNCMs were negatively correlated to the growth rate of per capita NSDP. These correlations were weakly negative. However, percentage distributions of UNCMs, male UNCMs and female UNCMs were positively correlated to the growth rate of per capita NSDP. It was significant at 0.05 percent (2 tailed). On the other hand, percentage distribution of UNCMs, male UNCMs and female UNCMs were negatively correlated to percentage distribution of natural calamity and growth rate of the urban population group (that is all, male, female).

Regression Analysis:

The percentage distributions of total NCMs, total male NCMs, total female NCMs, RNCMs, male RNCMs and female RNCMs were positively related with

population growth rates between 1981 and 1991. It implied larger the size of the base population higher was the percentage of NCMs. On the contrary, percentage distributions of UNCMs, male UNCMs and female UNCMs were negatively related to urban population growth rates.

The percentage distributions of total NCMs, total male NCMs, total female NCMs, RNCMs, male RNCMs and female RNCMs were negatively related to the growth rate of per capita NSDP between 1981 – 1982 and 1991 -1992 at the 1980 – 1981 constant prices, that is higher the growth rate of per capita NSDP in a state lower was the percentage of NCMs in it. But the percentage distributions of UNCMs, male UNCMs and female UNCMs were positively related with growth rate of per capita NSDP, that is a rise in latter would lead to an increase in the former.

Table 4.20 Regression Analysis of Impact of Frequency of Natural Calamities, Population Size and Community Resilience on Percentage Distribution of Natural Calamity Migrants in India, Duration of Residence 0 to 9 Years, 1991

Category	Constant	Percentage Distribution Of Natural Calamities (P_{nc})	Population Growth Rate (PGR)	Growth Rate of Per Capita NSDP ($NSDP_{rt}$)	Adjusted R^2
All NCMs	-1.001 (-0.097)	0.422 (0.866)	4.056 (0.848)	-1.466 (-0.839)	-0.006
All Male NCMs	1.898 (0.169)	0.462 (0.856)	2.779 (0.550)	-1.703 (-0.883)	-0.037
All Female NCMs	-3.139 (-0.352)	0.396 (0.930)	4.762 (1.113)	-1.081 (-0.706)	0.030
All Rural NCMs	2.354 (0.300)	0.386 (0.700)	3.535 (0.909)	-1.836 (-0.992)	0.037
All Male Rural NCMs	3.770 (0.443)	0.419 (0.695)	2.970 (0.737)	-2.137 (-1.052)	0.014
All Female Rural NCMs	2.783 (0.394)	0.443 (0.871)	2.309 (0.641)	-1.288 (-0.771)	0.006
All Urban NCMs	7.087 (0.872)	-0.213 (-0.599)	-1.627 (-0.921)	2.230 (1.702)	0.143
All Male Urban NCMs	2.223 (0.401)	-0.174 (-0.484)	-0.371 (-0.377)	2.453 (1.839)	0.105
All Female Urban NCMs	6.037 (0.742)	-0.142 (-0.395)	-1.434 (-0.813)	2.275 (1.710)	0.109

Source : Calculated from ORGCC, 1991; EM – DAT : The OFDA/ CRED

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The percentage distributions of total NCMs, total male NCMs, total female NCMs, RNCMs, male RNCMs and female RNCMs were positively related to percentage distribution of natural calamities in it, that is higher the frequency of natural calamities occurring in a state larger would be the number of NCMs in it. On the other hand, the percentage distributions of UNCMS, male UNCMS and female UNCMS were negatively related to percentage distribution of natural calamities.

CHAPTER-5: CONCLUSIONS

Between January 1970 to March 2008, there were 466 natural calamities in India that include floods, droughts, earthquakes, windstorm and associated storm surges and slides (estimated from EM – DAT). A total of 1,832 million Indians had been affected, either killed or affected, by natural calamities between 1974 and 2003. During the specified period 7,432 persons out of every 100,000 people had been a victim, either killed or affected, of natural calamities. (Guha – Sapir et al., 2004). It was possible that loss of property and livelihood or threat to life would force some of the affected to migrate. People across the world had been found to respond to threats from natural calamities in such manner and it was not supposed to differ in India. The relationship between natural calamity and migration in the Indian context had been scarcely explored. But it is significant because of the plight of the natural calamity migrants (NCMs). They had been harshly uprooted from the safety of their homes and kinship networks of their locality and thrust into a new environment at the place of destination. In such situation the place of origin, the place of destination and the NCMs themselves are supposed to undergo some changes. The sudden influx of NCMs at the destination could disturb its population – resource balance and overwhelm the local infrastructure, physical or social. The NCMs, particularly those from the disadvantageous sections of the society, in an attempt to reclaim their lives could start exploiting the local resources at the destination. On the other hand, the NCMs could themselves be exploited by unscrupulous persons. There could be several consequences of such sudden migration due to natural calamity. An appraisal of natural calamity migration was needed to recognise the predicament of natural calamity migrants, their place of origin and place of destination.

The main purpose of this study was to understand the scope of natural calamity migration in India. The study was based on data available from Census of India of 1991. First, we had tried to gauge the extent of internal migration in India. Second, people always have a motive for moving away from the place of last residence. To identify the possible reasons and their significance among the

internal migrants in India we analysed the reasons for migration at the national level. Furthermore it helped us situate the natural calamity migration among other reasons for migration. Third, we estimated the magnitude of natural calamity migration at the national level. Fourth, to further enhance our understanding of the phenomenon we tried to analyse regional, rural – urban and sex differentials. These were performed separately for total, intra – state and inter – state natural calamity migrants (NCMs). The analysis was executed for three durations of residence. The all durations of residence providing the overall picture with two shorter durations of residence complementing the former. Fifth, the influence of three determinants of natural calamity migration, viz. frequency of natural calamities, population size and resilience of the community, was analysed.

It was found that the relative share of natural calamity migration among the other reasons for migration was low but in absolute terms it was more than a million persons. There was a distinct regional picture emerging across the country. Further, there was a significant difference between rural and urban NCMs. The rural NCMs outnumbered the urban NCMs. Unlike internal migration in India, natural calamity migration in the country was a male dominated process. The mobility among women due to natural calamities was higher in urban areas than rural areas. The total NCMs, male NCMs, female NCMs had increased between duration of residence 5 to 9 years and duration of residence less than 5 years. The share of intra – state NCMs was higher than the inter – state NCMs. The patterns that had been identified for total NCMs was also noted for intra – state and inter – state NCMs. A overwhelming majority of NCMs migrated to a place within the state of enumeration. Normally this would indicate that NCMs preferred to move over short distance. Even the natural calamity migration between states was overwhelmingly restricted to neighboring states. The volume of NCMs moving to other states was considerable only for certain states. The distance decay function was apparent among inter – state natural calamity migrants. It was less so only in cases of urban oriented inter – state streams. The significance of distance as a restricting factor declined in rural to urban and urban to urban streams. This particular pattern was observed among

it was, the female intra – state NCMs mostly moved over shorter distance to resettle in neighboring state. This was noted even in the urban oriented streams. Apparently there was a ‘North – South’ divide in context of the inter – state NCMs moving between northern and southern states. In a similar manner, most of the inter – state NCMs originating from the north – east states resettled within the region. The correlation between percentage distribution of natural calamities was positively correlated to percentage distribution of NCMs but the correlation was weak. The regression analysis of the determinants of natural calamity migration was not significant.

As shown in Map 5.1 there is a association between the frequency of natural calamity, viz. floods, droughts, windstorms, earthquakes and slides, in different states of India between February, 1981 and February, 1991 to the percentage of NCMs with duration of residence 0 to 9 years in those states. Among the states Assam had second highest frequency of natural calamities and highest percentage of NCMs. During the same period West Bengal had the highest frequency of natural calamities and a high percentage of NCMs. Similar association was also noticed in other states, such as Andhra Pradesh, Uttar Pradesh, Maharashtra, Orissa, Bihar that had high number of natural calamities as well as high to moderate percentage of NCMs. On the contrary, states like Himachal Pradesh, Rajasthan and Gujarat had high frequency of natural calamities but low percentage of NCMs. Also, states such as Madhya Pradesh and Karnataka had a low frequency of natural calamities but accounted a moderately high percentage of NCMs.

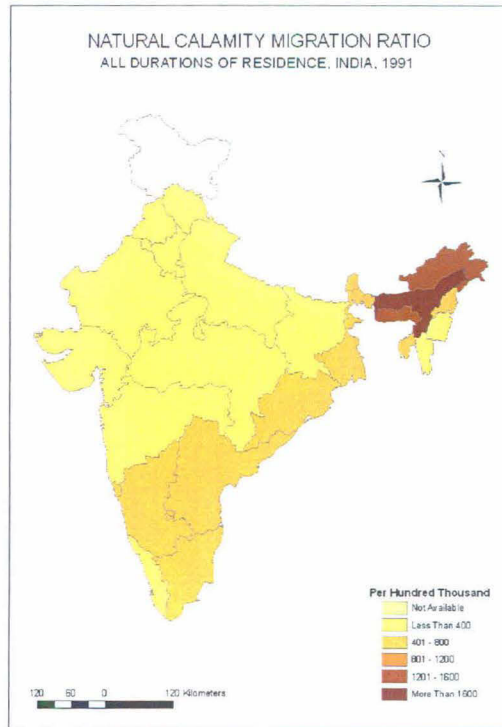
In times of natural calamity, the most vulnerable groups, such as aged, women, children may not receive proper protection and assistance. In this study we could only follow up male female differences in natural calamity migration by calculating sex ratio for the NCMs. The lack of age – segregated data did not permit us to study the whether natural calamity migration in India was an age – selective process. Henry at al. (2004) had observed that during a drought in Burkina Faso younger male members of a family would migrate to nearby towns. Further, the different types of natural calamity are dissimilar in the way they motivate the afflicted to migrate. The migration due to a sudden onset

natural calamity may be more spontaneous than one due to a slow onset natural calamity. However, the lack of segregated data on natural calamity types did not permit us to study the influence of different types of natural calamity on migration. The relationship between socio – economic condition of the NCMs and propensity to migrate because of natural calamities could not be investigated due to absence of required data. The lack of district level data did not allow us to study the magnitude and pattern of natural calamity migration beyond state level. Availability of district level data including those on inter – district natural calamity migration could have identified potential destination districts. It would have implications on quick and efficient mobilisation of resources to protect and provide assistance to the natural calamity migrants. These avenues could be pursued in future studies.

Effort should be made to mitigate the effects of natural calamity, thereby reducing the chances of being displaced by them. To this end the existing and potential technological knowhow should be explored. This should involve risk assessment and vulnerability analysis of local infrastructure to gauge the limit of community's resilience. Further, there is need for hazard monitoring and structural strengthening of infrastructure (Kettle, 2004). The means of mass communication should be readily utilised to warn the public of impending calamity. In India a response, relief and rehabilitation system to confront a natural calamity had been already in place since the independence.

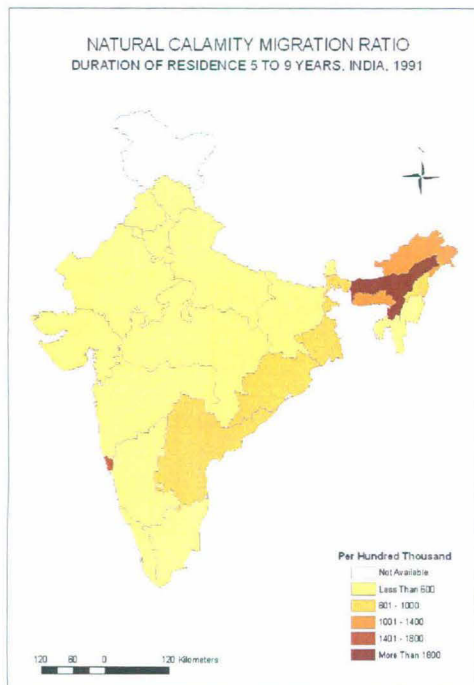
MAPS

Map No. M.1
 Distribution of Natural Calamity Migration Ratio
 All Durations of Residence, India, 1991

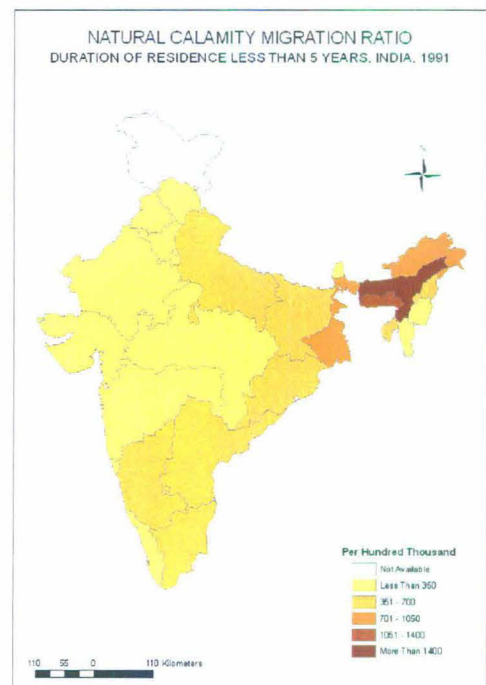


Source : Adapted from ORGCC, 1991

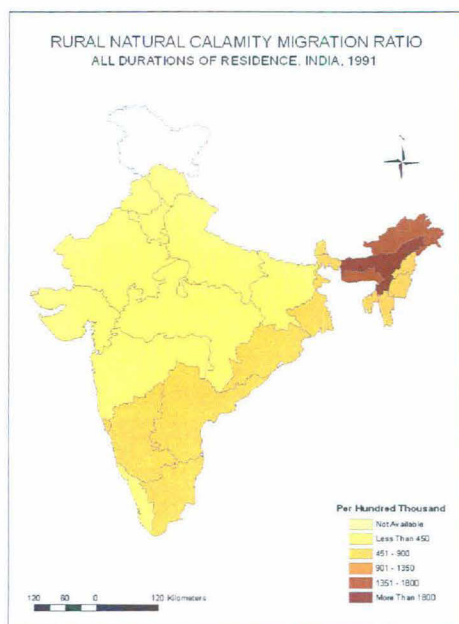
Map No. M.2
 Distribution of Natural Calamity Migration Ratio
 Duration of Residence 5-9 years, India, 1991



Map No. M.3
 Distribution of Natural Migration Ratio,
 Duration of Residence, less than 5 years, India, 1991

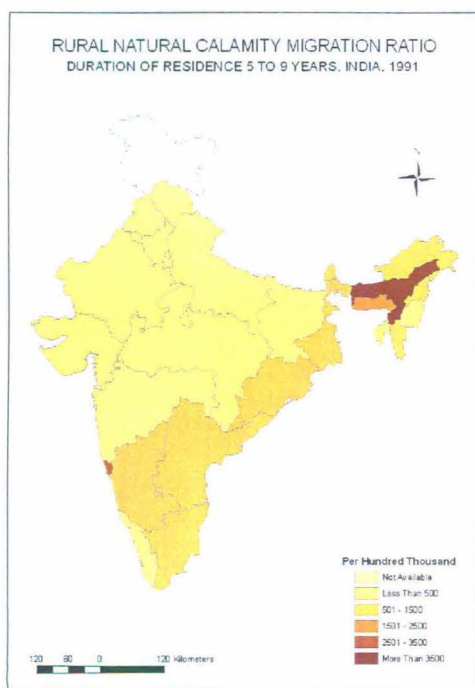


Map No. M.4
Distribution Showing Rural Natural calamity Migration ratio
All Durations of Residence, India, 1991



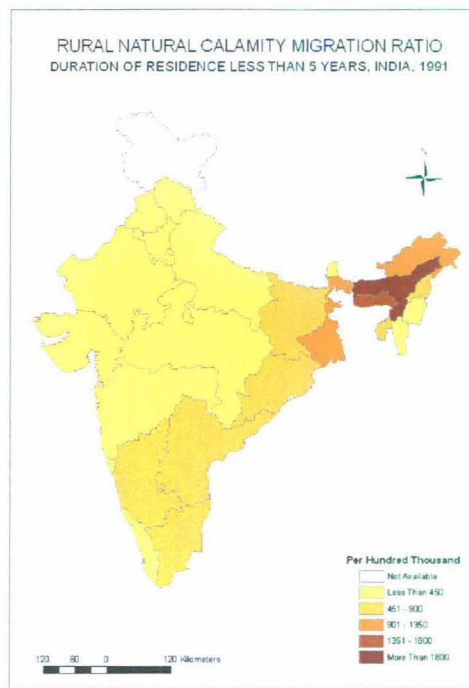
Source : Adapted from ORGCC, 1991

Map No. M.5
Distribution of Rural Natural Calamity
Migration Ratio, Duration of Residence
5-9 years, India, 1991



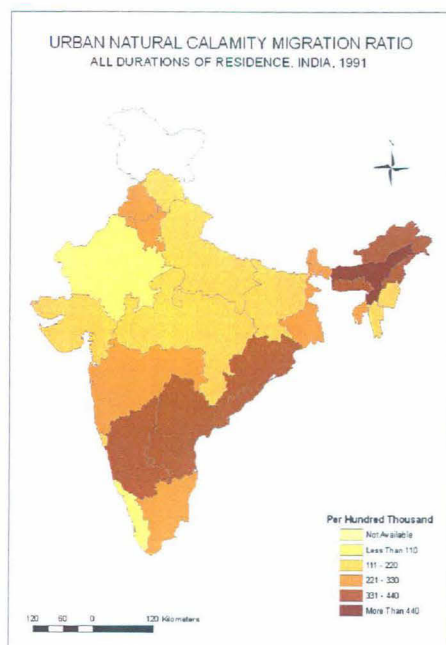
Source : Adapted from ORGCC, 1991

Map No. M.6
Distribution of Rural Natural Calamity Migration
Ratio, Duration of Residence Less than 5 years,
India, 1991



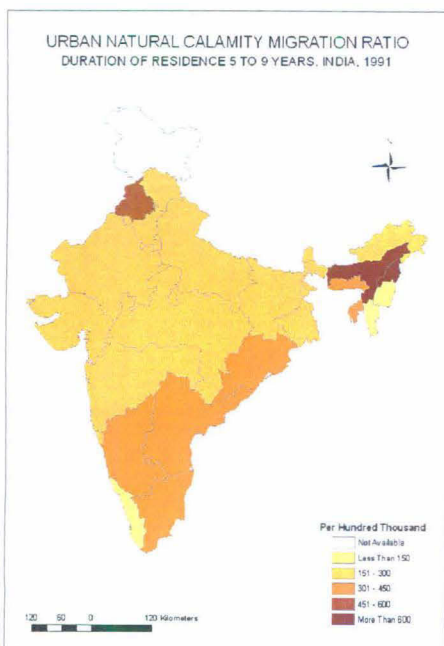
Source : Adapted from ORGCC, 1991

Map No. M.7
 Distribution of Urban Natural Calamity Migration Ratio
 All Durations of Residence, India 1991



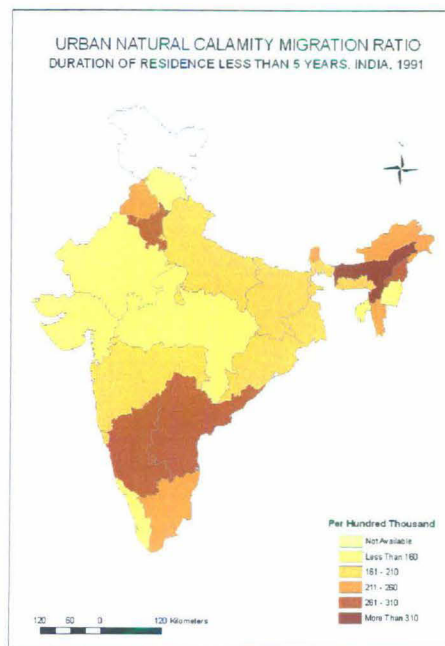
Source : Adapted from ORGCC, 1991

Map No. M.8
 Distribution of Urban Natural Calamity Migration
 Ratio, Duration of Residence 5-9 years, India, 1991



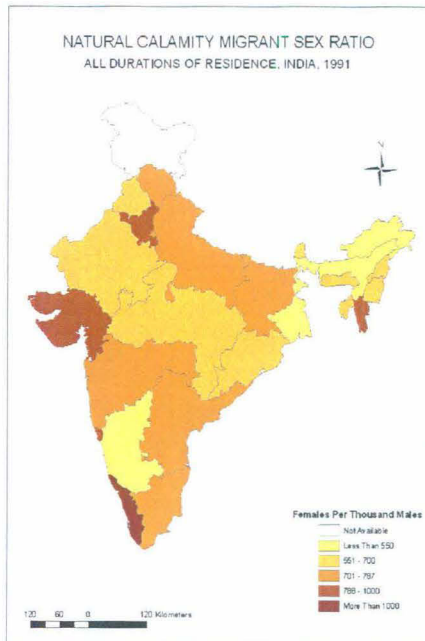
Source : Adapted from ORGCC, 1991

Map No. M.9
 Distribution of Urban Natural Calamity
 Migration Ratio, Duration of Residence
 Less than 5 years, India, 1991



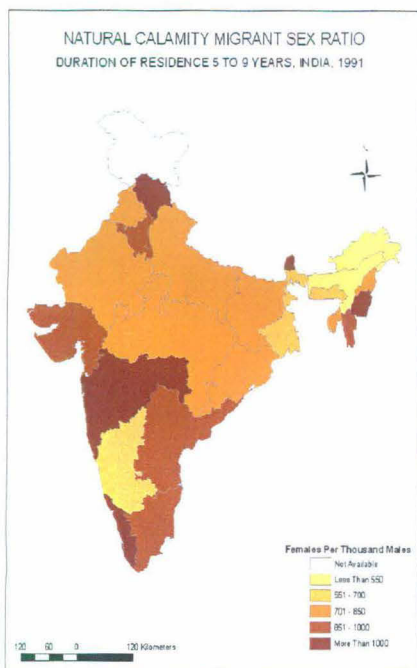
Source : Adapted from ORGCC, 1991

Map No. M.10
 Distribution of Natural Calamity Migrant Sex Ratio
 All Durations of Residence, India 1991



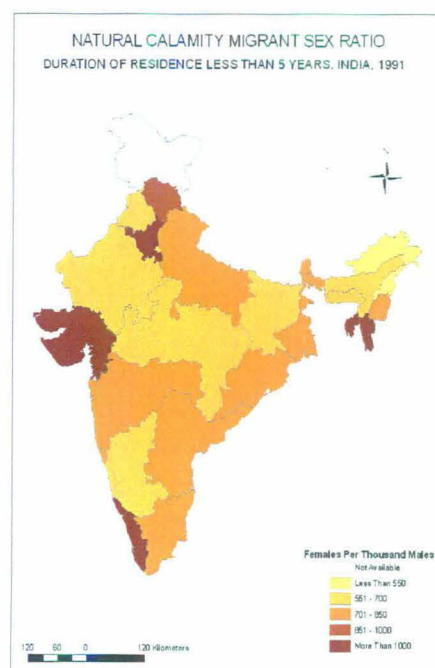
Source : Adapted from ORGCC, 1991

Map No. M.11
 Distribution of Natural Calamity Migrant Sex Ratio
 Duration of Residence 5-9 years, India, 1991



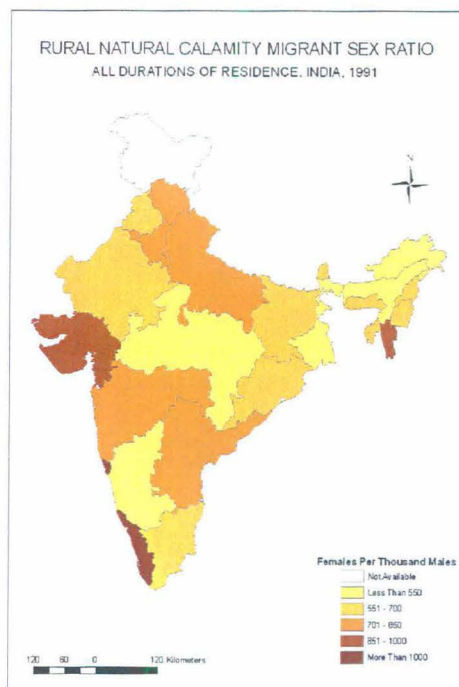
Source : Adapted from ORGCC, 1991

Map No. M.12
 Distribution of Natural Calamity Migrant Sex Ratio
 Duration of Residence Less than 5 years, India, 1991



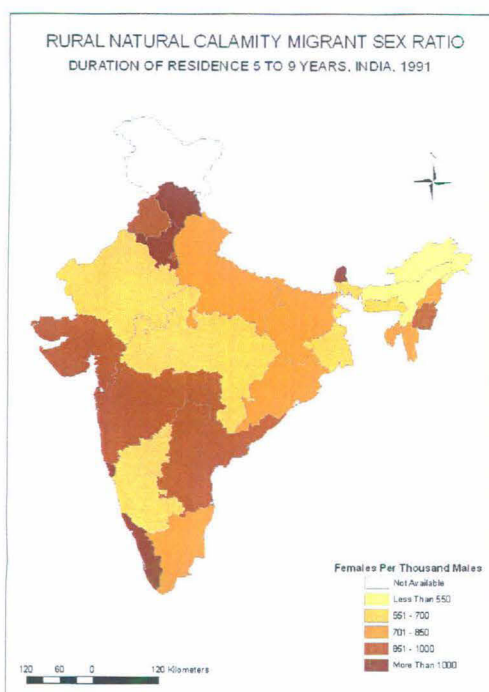
Source : Adapted from ORGCC, 1991

Map No. M.13
 Distribution of Rural Natural Calamity Migrant Sex Ratio
 All Durations of Residence, India 1991

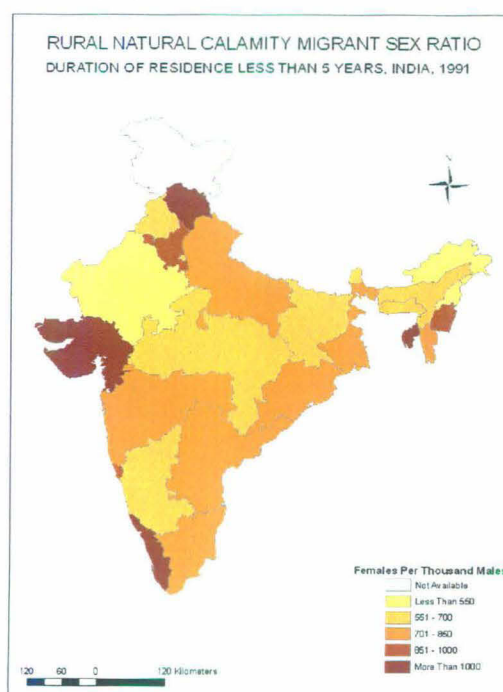


Source : Adapted from ORGCC, 1991

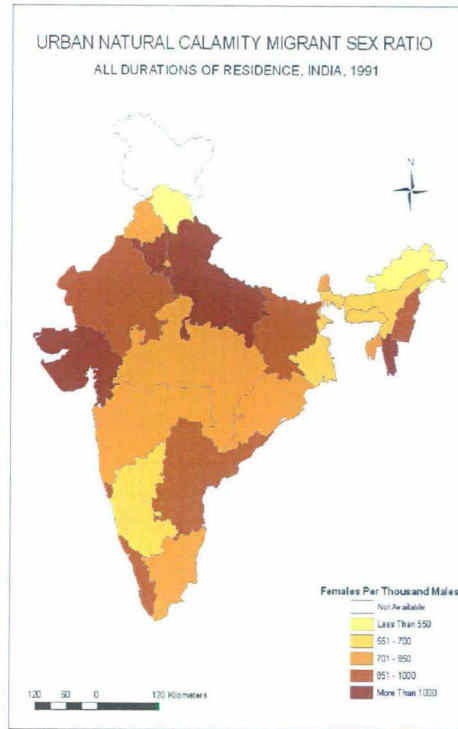
Map No. M.14
 Distribution of Rural Natural Calamity Migrant Sex Ratio
 Duration of Residence 5-9 years, India, 1991



Map No. M.15
 Distribution of Rural Natural Calamity Migrant Sex Ratio,
 Duration of Residence, Less than 5
 Years, India , 1991

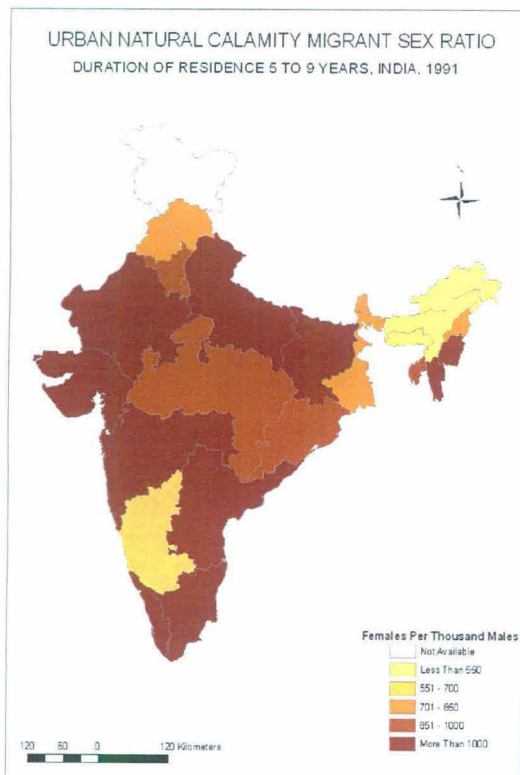


Map No. M.16
Distribution of Urban Natural Calamity Migrant Sex Ratio
All Durations of Residence, India 1991

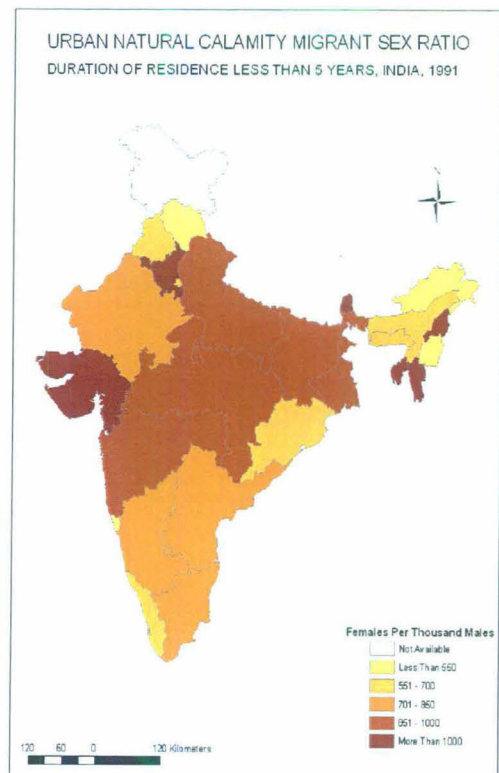


Source : Adapted from ORGCC, 1991

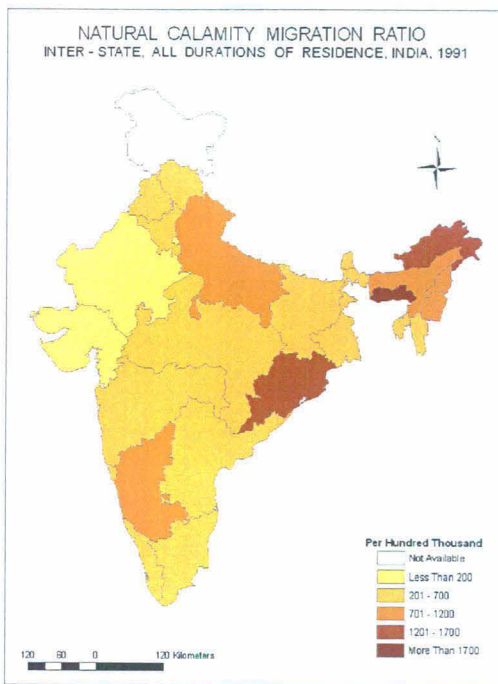
Map No. M.17
Distribution of Urban Natural Calamity Migrant Sex Ratio
Duration of Residence 5-9 years, India, 1991



Map No. M.18
Distribution of Urban Natural Calamity Migrant
Sex Ratio, Duration of Residence less than 5
Years, India, 1991

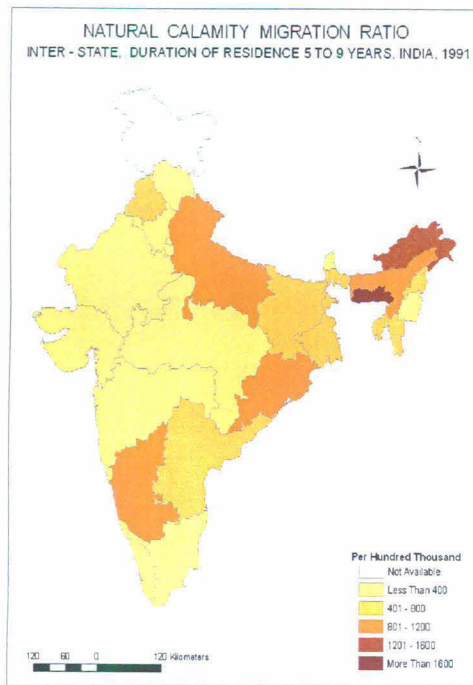


Map No. M.19
Distribution of Natural Calamity Migration Ratio
Inter State, All Durations of Residence, India 1991



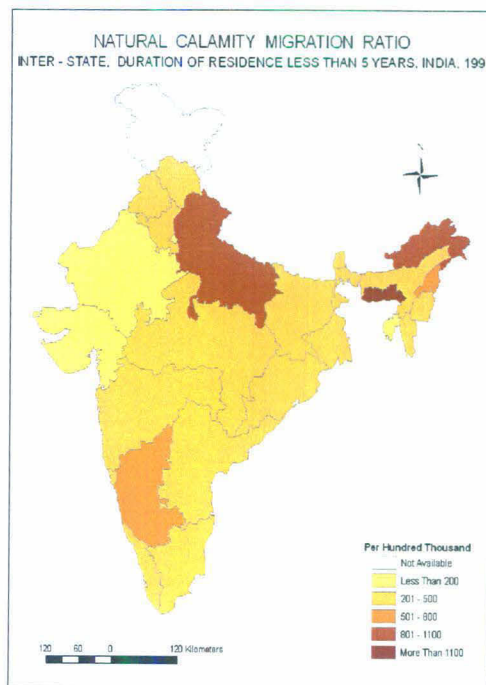
Source : Adapted from ORGCC, 1991

Map No. M.20
Distribution of Natural Calamity Migration Ratio
Inter State, Durations of Residence 5-9 years, India 1991



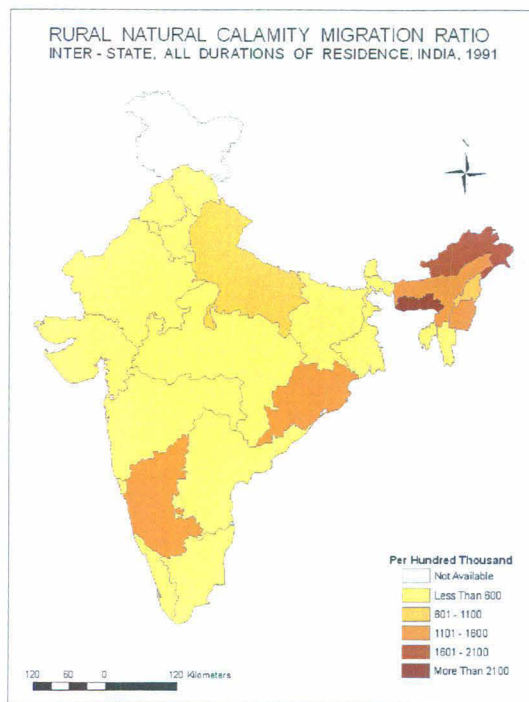
Source : Adapted from ORGCC, 1991

Map No. M.21
Distribution of Natural Calamity Migration Ratio, Inter State, Duration of Residence less than 5 years, India, 1991



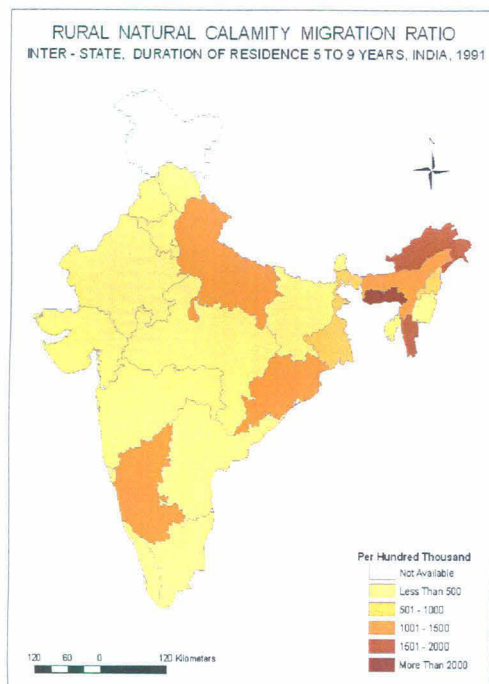
Source : Adapted from ORGCC, 1991

Map No. M.22
 Distribution of Rural Natural Calamity Migration Ratio
 Inter State, All Durations of Residence, India 1991



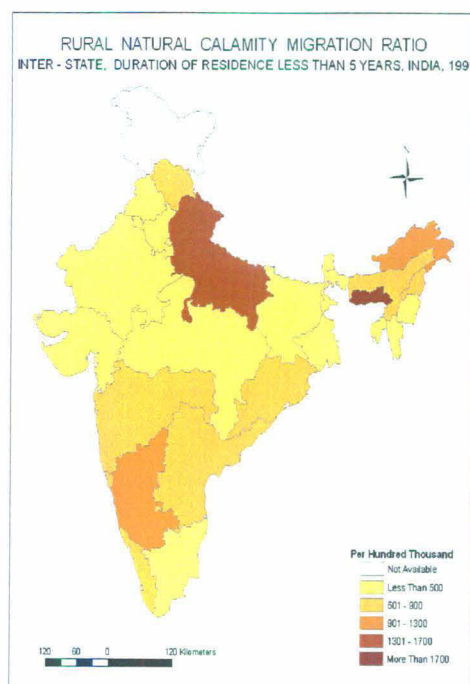
Source : Adapted from ORGCC, 1991

Map No. M.23
 Distribution of Rural Natural Calamity Migration Ratio
 Inter State, Durations of Residences 5-9 Years, India 1991



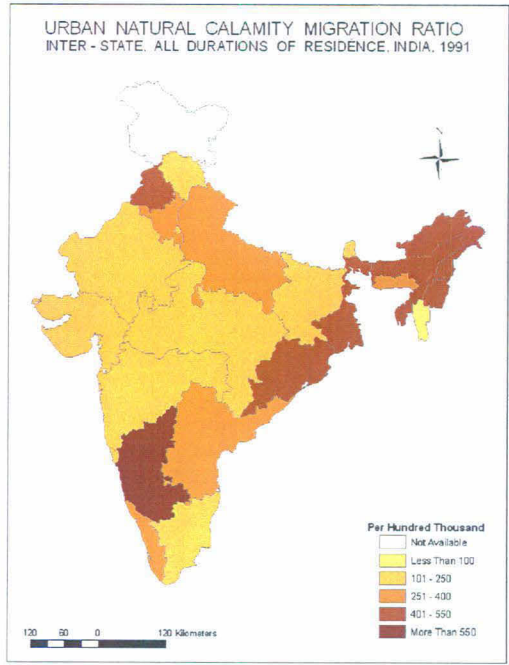
Source : Adapted from ORGCC, 1991

Map No. M.24
 Distribution of Rural Natural Calamity Migration Ratio,
 Inter state, Duration of Residence less than 5 years, India, 1991



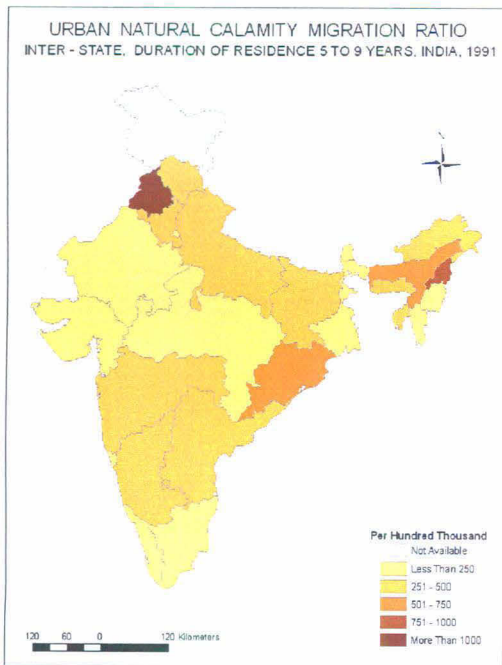
Source : Adapted from ORGCC, 1991

Map No. M.25
 Distribution of Urban Natural Calamity Migration Ratio
 Inter State, All Durations of Residence, India 1991



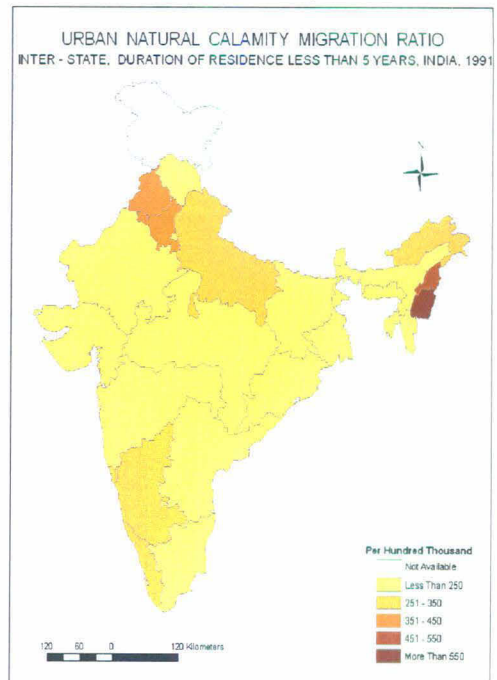
Source : Adapted from ORGCC, 1991

Map No. M.26
 Distribution of Urban Natural Calamity Migration Ratio
 Inter State, Durations of Residences 5-9 Years, India 1991



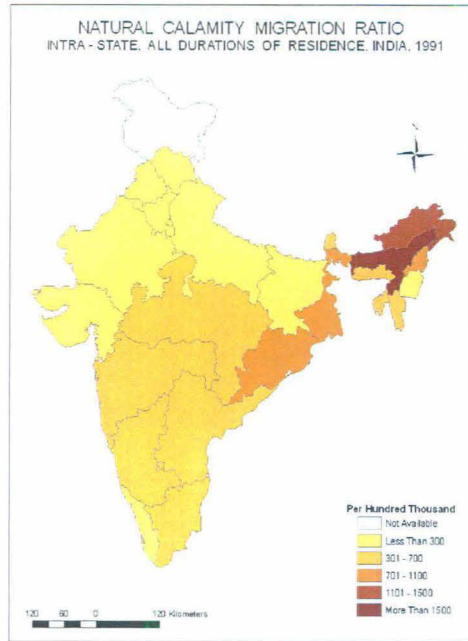
Source : Adapted from ORGCC, 1991

Map No. M. 27
 Distribution of Urban Natural Calamity Migration Ratio, Inter State, Duration of Residences less than 5 years, India, 1991



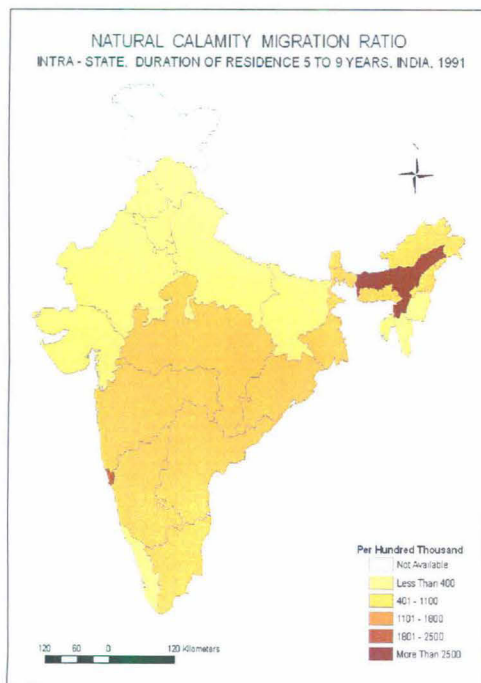
Source : Adapted from ORGCC, 1991

Map No. M.28
 Distribution of Natural Calamity Migration Ratio
 Intra State, All Durations of Residence, India 1991



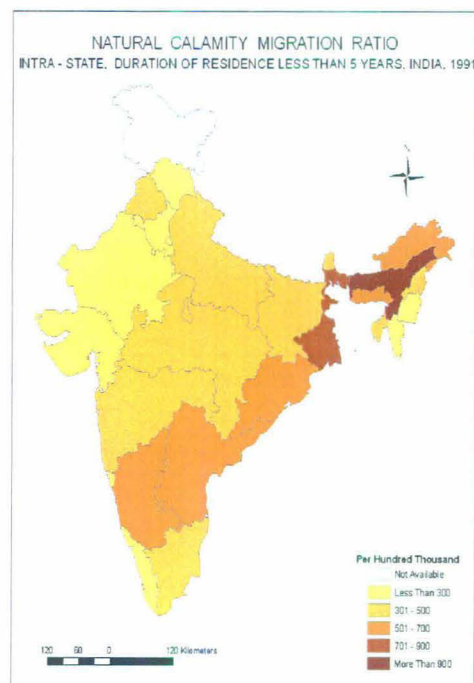
Source : Adapted from ORGCC, 1991

Map No. M.29
 Distribution of Natural Calamity Migration Ratio
 Intra State, Durations of Residence 5-9 years, India 1991



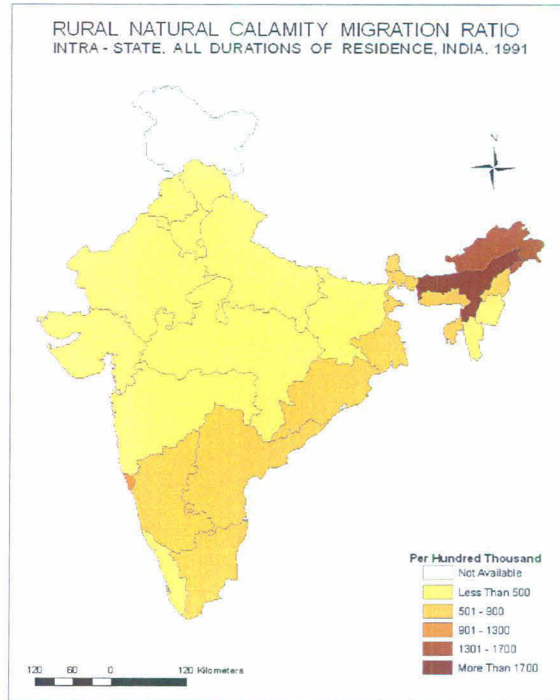
Source : Adapted from ORGCC, 1991

Map No. M.30
 Distribution of Natural Calamity Migration Ratio
 Intra State, Durations of Residence less than 5 Years, India 1991



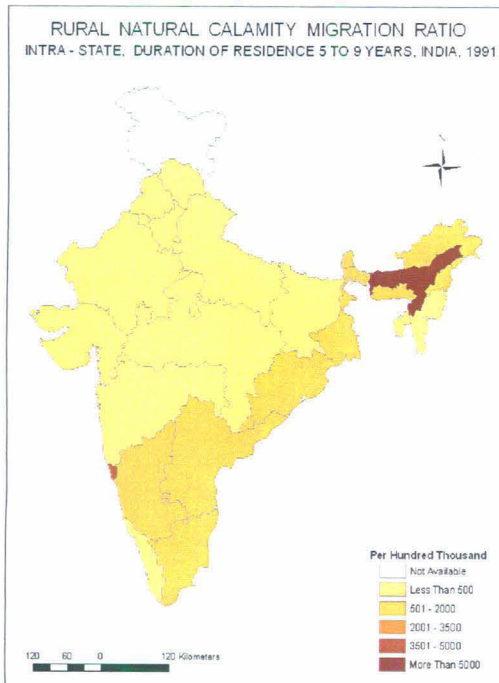
Source : Adapted from ORGCC, 1991

Map No. M.31
 Distribution of Rural Natural Calamity Migration Ratio
 Intra State, All Durations of Residence, India 1991



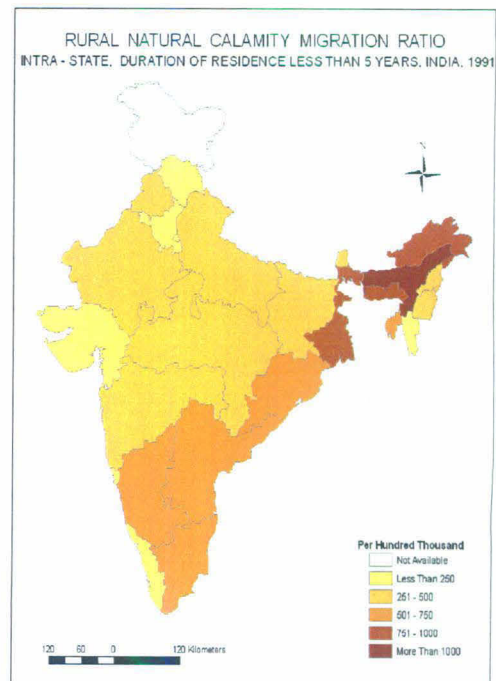
Source : Adapted from ORGCC, 1991

Map No. M.32
 Distribution of Rural Natural Calamity Migration Ratio
 Intra State, Durations of Residence 5-9 years, India 1991



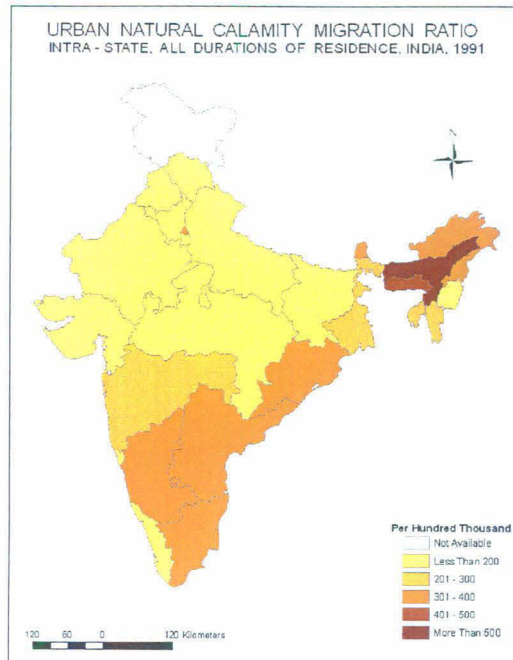
Source : Adapted from ORGCC, 1991

Map No. M.33
 Distribution of Rural Natural Calamity Migration Ratio
 Intra State, Durations of Residence less than 5 years,
 India, 1991



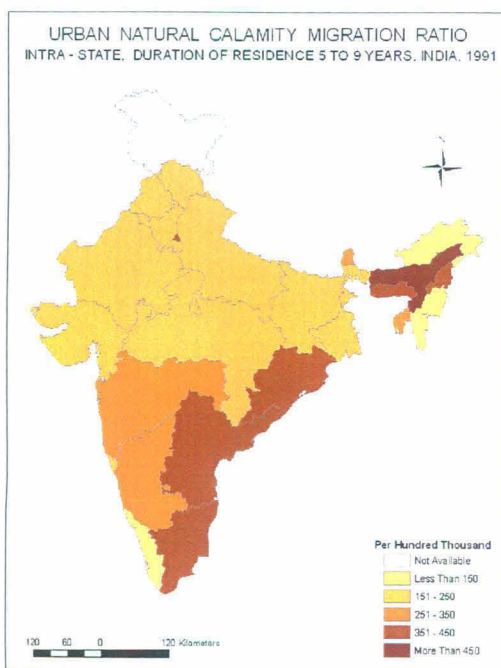
Source : Adapted from ORGCC, 1991

Map No. M.34
 Distribution of Urban Natural Calamity Migration Ratio
 Intra State, All Durations of Residence, India 1991



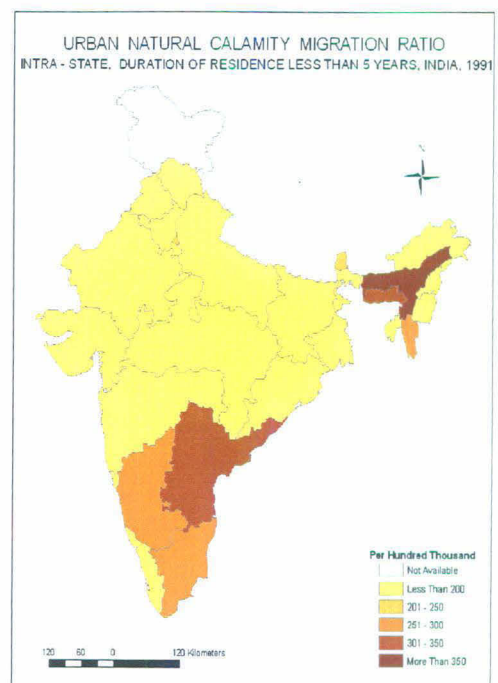
Source : Adapted from ORGCC, 1991

Map No. M.35
 Distribution of Urban Natural Calamity Migration Ratio
 Intra State, Durations of Residence 5-9 years, India 1991



Source : Adapted from ORGCC, 1991

Map No. M.36
 Distribution of Urban Natural Calamity Migration Ratio, Intra State, Duration of Residence less than 5 years, India, 1991



Source : Adapted from ORGCC, 1991

APPENDIX

**Table A.1 Percentage Distribution of Natural Calamity Migrants
All Durations of Residence, India, 1991**

Place of Last Residence	Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	8.75	7.79	10.38
Arunachal Pradesh	0.39	0.47	0.26
Assam	24.89	27.85	19.88
Bihar	5.43	5.07	6.03
Delhi	0.38	0.34	0.43
Goa	0.22	0.18	0.30
Gujarat	1.98	1.58	2.65
Haryana	0.82	0.68	1.06
Himachal Pradesh	0.43	0.40	0.48
Karnataka	7.74	8.12	7.11
Kerala	0.60	0.41	0.92
Madhya Pradesh	7.53	7.71	7.23
Maharashtra	8.34	7.56	9.67
Manipur	0.04	0.04	0.04
Meghalaya	0.31	0.31	0.30
Mizoram	0.04	0.03	0.05
Nagaland	0.08	0.07	0.09
Orissa	5.83	5.88	5.73
Punjab	1.42	1.36	1.52
Rajasthan	2.14	2.11	2.19
Sikkim	0.05	0.04	0.05
Tamil Nadu	5.39	5.00	6.06
Tripura	0.21	0.20	0.23
Uttar Pradesh	7.10	6.38	8.31
West Bengal	9.89	10.41	9.01
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.2 Percentage Distribution of Rural Natural Calamity Migrants
All Durations of Residence, India, 1991**

Place of Last Residence	Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	8.49	7.52	10.18
Arunachal Pradesh	0.41	0.48	0.28
Assam	26.84	29.76	21.73
Bihar	5.68	5.27	6.40
Delhi	0.19	0.17	0.22
Goa	0.20	0.16	0.28
Gujarat	1.78	1.45	2.36
Haryana	0.66	0.57	0.83
Himachal Pradesh	0.42	0.38	0.49
Karnataka	7.24	7.57	6.67
Kerala	0.50	0.32	0.82
Madhya Pradesh	7.65	7.84	7.33
Maharashtra	7.89	7.13	9.22
Manipur	0.04	0.04	0.04
Meghalaya	0.31	0.31	0.32
Mizoram	0.04	0.03	0.04
Nagaland	0.07	0.07	0.08
Orissa	6.09	6.10	6.07
Punjab	1.13	1.08	1.21
Rajasthan	2.15	2.13	2.19
Sikkim	0.04	0.04	0.04
Tamil Nadu	4.69	4.38	5.22
Tripura	0.21	0.20	0.22
Uttar Pradesh	7.08	6.35	8.36
West Bengal	10.21	10.66	9.42
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.3 Percentage Distribution of Urban Natural Calamity Migrants
All Durations of Residence, India, 1991**

Place of Last Residence	Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	11.87	11.50	12.34
Arunachal Pradesh	0.21	0.26	0.14
Assam	4.21	4.76	3.53
Bihar	2.71	2.59	2.85
Delhi	2.38	2.44	2.30
Goa	0.49	0.47	0.52
Gujarat	4.17	3.26	5.31
Haryana	2.52	2.05	3.11
Himachal Pradesh	0.52	0.61	0.42
Karnataka	12.98	14.61	10.95
Kerala	1.67	1.54	1.83
Madhya Pradesh	6.40	6.34	6.47
Maharashtra	13.43	13.13	13.80
Manipur	0.04	0.04	0.04
Meghalaya	0.20	0.22	0.18
Mizoram	0.04	0.02	0.07
Nagaland	0.14	0.13	0.15
Orissa	3.14	3.24	3.02
Punjab	4.48	4.73	4.18
Rajasthan	2.12	2.03	2.23
Sikkim	0.08	0.08	0.08
Tamil Nadu	12.64	12.33	13.02
Tripura	0.28	0.28	0.29
Uttar Pradesh	6.86	6.14	7.75
West Bengal	6.41	7.20	5.43
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.4 Percentage Distribution of Natural Calamity Migrants, Duration of Residence 5-9 years, India, 1991

Place of Last Residence	Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	10.37	9.56	11.49
Arunachal Pradesh	0.37	0.47	0.23
Assam	23.56	26.79	19.12
Bihar	5.73	5.59	5.94
Delhi	0.49	0.44	0.56
Goa	0.80	0.68	0.97
Gujarat	2.66	2.31	3.16
Haryana	0.82	0.71	0.97
Himachal Pradesh	0.27	0.22	0.33
Karnataka	6.34	6.73	5.81
Kerala	0.76	0.54	1.06
Madhya Pradesh	6.66	6.76	6.54
Maharashtra	7.87	6.76	9.40
Manipur	0.03	0.03	0.04
Meghalaya	0.26	0.29	0.23
Mizoram	0.04	0.04	0.04
Nagaland	0.13	0.13	0.14
Orissa	5.17	5.11	5.25
Punjab	1.87	1.76	2.02
Rajasthan	2.67	2.64	2.72
Sikkim	0.05	0.04	0.06
Tamil Nadu	5.35	4.91	5.96
Tripura	0.16	0.16	0.17
Uttar Pradesh	7.60	7.11	8.27
West Bengal	9.95	10.24	9.56
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.5 Percentage Distribution of Rural Natural Calamity Migrants, Duration of Residence 5-9 years, India, 1991

Place of Last Residence	Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	10.17	9.38	11.28
Arunachal Pradesh	0.39	0.49	0.25
Assam	25.58	28.77	21.09
Bihar	6.09	5.88	6.38
Delhi	0.28	0.25	0.32
Goa	0.83	0.71	1.01
Gujarat	2.49	2.19	2.91
Haryana	0.61	0.51	0.75
Himachal Pradesh	0.23	0.18	0.31
Karnataka	5.92	6.22	5.50
Kerala	0.64	0.46	0.90
Madhya Pradesh	6.81	6.89	6.71
Maharashtra	7.30	6.24	8.79
Manipur	0.03	0.03	0.04
Meghalaya	0.27	0.30	0.24
Mizoram	0.04	0.04	0.04
Nagaland	0.12	0.11	0.12
Orissa	5.40	5.30	5.54
Punjab	1.13	1.01	1.29
Rajasthan	2.63	2.65	2.60
Sikkim	0.05	0.04	0.06
Tamil Nadu	4.51	4.18	4.98
Tripura	0.15	0.15	0.16
Uttar Pradesh	7.65	7.15	8.35
West Bengal	10.68	10.88	10.39
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.6 Percentage Distribution of Urban Natural Calamity Migrants, Duration of Residence, 5-9 years, India, 1991

Place of Last Residence	Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	12.86	12.09	13.69
Arunachal Pradesh	0.15	0.22	0.08
Assam	3.50	4.42	2.51
Bihar	2.35	2.21	2.51
Delhi	2.57	2.59	2.54
Goa	0.53	0.40	0.66
Gujarat	4.49	3.68	5.36
Haryana	2.84	2.84	2.85
Himachal Pradesh	0.61	0.68	0.52
Karnataka	10.28	12.30	8.10
Kerala	1.86	1.37	2.40
Madhya Pradesh	5.42	5.57	5.25
Maharashtra	13.62	12.72	14.60
Manipur	0.02	0.01	0.02
Meghalaya	0.13	0.17	0.09
Mizoram	0.03	0.01	0.05
Nagaland	0.26	0.27	0.25
Orissa	3.12	3.15	3.08
Punjab	8.92	9.88	7.87
Rajasthan	3.12	2.63	3.65
Sikkim	0.05	0.05	0.05
Tamil Nadu	12.53	11.98	13.12
Tripura	0.26	0.25	0.26
Uttar Pradesh	7.28	6.94	7.64
West Bengal	3.23	3.57	2.85
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.7 Percentage Distribution of Natural Calamity Migrants, Duration of Residence Less than 5 years, India, 1991

Place of Last Residence	Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	10.91	10.32	11.74
Arunachal Pradesh	0.43	0.51	0.31
Assam	24.28	26.27	21.46
Bihar	5.93	6.06	5.75
Delhi	0.56	0.57	0.56
Goa	0.16	0.15	0.17
Gujarat	2.17	1.80	2.68
Haryana	1.11	0.89	1.41
Himachal Pradesh	0.36	0.32	0.42
Karnataka	7.63	7.90	7.24
Kerala	0.82	0.67	1.04
Madhya Pradesh	6.41	6.44	6.38
Maharashtra	8.71	8.11	9.56
Manipur	0.02	0.02	0.02
Meghalaya	0.36	0.38	0.34
Mizoram	0.03	0.02	0.04
Nagaland	0.08	0.09	0.07
Orissa	3.59	3.51	3.70
Punjab	1.84	1.95	1.68
Rajasthan	2.45	2.70	2.11
Sikkim	0.04	0.04	0.04
Tamil Nadu	4.99	4.73	5.36
Tripura	0.20	0.17	0.25
Uttar Pradesh	7.65	7.21	8.26
West Bengal	9.26	9.15	9.42
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.8 Percentage Distribution of Rural Natural Calamity Migrants, Duration of Residence Less than 5 years, India, 1991

Place of Last Residence	Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	10.55	9.94	11.44
Arunachal Pradesh	0.45	0.53	0.33
Assam	26.44	28.41	23.60
Bihar	6.29	6.42	6.12
Delhi	0.27	0.27	0.28
Goa	0.11	0.10	0.14
Gujarat	1.88	1.57	2.32
Haryana	0.84	0.71	1.02
Himachal Pradesh	0.33	0.27	0.41
Karnataka	7.09	7.35	6.70
Kerala	0.67	0.50	0.93
Madhya Pradesh	6.46	6.51	6.39
Maharashtra	8.20	7.62	9.04
Manipur	0.02	0.02	0.02
Meghalaya	0.39	0.41	0.36
Mizoram	0.02	0.02	0.02
Nagaland	0.08	0.09	0.06
Orissa	3.76	3.64	3.95
Punjab	1.61	1.72	1.46
Rajasthan	2.47	2.74	2.09
Sikkim	0.04	0.04	0.04
Tamil Nadu	4.26	4.02	4.60
Tripura	0.21	0.17	0.26
Uttar Pradesh	7.75	7.29	8.42
West Bengal	9.80	9.64	10.02
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.9 Percentage Distribution of Urban Natural Calamity Migrants, Duration of Residence Less than 5 years, India, 1991

Place of Last Residence	Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	14.67	14.67	14.66
Arunachal Pradesh	0.22	0.28	0.15
Assam	2.97	3.24	2.65
Bihar	2.23	2.05	2.44
Delhi	3.37	3.65	3.03
Goa	0.58	0.69	0.45
Gujarat	5.01	4.27	5.91
Haryana	3.67	2.81	4.68
Himachal Pradesh	0.69	0.83	0.52
Karnataka	12.86	13.73	11.81
Kerala	2.27	2.47	2.04
Madhya Pradesh	5.89	5.72	6.11
Maharashtra	13.88	13.56	14.26
Manipur	0.03	0.04	0.01
Meghalaya	0.11	0.13	0.09
Mizoram	0.09	0.06	0.13
Nagaland	0.15	0.13	0.17
Orissa	2.05	2.41	1.63
Punjab	3.99	4.35	3.56
Rajasthan	2.32	2.39	2.24
Sikkim	0.08	0.07	0.10
Tamil Nadu	12.21	12.37	12.02
Tripura	0.16	0.10	0.23
Uttar Pradesh	6.64	6.31	7.03
West Bengal	3.85	3.67	4.07
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.10 Distribution of Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Place of Last Residence	Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	499	872	323
Arunachal Pradesh	1546	2288	784
Assam	5392	10073	2566
Bihar	284	1519	132
Delhi	123	131	114
Goa	484	592	409
Gujarat	163	268	117
Haryana	187	435	116
Himachal Pradesh	264	560	152
Karnataka	648	1241	337
Kerala	83	100	73
Madhya Pradesh	391	929	191
Maharashtra	368	562	253
Manipur	397	662	235
Meghalaya	1346	1529	1119
Mizoram	395	434	362
Nagaland	701	705	696
Orissa	777	2181	367
Punjab	246	555	133
Rajasthan	191	588	91
Sikkim	456	586	338
Tamil Nadu	460	787	291
Tripura	542	849	351
Uttar Pradesh	269	1041	137
West Bengal	729	1813	336
India	496	1156	252

Source: Calculated from ORGCC, 1991

**Table A.11 : Distribution of Rural Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Place of Last Residence	Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	531	995	331
Arunachal Pradesh	1764	2704	858
Assam	5911	11417	2747
Bihar	288	1747	131
Delhi	100	102	98
Goa	785	1097	613
Gujarat	168	313	112
Haryana	172	485	97
Himachal Pradesh	275	685	152
Karnataka	735	1558	359
Kerala	85	104	75
Madhya Pradesh	430	1130	200
Maharashtra	408	665	268
Manipur	453	779	258
Meghalaya	1579	1798	1304
Mizoram	453	552	375
Nagaland	819	848	779
Orissa	812	2525	371
Punjab	231	587	119
Rajasthan	207	729	93
Sikkim	509	699	354
Tamil Nadu	522	1022	304
Tripura	595	979	369
Uttar Pradesh	282	1295	139
West Bengal	795	2182	353
India	549	1449	264

Source: Calculated from ORGCC, 1991

**Table A.12 : Distribution of Urban Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Place of Last Residence	Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	343	443	272
Arunachal Pradesh	439	523	319
Assam	818	1069	587
Bihar	203	362	136
Delhi	151	171	131
Goa	185	211	162
Gujarat	146	155	139
Haryana	245	319	206
Himachal Pradesh	196	237	149
Karnataka	389	558	258
Kerala	78	92	67
Madhya Pradesh	181	257	133
Maharashtra	230	280	190
Manipur	179	235	142
Meghalaya	426	466	376
Mizoram	187	107	284
Nagaland	402	348	481
Orissa	415	540	316
Punjab	291	485	186
Rajasthan	107	177	73
Sikkim	323	329	316
Tamil Nadu	310	394	247
Tripura	325	405	263
Uttar Pradesh	177	306	125
West Bengal	305	463	195
India	245	338	182

Source: Calculated from ORGCC, 1991

Table A.13 Distribution of Natural Calamity Migration Ratio Durations of Residence 5-9 Years, India, 1991

Place of Last Residence	Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	622	1005	433
Arunachal Pradesh	1253	1792	679
Assam	5314	10213	2761
Bihar	377	1733	187
Delhi	132	129	135
Goa	1693	1960	1495
Gujarat	236	371	173
Haryana	196	409	129
Himachal Pradesh	191	312	140
Karnataka	577	1035	338
Kerala	105	123	95
Madhya Pradesh	392	818	225
Mahrashtra	398	528	320
Manipur	373	458	317
Meghalaya	1333	1504	1112
Mizoram	408	471	352
Nagaland	950	901	1021
Orissa	777	1880	435
Punjab	344	696	214
Rajasthan	279	721	154
Sikkim	547	587	512
Tamil Nadu	506	790	360
Tripura	398	680	260
Uttar Pradesh	373	1349	201
West Bengal	794	1925	426
India	559	1156	296

Source: Calculated from ORGCC, 1991

Table A.14 : Distribution of Rural Natural Calamity Migration Ratio Durations of Residence 5-9 Years, India, 1991

Place of Last Residence	Rural Natural Calamity Migration ratio		
	Person	Male	Female
Andhra Pradesh	685	1193	457
Arunachal Pradesh	1459	2141	770
Assam	5811	11572	2970
Bihar	388	2023	190
Delhi	111	103	122
Goa	3437	4461	2800
Gujarat	256	444	176
Haryana	173	407	111
Himachal Pradesh	181	333	132
Karnataka	665	1306	373
Kerala	111	145	95
Madhya Pradesh	441	1007	244
Mahrashtra	442	617	344
Manipur	442	560	366
Meghalaya	1576	1773	1322
Mizoram	504	636	398
Nagaland	1078	1035	1140
Orissa	815	2175	442
Punjab	257	555	161
Rajasthan	302	886	155
Sikkim	670	758	605
Tamil Nadu	582	1044	383
Tripura	414	753	258
Uttar Pradesh	400	1734	207
West Bengal	902	2433	468
India	631	1467	350

Source: Calculated from ORGCC, 1991

Table A.15 Distribution of Urban Natural Calamity Migration Ratio Durations of Residence 5-9 Years, India, 1991

Place of Last Residence	Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	370	437	322
Arunachal Pradesh	283	368	167
Assam	764	1107	480
Bihar	207	329	153
Delhi	162	174	150
Goa	196	169	220
Gujarat	168	182	159
Haryana	274	419	200
Himachal Pradesh	240	268	208
Karnataka	334	491	218
Kerala	90	80	97
Madhya Pradesh	169	236	127
Mahrashtra	264	300	237
Manipur	92	71	108
Meghalaya	341	406	259
Mizoram	111	42	187
Nagaland	620	553	722
Orissa	442	541	367
Punjab	581	985	372
Rajasthan	179	245	148
Sikkim	213	219	206
Tamil Nadu	332	398	285
Tripura	316	417	252
Uttar Pradesh	225	397	157
West Bengal	168	252	116
India	266	352	210

Source: Calculated from ORGCC, 1991

**Table A.16 Distribution of Natural Calamity Migration Ratio
Durations of Residence Less than 5 Years, India, 1991**

Place of Last Residence	Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	556	748	421
Arunachal Pradesh	818	1008	568
Assam	4961	7263	3201
Bihar	439	1335	219
Delhi	142	153	130
Goa	254	298	214
Gujarat	165	206	139
Haryana	233	328	185
Himachal Pradesh	205	248	172
Karnataka	547	779	375
Kerala	95	116	82
Madhya Pradesh	318	511	206
Maharashtra	346	430	280
Manipur	275	352	213
Meghalaya	1398	1540	1218
Mizoram	233	214	253
Nagaland	480	513	429
Orissa	523	845	345
Punjab	314	570	180
Rajasthan	223	432	119
Sikkim	286	307	263
Tamil Nadu	422	593	311
Tripura	417	478	373
Uttar Pradesh	379	877	223
West Bengal	801	1484	490
India	502	806	327

Source: Calculated from ORGCC, 1991

**Table A.17 Distribution of Rural Natural Calamity Migration Ratio
Durations of Residence Less than 5 Years, India, 1991**

Place of Last Residence	Rural Natural Calamity Migration ratio		
	Person	Male	Female
Andhra Pradesh	627	878	462
Arunachal Pradesh	958	1196	653
Assam	5578	8414	3517
Bihar	462	1590	223
Delhi	113	114	110
Goa	362	409	323
Gujarat	170	225	137
Haryana	215	345	157
Himachal Pradesh	219	282	180
Karnataka	665	1010	432
Kerala	100	121	88
Madhya Pradesh	364	628	225
Maharashtra	400	514	316
Manipur	312	389	254
Meghalaya	1766	1943	1538
Mizoram	229	264	196
Nagaland	564	633	454
Orissa	579	1011	369
Punjab	344	682	186
Rajasthan	256	546	128
Sikkim	321	374	267
Tamil Nadu	522	800	363
Tripura	501	616	424
Uttar Pradesh	429	1170	239
West Bengal	923	1858	543
India	591	1032	366

Source: Calculated from ORGCC, 1991

**Table A.18 : Distribution of Urban Natural Calamity Migration Ratio
Durations of Residence, Less than 5 Years, India, 1991**

Place of Last Residence	Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	309	364	262
Arunachal Pradesh	214	247	166
Assam	479	543	410
Bihar	174	206	150
Delhi	179	205	150
Goa	163	212	114
Gujarat	149	155	145
Haryana	282	287	279
Himachal Pradesh	155	173	129
Karnataka	284	345	228
Kerala	83	107	63
Madhya Pradesh	134	158	114
Maharashtra	195	220	172
Manipur	152	249	52
Meghalaya	182	207	151
Mizoram	222	131	352
Nagaland	277	215	373
Orissa	194	238	147
Punjab	233	340	160
Rajasthan	97	126	75
Sikkim	213	166	275
Tamil Nadu	257	315	209
Tripura	141	100	179
Uttar Pradesh	167	220	133
West Bengal	188	228	158
India	204	244	170

Source: Calculated from ORGCC, 1991

**Table A.19 Distribution of Natural Calamity Migrant Sex Ratio
All Duration of Residence, India, 1991**

Place of Last Residence	Natural Calamity Migrant Sex Ratio		
	Total	Rural	Urban
Andhra Pradesh	787	777	861
Arunachal Pradesh	334	329	426
Assam	422	419	594
Bihar	702	696	885
Delhi	748	741	756
Goa	989	1014	881
Gujarat	990	930	1309
Haryana	921	838	1218
Himachal Pradesh	712	736	544
Karnataka	518	505	601
Kerala	1316	1457	952
Madhya Pradesh	555	537	818
Maharashtra	755	741	843
Manipur	577	552	900
Meghalaya	588	580	655
Mizoram	961	859	2231
Nagaland	695	657	930
Orissa	576	570	746
Punjab	660	640	709
Rajasthan	613	589	881
Sikkim	639	618	767
Tamil Nadu	717	684	846
Tripura	663	641	838
Uttar Pradesh	770	754	1012
West Bengal	512	507	605
India	591	573	802

Source: Calculated from ORGCC, 1991

**Table A.20 Distribution of Natural Calamity Migrant Sex Ratio
Durations of Residence 5 - 9 Years, India, 1991**

Place of Last Residence	Natural Calamity Migrant Sex Ratio		
	Total	Rural	Urban
Andhra Pradesh	873	853	1043
Arunachal Pradesh	356	356	333
Assam	519	520	524
Bihar	773	771	1048
Delhi	913	920	907
Goa	1034	1008	1526
Gujarat	996	942	1343
Haryana	1000	1038	926
Himachal Pradesh	1072	1201	708
Karnataka	628	627	607
Kerala	1433	1383	1615
Madhya Pradesh	704	692	868
Maharashtra	1011	1000	1058
Manipur	1032	1000	2000
Meghalaya	575	579	500
Mizoram	854	775	4000
Nagaland	783	783	846
Orissa	747	742	900
Punjab	831	900	734
Rajasthan	749	696	1280
Sikkim	1043	1071	800
Tamil Nadu	883	847	1009
Tripura	778	747	958
Uttar Pradesh	845	828	1015
West Bengal	679	678	735
India	727	710	922

Source: Calculated from ORGCC, 1991

**Table A.21 Distribution of Natural Calamity Migrant Sex Ratio
Durations of Residence Less than 5 Years, India, 1991**

Place of Last Residence	Natural Calamity Migrant Sex Ratio		
	Total	Rural	Urban
Andhra Pradesh	803	797	837
Arunachal Pradesh	428	425	455
Assam	576	575	684
Bihar	668	660	1000
Delhi	696	699	696
Goa	787	966	543
Gujarat	1049	1026	1160
Haryana	1107	1000	1394
Himachal Pradesh	917	1036	526
Karnataka	645	632	720
Kerala	1100	1295	690
Madhya Pradesh	698	679	896
Maharashtra	831	822	881
Manipur	750	870	200
Meghalaya	623	617	600
Mizoram	1097	792	1857
Nagaland	528	446	1133
Orissa	743	752	567
Punjab	606	585	686
Rajasthan	551	528	786
Sikkim	774	689	1250
Tamil Nadu	798	794	814
Tripura	1070	1023	1917
Uttar Pradesh	808	799	932
West Bengal	726	719	930
India	705	693	838

Source: Calculated from ORGCC, 1991

Table A.22 Percentage Distribution of Intra State Natural Calamity Migrants
All Duration of Residence, India, 1991

Place of Last Residence	Intra - State Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	9.31	8.27	11.06
Arunachal Pradesh	0.27	0.32	0.19
Assam	27.24	30.47	21.76
Bihar	5.53	5.18	6.13
Delhi	0.04	0.04	0.04
Goa	0.20	0.16	0.27
Gujarat	2.05	1.65	2.74
Haryana	0.44	0.32	0.63
Himachal Pradesh	0.40	0.37	0.46
Karnataka	6.89	7.17	6.40
Kerala	0.52	0.32	0.86
Madhya Pradesh	7.42	7.60	7.12
Maharashtra	7.84	7.05	9.18
Manipur	0.03	0.02	0.04
Meghalaya	0.12	0.11	0.14
Mizoram	0.04	0.03	0.05
Nagaland	0.06	0.05	0.07
Orissa	5.73	5.74	5.72
Punjab	1.17	1.13	1.25
Rajasthan	2.15	2.12	2.20
Sikkim	0.04	0.04	0.05
Tamil Nadu	5.81	5.40	6.50
Tripura	0.22	0.21	0.23
Uttar Pradesh	6.47	5.68	7.83
West Bengal	10.00	10.54	9.08
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.23 Percentage Distribution of Intra State Rural Natural Calamity Migrants
All Duration of Residence, India, 1991

Last Place of Residence	Intra - State Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	8.94	7.91	10.74
Arunachal Pradesh	0.29	0.33	0.20
Assam	28.83	31.99	23.31
Bihar	5.72	5.30	6.44
Delhi	0.01	0.01	0.01
Goa	0.19	0.15	0.26
Gujarat	1.85	1.52	2.44
Haryana	0.40	0.30	0.57
Himachal Pradesh	0.40	0.36	0.47
Karnataka	6.54	6.82	6.07
Kerala	0.46	0.27	0.78
Madhya Pradesh	7.53	7.72	7.22
Maharashtra	7.43	6.66	8.77
Manipur	0.03	0.02	0.04
Meghalaya	0.12	0.10	0.14
Mizoram	0.03	0.03	0.05
Nagaland	0.05	0.05	0.06
Orissa	5.94	5.91	6.00
Punjab	1.05	1.01	1.11
Rajasthan	2.16	2.14	2.20
Sikkim	0.04	0.04	0.04
Tamil Nadu	5.01	4.69	5.56
Tripura	0.21	0.20	0.23
Uttar Pradesh	6.46	5.66	7.85
West Bengal	10.30	10.80	9.44
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.24 Percentage Distribution of Intra State Urban Natural Calamity Migrants
All Duration of Residence, India, 1991

Last Place of Residence	Intra - State Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	14.66	14.46	14.90
Arunachal Pradesh	0.10	0.12	0.06
Assam	5.08	5.84	4.18
Bihar	2.94	3.03	2.85
Delhi	0.46	0.55	0.34
Goa	0.42	0.40	0.45
Gujarat	4.87	3.80	6.14
Haryana	0.99	0.72	1.30
Himachal Pradesh	0.36	0.43	0.28
Karnataka	11.52	12.83	9.96
Kerala	1.39	1.10	1.74
Madhya Pradesh	5.99	5.92	6.07
Maharashtra	13.66	13.53	13.82
Manipur	0.03	0.02	0.04
Meghalaya	0.16	0.16	0.15
Mizoram	0.06	0.03	0.09
Nagaland	0.08	0.07	0.10
Orissa	3.08	3.19	2.94
Punjab	2.87	3.03	2.69
Rajasthan	1.97	1.77	2.21
Sikkim	0.08	0.09	0.08
Tamil Nadu	16.69	16.79	16.57
Tripura	0.28	0.27	0.29
Uttar Pradesh	6.34	5.49	7.34
West Bengal	5.92	6.35	5.41
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.25 Percentage Distribution of Intra State Natural Calamity Migrants
Durations of Residence 5-9 Years, India, 1991

Place of Last Residence	Intra - State Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	11.05	10.16	12.26
Arunachal Pradesh	0.21	0.27	0.13
Assam	25.65	29.23	20.74
Bihar	5.98	5.88	6.13
Delhi	0.06	0.05	0.07
Goa	0.83	0.73	0.98
Gujarat	2.79	2.41	3.31
Haryana	0.39	0.28	0.56
Himachal Pradesh	0.21	0.16	0.29
Karnataka	5.85	6.07	5.54
Kerala	0.71	0.47	1.03
Madhya Pradesh	6.75	6.84	6.63
Maharashtra	7.40	6.32	8.89
Manipur	0.03	0.03	0.04
Meghalaya	0.09	0.11	0.07
Mizoram	0.03	0.03	0.04
Nagaland	0.10	0.09	0.12
Orissa	5.22	5.19	5.26
Punjab	1.12	0.94	1.36
Rajasthan	2.74	2.74	2.74
Sikkim	0.05	0.04	0.06
Tamil Nadu	5.69	5.25	6.29
Tripura	0.16	0.16	0.17
Uttar Pradesh	6.71	6.02	7.64
West Bengal	10.15	10.51	9.66
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.26 Percentage Distribution of Intra State Rural Natural Calamity Migrants
Durations of Residence 5-9 Years, India, 1991

Last Place of Residence	Intra - State Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	10.72	9.87	11.92
Arunachal Pradesh	0.22	0.28	0.14
Assam	27.30	30.77	22.41
Bihar	6.27	6.11	6.49
Delhi	0.01	0.01	0.01
Goa	0.87	0.76	1.03
Gujarat	2.61	2.28	3.07
Haryana	0.34	0.25	0.45
Himachal Pradesh	0.21	0.15	0.30
Karnataka	5.49	5.69	5.19
Kerala	0.62	0.42	0.90
Madhya Pradesh	6.83	6.88	6.75
Maharashtra	6.86	5.77	8.39
Manipur	0.03	0.03	0.04
Meghalaya	0.09	0.11	0.07
Mizoram	0.03	0.03	0.04
Nagaland	0.10	0.09	0.12
Orissa	5.39	5.30	5.52
Punjab	0.96	0.84	1.13
Rajasthan	2.69	2.73	2.64
Sikkim	0.05	0.04	0.06
Tamil Nadu	4.80	4.48	5.24
Tripura	0.15	0.15	0.16
Uttar Pradesh	6.65	5.95	7.64
West Bengal	10.70	10.99	10.30
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.27 Percentage Distribution of Intra State Urban Natural Calamity Migrants
Durations of Residence, 5-9 Years, India, 1991

Last Place of Residence	Intra - State Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	15.60	14.96	16.24
Arunachal Pradesh	0.05	0.08	0.02
Assam	3.98	5.04	2.91
Bihar	2.45	2.29	2.60
Delhi	0.70	0.69	0.72
Goa	0.46	0.37	0.55
Gujarat	5.12	4.43	5.82
Haryana	1.15	0.61	1.69
Himachal Pradesh	0.30	0.40	0.20
Karnataka	10.25	11.76	8.73
Kerala	1.84	1.22	2.45
Madhya Pradesh	5.96	6.41	5.51
Maharashtra	14.30	14.50	14.09
Manipur	0.02	0.02	0.03
Meghalaya	0.11	0.14	0.08
Mizoram	0.04	0.02	0.06
Nagaland	0.11	0.11	0.12
Orissa	3.21	3.66	2.76
Punjab	3.06	2.44	3.68
Rajasthan	3.36	3.05	3.68
Sikkim	0.07	0.08	0.06
Tamil Nadu	16.75	16.64	16.85
Tripura	0.27	0.26	0.28
Uttar Pradesh	7.34	7.18	7.51
West Bengal	3.52	3.66	3.37
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.28 Percentage Distribution of Intra State Natural Calamity Migrants
Durations of Residence Less than 5 Years, India, 1991**

Place of Last Residence	Intra - State Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	11.63	10.98	12.56
Arunachal Pradesh	0.25	0.29	0.20
Assam	26.88	29.09	23.74
Bihar	6.34	6.53	6.07
Delhi	0.06	0.07	0.05
Goa	0.06	0.05	0.08
Gujarat	2.26	1.89	2.79
Haryana	0.48	0.31	0.73
Himachal Pradesh	0.27	0.22	0.35
Karnataka	7.21	7.45	6.87
Kerala	0.58	0.41	0.81
Madhya Pradesh	6.44	6.51	6.35
Maharashtra	7.85	7.21	8.76
Manipur	0.02	0.02	0.02
Meghalaya	0.13	0.13	0.13
Mizoram	0.03	0.02	0.04
Nagaland	0.05	0.05	0.05
Orissa	3.73	3.65	3.85
Punjab	1.63	1.69	1.53
Rajasthan	2.45	2.69	2.11
Sikkim	0.04	0.04	0.04
Tamil Nadu	5.35	5.06	5.76
Tripura	0.22	0.18	0.27
Uttar Pradesh	6.21	5.70	6.95
West Bengal	9.82	9.77	9.90
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.29 Percentage Distribution of Intra State Rural Natural Calamity Migrants
Durations of Residence Less than 5 Years, India, 1991**

Last Place of Residence	Intra - State Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	11.14	10.49	12.08
Arunachal Pradesh	0.26	0.30	0.21
Assam	28.71	30.85	25.61
Bihar	6.63	6.78	6.41
Delhi	0.02	0.02	0.01
Goa	0.05	0.03	0.07
Gujarat	1.96	1.64	2.40
Haryana	0.46	0.30	0.68
Himachal Pradesh	0.25	0.19	0.34
Karnataka	6.76	7.02	6.38
Kerala	0.50	0.33	0.75
Madhya Pradesh	6.50	6.60	6.36
Maharashtra	7.37	6.77	8.23
Manipur	0.02	0.02	0.02
Meghalaya	0.13	0.13	0.14
Mizoram	0.02	0.02	0.02
Nagaland	0.05	0.05	0.05
Orissa	3.86	3.73	4.04
Punjab	1.57	1.66	1.44
Rajasthan	2.51	2.79	2.11
Sikkim	0.03	0.03	0.03
Tamil Nadu	4.51	4.24	4.91
Tripura	0.22	0.18	0.28
Uttar Pradesh	6.22	5.66	7.03
West Bengal	10.24	10.13	10.40
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.30 Percentage Distribution of Intra State Urban Natural Calamity Migrants
Durations of Residence Less than 5 Years, India, 1991**

Last Place of Residence	Intra - State Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	18.10	18.23	17.95
Arunachal Pradesh	0.13	0.15	0.11
Assam	3.80	4.25	3.29
Bihar	2.51	2.55	2.47
Delhi	0.61	0.75	0.45
Goa	0.26	0.32	0.21
Gujarat	6.12	5.35	6.99
Haryana	0.77	0.36	1.23
Himachal Pradesh	0.47	0.57	0.36
Karnataka	12.82	13.49	12.05
Kerala	1.55	1.58	1.51
Madhya Pradesh	5.54	5.23	5.89
Maharashtra	14.10	13.49	14.79
Manipur	0.01	0.00	0.01
Meghalaya	0.13	0.15	0.11
Mizoram	0.12	0.07	0.18
Nagaland	0.05	0.02	0.07
Orissa	2.33	2.70	1.92
Punjab	2.32	2.19	2.47
Rajasthan	1.74	1.46	2.05
Sikkim	0.07	0.09	0.05
Tamil Nadu	15.71	16.41	14.93
Tripura	0.18	0.13	0.23
Uttar Pradesh	6.12	6.20	6.03
West Bengal	4.44	4.25	4.66
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.31 Distribution of Intra State Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Last Place of Residence	Intra - State Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	501	884	324
Arunachal Pradesh	1490	2398	714
Assam	5845	11536	2693
Bihar	273	1586	125
Delhi	272	387	174
Goa	567	774	447
Gujarat	170	306	117
Haryana	131	359	85
Himachal Pradesh	255	608	142
Karnataka	587	1159	303
Kerala	68	74	64
Madhya Pradesh	390	983	186
Maharashtra	370	610	244
Manipur	279	387	222
Meghalaya	657	668	643
Mizoram	402	447	365
Nagaland	701	715	685
Orissa	738	2178	348
Punjab	220	564	113
Rajasthan	195	641	91
Sikkim	499	666	362
Tamil Nadu	475	832	297
Tripura	549	879	351
Uttar Pradesh	235	943	122
West Bengal	762	2260	331
India	503	1280	248

**Table A.32 Distribution of Intra State Rural Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Last Place of Residence	Intra - State Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	529	994	331
Arunachal Pradesh	1639	2739	759
Assam	6277	12724	2838
Bihar	277	1790	125
Delhi	199	399	100
Goa	931	1559	662
Gujarat	174	353	112
Haryana	128	408	79
Himachal Pradesh	263	697	143
Karnataka	662	1429	323
Kerala	72	83	67
Madhya Pradesh	425	1166	195
Maharashtra	404	712	257
Manipur	317	447	250
Meghalaya	693	705	677
Mizoram	443	542	368
Nagaland	822	861	773
Orissa	769	2478	352
Punjab	226	638	111
Rajasthan	210	771	94
Sikkim	541	764	372
Tamil Nadu	531	1053	307
Tripura	602	1006	372
Uttar Pradesh	247	1161	124
West Bengal	828	2715	347
India	550	1567	258

Source: Calculated from ORGCC, 1991

**Table A.33 Distribution of Intra State Urban Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Last Place of Residence	Intra - State Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	349	452	277
Arunachal Pradesh	316	377	230
Assam	975	1328	677
Bihar	195	384	121
Delhi	306	387	219
Goa	170	197	149
Gujarat	155	171	146
Haryana	150	203	128
Himachal Pradesh	179	224	130
Karnataka	319	458	219
Kerala	52	53	52
Madhya Pradesh	163	233	121
Maharashtra	228	290	184
Manipur	116	136	106
Meghalaya	471	480	460
Mizoram	224	130	325
Nagaland	309	248	385
Orissa	376	496	287
Punjab	194	351	121
Rajasthan	96	158	70
Sikkim	371	384	355
Tamil Nadu	333	431	262
Tripura	288	350	241
Uttar Pradesh	141	238	103
West Bengal	266	415	177
India	233	331	173

Source: Calculated from ORGCC, 1991

**Table A.34 Distribution of Intra State Natural Calamity Migration Ratio
Durations of Residence 5-9 Years, India, 1991**

Last Place of Residence	Intra - State Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	634	1028	442
Arunachal Pradesh	1048	1624	533
Assam	5687	11481	2881
Bihar	374	1846	183
Delhi	333	363	306
Goa	2315	2962	1894
Gujarat	255	439	180
Haryana	129	285	94
Himachal Pradesh	162	268	125
Karnataka	546	987	327
Kerala	94	107	88
Madhya Pradesh	406	884	230
Maharashtra	409	587	316
Manipur	386	517	311
Meghalaya	606	721	457
Mizoram	360	385	340
Nagaland	1056	997	1129
Orissa	760	1921	418
Punjab	235	499	156
Rajasthan	296	812	158
Sikkim	663	759	589
Tamil Nadu	522	830	366
Tripura	390	680	252
Uttar Pradesh	321	1181	180
West Bengal	824	2291	421
India	578	1299	329

Source: Calculated from ORGCC, 1991

**Table A.35 Distribution of Intra State Rural Natural Calamity Migration Ratio
Durations of Residence 5-9 Years, India, 1991**

Last Place of Residence	Intra - State Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	693	1205	463
Arunachal Pradesh	1184	1889	588
Assam	6116	12736	3054
Bihar	386	2131	185
Delhi	182	327	105
Goa	4719	7144	3492
Gujarat	275	518	184
Haryana	120	320	80
Himachal Pradesh	163	287	126
Karnataka	621	1224	353
Kerala	102	130	90
Madhya Pradesh	448	1058	246
Maharashtra	451	682	340
Manipur	447	610	352
Meghalaya	648	771	486
Mizoram	417	481	367
Nagaland	1267	1213	1333
Orissa	794	2180	427
Punjab	240	576	149
Rajasthan	315	957	159
Sikkim	764	926	652
Tamil Nadu	596	1087	386
Tripura	411	762	253
Uttar Pradesh	340	1476	185
West Bengal	923	2866	458
India	645	1622	350

Source: Calculated from ORGCC, 1991

**Table A.36 Distribution of Intra State Urban Natural Calamity Migration Ratio
Durations of Residence 5-9 Years, India, 1991**

Last Place of Residence	Intra - State Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	370	431	327
Arunachal Pradesh	129	191	49
Assam	818	1180	533
Bihar	189	295	144
Delhi	391	375	408
Goa	180	162	195
Gujarat	177	207	160
Haryana	178	171	181
Himachal Pradesh	155	199	108
Karnataka	304	425	220
Kerala	72	57	82
Madhya Pradesh	175	250	129
Maharashtra	262	325	219
Manipur	114	102	121
Meghalaya	391	453	313
Mizoram	147	61	228
Nagaland	371	308	452
Orissa	410	550	306
Punjab	219	304	185
Rajasthan	188	282	148
Sikkim	324	328	319
Tamil Nadu	360	435	308
Tripura	283	363	235
Uttar Pradesh	198	354	139
West Bengal	165	239	123
India	252	335	202

Source: Calculated from ORGCC, 1991

**Table A.37 Distribution of Intra State Natural Calamity Migration Ratio
Durations of Residence Less than 5 Years, India, 1991**

Last Place of Residence	Intra - State Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	566	764	428
Arunachal Pradesh	694	849	506
Assam	5403	8232	3381
Bihar	445	1444	216
Delhi	205	263	142
Goa	154	175	138
Gujarat	179	241	144
Haryana	149	206	128
Himachal Pradesh	171	205	149
Karnataka	535	779	361
Kerala	65	72	60
Madhya Pradesh	326	545	206
Maharashtra	335	430	266
Manipur	263	315	225
Meghalaya	684	712	649
Mizoram	235	218	253
Nagaland	375	370	382
Orissa	525	868	343
Punjab	328	681	181
Rajasthan	234	474	122
Sikkim	313	368	258
Tamil Nadu	437	619	320
Tripura	454	545	393
Uttar Pradesh	305	737	182
West Bengal	868	1776	506
India	522	890	329

Source: Calculated from ORGCC, 1991

**Table A.38 Distribution of Intra State Rural Natural Calamity Migration Ratio
Durations of Residence Less than 5 Years, India, 1991**

Last Place of Residence	Intra - State Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	630	884	463
Arunachal Pradesh	786	983	555
Assam	5942	9289	3651
Bihar	465	1675	221
Delhi	201	313	107
Goa	233	257	218
Gujarat	182	260	140
Haryana	160	249	130
Himachal Pradesh	176	219	152
Karnataka	637	980	409
Kerala	71	78	67
Madhya Pradesh	369	659	223
Maharashtra	383	511	295
Manipur	322	406	265
Meghalaya	761	792	722
Mizoram	213	255	177
Nagaland	474	484	461
Orissa	572	1012	362
Punjab	379	869	195
Rajasthan	266	583	131
Sikkim	346	413	281
Tamil Nadu	528	810	368
Tripura	532	674	442
Uttar Pradesh	338	946	193
West Bengal	985	2184	555
India	604	1114	363

Source: Calculated from ORGCC, 1991

**Table A.39 Distribution of Intra State Urban Natural Calamity Migration Ratio
Durations of Residence Less than 5 Years, India, 1991**

Last Place of Residence	Intra - State Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	320	370	277
Arunachal Pradesh	175	176	174
Assam	584	677	486
Bihar	177	231	139
Delhi	208	251	157
Goa	89	120	62
Gujarat	170	185	159
Haryana	102	71	120
Himachal Pradesh	140	151	123
Karnataka	266	319	219
Kerala	48	59	40
Madhya Pradesh	119	136	106
Maharashtra	186	206	169
Manipur	32	0	59
Meghalaya	320	348	285
Mizoram	262	148	408
Nagaland	104	52	173
Orissa	199	237	159
Punjab	154	212	122
Rajasthan	76	82	71
Sikkim	216	245	178
Tamil Nadu	272	338	220
Tripura	144	120	167
Uttar Pradesh	142	199	106
West Bengal	199	248	165
India	196	236	165

Source: Calculated from ORGCC, 1991

Table A.40 Percentage Distribution of Inter State Natural Calamity Migration
All Duration of Residence, India, 1991

Last Place of Residence	Inter - State Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	3.92	3.58	4.48
Arunachal Pradesh	1.41	1.72	0.89
Assam	4.48	4.95	3.69
Bihar	4.51	4.12	5.15
Delhi	3.30	2.97	3.86
Goa	0.39	0.31	0.52
Gujarat	1.34	1.02	1.88
Haryana	4.19	3.83	4.78
Himachal Pradesh	0.66	0.65	0.68
Karnataka	15.20	16.33	13.29
Kerala	1.33	1.26	1.46
Madhya Pradesh	8.45	8.60	8.19
Maharashtra	12.72	12.04	13.85
Manipur	0.15	0.21	0.05
Meghalaya	1.91	2.03	1.72
Mizoram	0.03	0.03	0.03
Nagaland	0.27	0.27	0.26
Orissa	6.64	7.13	5.82
Punjab	3.59	3.39	3.92
Rajasthan	2.08	2.06	2.11
Sikkim	0.06	0.06	0.05
Tamil Nadu	1.73	1.44	2.23
Tripura	0.17	0.17	0.17
Uttar Pradesh	12.50	12.51	12.48
West Bengal	8.96	9.27	8.44
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.41 Percentage Distribution of Inter State Rural Natural Calamity Migration
All Duration of Residence, India, 1991

Last Place of Residence	Inter - State Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	3.54	3.25	4.04
Arunachal Pradesh	1.75	2.11	1.11
Assam	5.19	5.62	4.43
Bihar	5.26	4.89	5.92
Delhi	2.12	1.89	2.51
Goa	0.31	0.22	0.46
Gujarat	1.01	0.74	1.49
Haryana	3.53	3.47	3.62
Himachal Pradesh	0.59	0.56	0.64
Karnataka	14.87	15.77	13.30
Kerala	1.03	0.90	1.26
Madhya Pradesh	8.94	9.13	8.61
Maharashtra	12.93	12.24	14.14
Manipur	0.18	0.25	0.05
Meghalaya	2.47	2.58	2.27
Mizoram	0.04	0.04	0.04
Nagaland	0.26	0.28	0.25
Orissa	7.63	8.13	6.76
Punjab	2.02	1.86	2.30
Rajasthan	1.97	1.93	2.04
Sikkim	0.06	0.06	0.05
Tamil Nadu	1.16	0.97	1.49
Tripura	0.12	0.13	0.12
Uttar Pradesh	13.89	13.89	13.88
West Bengal	9.14	9.10	9.22
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.42 Percentage Distribution of Inter State Urban Natural Calamity Migration
All Duration of Residence, India, 1991

Last Place of Residence	Inter - State Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	4.98	4.75	5.31
Arunachal Pradesh	0.48	0.58	0.35
Assam	2.08	2.31	1.74
Bihar	2.11	1.58	2.87
Delhi	7.13	6.74	7.69
Goa	0.66	0.63	0.70
Gujarat	2.44	2.01	3.05
Haryana	6.31	5.05	8.10
Himachal Pradesh	0.93	1.02	0.80
Karnataka	16.59	18.64	13.67
Kerala	2.36	2.56	2.09
Madhya Pradesh	7.42	7.31	7.57
Maharashtra	12.86	12.24	13.75
Manipur	0.06	0.07	0.05
Meghalaya	0.32	0.36	0.26
Mizoram	0.01	0.01	0.01
Nagaland	0.29	0.28	0.30
Orissa	3.30	3.35	3.22
Punjab	8.46	8.59	8.27
Rajasthan	2.47	2.62	2.26
Sikkim	0.07	0.07	0.08
Tamil Nadu	2.62	2.19	3.22
Tripura	0.29	0.30	0.28
Uttar Pradesh	8.13	7.61	8.88
West Bengal	7.63	9.14	5.48
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.43 Percentage Distribution of Inter State Natural Calamity Migration
Durations of Residence 5-9 Years, India, 1991

Last Place of Residence	Inter - State Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	3.97	3.98	3.95
Arunachal Pradesh	1.87	2.37	1.16
Assam	3.70	3.98	3.30
Bihar	3.37	2.87	4.09
Delhi	4.58	4.09	5.29
Goa	0.48	0.23	0.83
Gujarat	1.47	1.30	1.71
Haryana	4.84	4.72	5.01
Himachal Pradesh	0.76	0.79	0.72
Karnataka	11.04	12.87	8.44
Kerala	1.20	1.11	1.32
Madhya Pradesh	5.82	5.92	5.67
Maharashtra	12.34	10.92	14.37
Manipur	0.03	0.03	0.04
Meghalaya	1.86	1.95	1.73
Mizoram	0.09	0.12	0.05
Nagaland	0.40	0.44	0.33
Orissa	4.68	4.35	5.14
Punjab	9.03	9.44	8.44
Rajasthan	2.01	1.67	2.50
Sikkim	0.03	0.02	0.05
Tamil Nadu	2.12	1.67	2.77
Tripura	0.16	0.16	0.17
Uttar Pradesh	16.10	17.31	14.37
West Bengal	8.05	7.68	8.57
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.44 Percentage Distribution of Inter State Rural Natural Calamity Migration
Durations of Residence 5-9 Years, India, 1991

Last Place of Residence	Inter - State Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	3.54	3.25	4.04
Arunachal Pradesh	1.75	2.11	1.11
Assam	5.19	5.62	4.43
Bihar	5.26	4.89	5.92
Delhi	2.12	1.89	2.51
Goa	0.31	0.22	0.46
Gujarat	1.01	0.74	1.49
Haryana	3.53	3.47	3.62
Himachal Pradesh	0.59	0.56	0.64
Karnataka	14.87	15.77	13.30
Kerala	1.03	0.90	1.26
Madhya Pradesh	8.94	9.13	8.61
Maharashtra	12.93	12.24	14.14
Manipur	0.18	0.25	0.05
Meghalaya	2.47	2.58	2.27
Mizoram	0.04	0.04	0.04
Nagaland	0.26	0.28	0.25
Orissa	7.63	8.13	6.76
Punjab	2.02	1.86	2.30
Rajasthan	1.97	1.93	2.04
Sikkim	0.06	0.06	0.05
Tamil Nadu	1.16	0.97	1.49
Tripura	0.12	0.13	0.12
Uttar Pradesh	13.89	13.89	13.88
West Bengal	9.14	9.10	9.22
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.45 Percentage Distribution of Inter State Urban Natural Calamity Migration
Durations of Residence 5-9 Years, India, 1991

Last Place of Residence	Inter - State Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	5.96	5.74	6.25
Arunachal Pradesh	0.42	0.54	0.27
Assam	2.31	3.04	1.34
Bihar	2.11	2.02	2.23
Delhi	7.25	6.78	7.86
Goa	0.69	0.47	0.98
Gujarat	2.88	2.02	4.02
Haryana	7.11	7.76	6.25
Himachal Pradesh	1.38	1.32	1.47
Karnataka	10.38	13.50	6.25
Kerala	1.92	1.69	2.23
Madhya Pradesh	4.04	3.71	4.47
Maharashtra	11.92	8.77	16.08
Manipur	0.00	0.00	0.00
Meghalaya	0.19	0.24	0.13
Mizoram	0.00	0.00	0.00
Nagaland	0.63	0.64	0.63
Orissa	2.88	2.02	4.02
Punjab	23.64	26.32	20.10
Rajasthan	2.50	1.69	3.57
Sikkim	0.00	0.00	0.00
Tamil Nadu	1.92	1.69	2.23
Tripura	0.23	0.24	0.22
Uttar Pradesh	7.11	6.41	8.04
West Bengal	2.50	3.37	1.34
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.46 Percentage Distribution of Inter State Natural Calamity Migration Durations of Residence Less Than 5 Years, India, 1991

Last Place of Residence	Inter - State Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	4.69	4.61	4.79
Arunachal Pradesh	1.91	2.40	1.22
Assam	2.03	1.99	2.10
Bihar	2.45	2.06	3.00
Delhi	4.87	4.84	4.91
Goa	0.96	0.98	0.93
Gujarat	1.37	1.06	1.80
Haryana	6.47	5.96	7.19
Himachal Pradesh	1.15	1.22	1.05
Karnataka	11.20	11.77	10.39
Kerala	2.90	2.84	3.00
Madhya Pradesh	6.19	5.89	6.61
Maharashtra	16.09	15.89	16.38
Manipur	0.04	0.06	0.01
Meghalaya	2.34	2.53	2.07
Mizoram	0.03	0.04	0.03
Nagaland	0.41	0.51	0.26
Orissa	2.36	2.34	2.40
Punjab	3.65	4.18	2.90
Rajasthan	2.49	2.77	2.10
Sikkim	0.07	0.06	0.10
Tamil Nadu	1.91	1.92	1.90
Tripura	0.08	0.06	0.12
Uttar Pradesh	19.91	20.21	19.47
West Bengal	4.44	3.83	5.29
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.47 Percentage Distribution of Inter State Rural Natural Calamity Migration Durations of Residence Less Than 5 Years, India, 1991

Last Place of Residence	Inter - State Rural Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	4.25	4.00	4.61
Arunachal Pradesh	2.42	3.02	1.56
Assam	2.29	2.19	2.44
Bihar	2.69	2.48	2.98
Delhi	3.02	2.99	3.06
Goa	0.81	0.77	0.87
Gujarat	1.06	0.76	1.49
Haryana	4.87	5.05	4.61
Himachal Pradesh	1.13	1.16	1.08
Karnataka	10.58	10.87	10.17
Kerala	2.52	2.29	2.85
Madhya Pradesh	6.06	5.63	6.67
Maharashtra	17.07	16.69	17.62
Manipur	0.02	0.03	0.01
Meghalaya	3.11	3.37	2.75
Mizoram	0.04	0.04	0.04
Nagaland	0.41	0.56	0.19
Orissa	2.74	2.57	2.98
Punjab	2.07	2.38	1.63
Rajasthan	2.07	2.19	1.90
Sikkim	0.06	0.07	0.05
Tamil Nadu	1.51	1.62	1.36
Tripura	0.07	0.07	0.08
Uttar Pradesh	24.07	24.79	23.04
West Bengal	5.04	4.39	5.96
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

Table A.48 Percentage Distribution of Inter State Urban Natural Calamity Migration Durations of Residence, Less Than 5 Years, India, 1991

Last Place of Residence	Inter - State Urban Natural Calamity Migrants		
	Person	Male	Female
Andhra Pradesh	5.82	6.29	5.16
Arunachal Pradesh	0.47	0.60	0.28
Assam	0.83	0.86	0.79
Bihar	1.50	0.86	2.38
Delhi	10.49	10.47	10.51
Goa	1.40	1.57	1.15
Gujarat	2.16	1.72	2.78
Haryana	11.14	8.58	14.68
Himachal Pradesh	1.25	1.43	0.99
Karnataka	12.96	14.30	11.11
Kerala	4.15	4.58	3.57
Madhya Pradesh	6.81	6.86	6.74
Maharashtra	13.30	13.73	12.69
Manipur	0.08	0.14	0.00
Meghalaya	0.07	0.09	0.04
Mizoram	0.02	0.03	0.00
Nagaland	0.42	0.37	0.48
Orissa	1.33	1.72	0.79
Punjab	8.31	9.44	6.74
Rajasthan	3.82	4.58	2.78
Sikkim	0.12	0.03	0.24
Tamil Nadu	3.16	2.86	3.57
Tripura	0.12	0.03	0.24
Uttar Pradesh	7.98	6.58	9.92
West Bengal	2.33	2.29	2.38
India	100.00	100.00	100.00

Source: Calculated from ORGCC, 1991

**Table A.49 Distribution of Inter State Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Last Place of Residence	Inter State Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	455	685	313
Arunachal Pradesh	1652	2129	958
Assam	1060	1293	754
Bihar	504	1038	298
Delhi	117	121	111
Goa	290	286	294
Gujarat	106	97	115
Haryana	306	515	198
Himachal Pradesh	323	405	243
Karnataka	1095	1702	632
Kerala	352	405	297
Madhya Pradesh	397	655	234
Maharashtra	361	401	316
Manipur	1131	1593	370
Meghalaya	3140	3792	2341
Mizoram	334	343	320
Nagaland	701	689	723
Orissa	1293	2207	699
Punjab	370	532	256
Rajasthan	163	337	89
Sikkim	292	344	224
Tamil Nadu	237	284	201
Tripura	481	627	348
Uttar Pradesh	770	1763	395
West Bengal	516	612	400
India	444	627	298

**Table A.50 Distribution of Inter State Rural Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Last Place of Residence	Inter State Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	566	1021	347
Arunachal Pradesh	2040	2645	1157
Assam	1307	1557	962
Bihar	579	1363	315
Delhi	98	98	98
Goa	385	349	422
Gujarat	102	88	117
Haryana	293	588	159
Himachal Pradesh	434	613	300
Karnataka	1539	2705	810
Kerala	481	532	429
Madhya Pradesh	487	879	266
Maharashtra	437	479	385
Manipur	1401	2070	355
Meghalaya	4620	5637	3398
Mizoram	599	659	514
Nagaland	814	824	795
Orissa	1555	2968	775
Punjab	269	398	184
Rajasthan	177	440	89
Sikkim	347	440	229
Tamil Nadu	299	404	231
Tripura	484	666	320
Uttar Pradesh	983	2630	467
West Bengal	535	618	433
India	538	799	342

Source: Calculated from ORGCC, 1991

**Table A.51 Distribution of Inter State Urban Natural Calamity Migration Ratio
All Duration of Residence, India, 1991**

Last Place of Residence	Inter State Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	304	384	240
Arunachal Pradesh	543	644	395
Assam	416	504	312
Bihar	236	290	206
Delhi	140	155	125
Goa	215	236	193
Gujarat	111	109	113
Haryana	324	392	281
Himachal Pradesh	216	250	172
Karnataka	620	846	407
Kerala	263	321	200
Madhya Pradesh	235	316	174
Maharashtra	235	259	210
Manipur	452	453	451
Meghalaya	382	454	292
Mizoram	44	33	64
Nagaland	507	446	618
Orissa	544	668	426
Punjab	501	699	353
Rajasthan	135	216	83
Sikkim	238	233	244
Tamil Nadu	146	157	137
Tripura	470	593	357
Uttar Pradesh	351	575	237
West Bengal	428	565	271
India	281	356	216

Source: Calculated from ORGCC, 1991

**Table A.52 Distribution of Inter State Natural Calamity Migration Ratio
Durations of Residence 5-9 Years, India, 1991**

Last Place of Residence	Inter State Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	420	651	278
Arunachal Pradesh	1585	2011	981
Assam	997	1189	780
Bihar	425	797	290
Delhi	122	119	125
Goa	310	179	438
Gujarat	99	100	99
Haryana	330	539	217
Himachal Pradesh	366	462	277
Karnataka	805	1313	437
Kerala	285	309	260
Madhya Pradesh	286	453	184
Maharashtra	347	343	352
Manipur	282	220	394
Meghalaya	3081	3432	2644
Mizoram	756	913	484
Nagaland	760	758	765
Orissa	1015	1517	726
Punjab	767	1103	516
Rajasthan	163	265	119
Sikkim	150	97	208
Tamil Nadu	289	326	263
Tripura	501	679	373
Uttar Pradesh	1041	2517	519
West Bengal	555	631	480
India	426	570	313

Source: Calculated from ORGCC, 1991

**Table A.53 Distribution of Inter State Rural Natural Calamity Migration Ratio
Durations of Residence 5-9 Years, India, 1991**

Last Place of Residence	Inter State Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	469	872	268
Arunachal Pradesh	1973	2508	1215
Assam	1130	1213	1030
Bihar	457	895	319
Delhi	110	100	123
Goa	414	176	648
Gujarat	75	92	55
Haryana	320	529	219
Himachal Pradesh	401	642	225
Karnataka	1168	2084	624
Kerala	387	461	315
Madhya Pradesh	369	633	221
Maharashtra	389	394	382
Manipur	408	323	555
Meghalaya	4425	4964	3773
Mizoram	1525	1917	915
Nagaland	652	699	559
Orissa	1215	2113	776
Punjab	352	494	250
Rajasthan	172	359	106
Sikkim	253	163	348
Tamil Nadu	237	160	282
Tripura	472	627	368
Uttar Pradesh	1481	4170	676
West Bengal	701	767	636
India	495	137	675

Source: Calculated from ORGCC, 1991

**Table A.54 Distribution of Inter State Urban Natural Calamity Migration Ratio
Durations of Residence, 5-9 Years, India, 1991**

Last Place of Residence	Inter State Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	369	471	292
Arunachal Pradesh	418	518	277
Assam	595	903	294
Bihar	289	460	200
Delhi	141	155	128
Goa	231	183	277
Gujarat	136	114	155
Haryana	351	561	217
Himachal Pradesh	340	349	329
Karnataka	439	699	213
Kerala	218	213	224
Madhya Pradesh	150	193	120
Maharashtra	271	235	305
Manipur	0	0	0
Meghalaya	290	358	201
Mizoram	0	0	0
Nagaland	890	782	1096
Orissa	564	506	610
Punjab	1255	1823	815
Rajasthan	153	161	148
Sikkim	0	0	0
Tamil Nadu	121	140	106
Tripura	476	657	344
Uttar Pradesh	344	572	242
West Bengal	183	291	82
India	308	396	238

Source: Calculated from ORGCC, 1991

Table A.55 Distribution of Inter State Natural Calamity Migration Ratio Durations of Residence Less than 5 Years, India, 1991

Last Place of Residence	Inter State Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	402	524	305
Arunachal Pradesh	1028	1251	688
Assam	484	459	520
Bihar	339	436	279
Delhi	138	145	129
Goa	400	443	349
Gujarat	77	64	93
Haryana	365	443	302
Himachal Pradesh	338	369	298
Karnataka	624	780	474
Kerala	473	491	451
Madhya Pradesh	258	321	207
Maharashtra	404	433	371
Manipur	349	498	103
Meghalaya	2844	3213	2374
Mizoram	217	197	261
Nagaland	662	727	531
Orissa	494	627	382
Punjab	269	364	175
Rajasthan	159	248	95
Sikkim	210	159	283
Tamil Nadu	232	301	175
Tripura	147	110	189
Uttar Pradesh	1081	1627	726
West Bengal	324	322	326
India	375	446	307

Source: Calculated from ORGCC, 1991

Table A.56 Distribution of Inter State Rural Natural Calamity Migration Ratio Durations of Residence Less than 5 Years, India, 1991

Last Place of Residence	Inter State Rural Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	551	740	418
Arunachal Pradesh	1288	1557	873
Assam	608	553	697
Bihar	407	639	285
Delhi	110	110	110
Goa	548	566	526
Gujarat	73	54	98
Haryana	332	461	231
Himachal Pradesh	530	569	479
Karnataka	955	1278	690
Kerala	775	740	819
Madhya Pradesh	312	394	250
Maharashtra	508	526	486
Manipur	238	304	143
Meghalaya	4450	4983	3752
Mizoram	373	322	472
Nagaland	734	875	437
Orissa	708	984	527
Punjab	196	262	128
Rajasthan	172	291	102
Sikkim	227	247	199
Tamil Nadu	388	583	248
Tripura	175	174	175
Uttar Pradesh	1683	2782	1049
West Bengal	393	396	390
India	482	578	390

Source: Calculated from ORGCC, 1991

Table A.57 Distribution of Inter State Urban Natural Calamity Migration Ratio Durations of Residence, Less than 5 Years, India, 1991

Last Place of Residence	Inter State Urban Natural Calamity Migration Ratio		
	Person	Male	Female
Andhra Pradesh	246	328	172
Arunachal Pradesh	255	322	157
Assam	154	164	142
Bihar	163	118	202
Delhi	175	199	149
Goa	272	331	203
Gujarat	79	71	87
Haryana	412	411	412
Himachal Pradesh	173	200	135
Karnataka	344	419	261
Kerala	281	331	222
Madhya Pradesh	178	223	138
Maharashtra	224	260	185
Manipur	589	838	0
Meghalaya	57	79	32
Mizoram	57	79	0
Nagaland	523	418	722
Orissa	176	241	97
Punjab	368	506	240
Rajasthan	145	209	86
Sikkim	209	51	433
Tamil Nadu	150	167	134
Tripura	128	35	229
Uttar Pradesh	260	286	239
West Bengal	149	169	129
India	225	263	187

Source: Calculated from ORGCC, 1991

All Durations of Residence

Table A.58 Interstate Natural Calamity Migration, Person, All Durations of Residence, India, 1991

States	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	2.01	1.34	1.12	0.67	0.89	0.45	0.22	0.67	22.10	2.23	1.56	18.75	0.00	0.00	0.00	0.00	15.63	0.00	1.56	0.45	26.79	0.22	2.23	1.12	0.00	
Arunachal Pradesh	0.18	0.00	94.05	2.33	0.31	0.18	0.06	0.43	0.00	0.12	0.00	0.06	0.00	0.18	0.25	0.00	0.37	0.12	0.00	0.00	0.37	0.00	0.18	0.25	0.49	0.06	
Assam	3.87	1.74	0.00	23.21	0.97	2.90	0.58	2.32	0.00	0.19	0.97	0.58	1.16	5.22	0.97	1.93	1.55	0.77	0.00	2.51	0.58	9.48	8.90	28.63	0.00		
Bihar	1.56	0.00	0.39	0.00	1.76	0.98	0.78	0.20	0.00	0.00	0.20	1.95	0.59	0.00	0.00	0.00	2.54	0.00	0.78	1.95	0.78	0.20	0.00	17.97	67.38	0.00	
Goa	2.44	0.44	0.00	0.44	0.00	0.44	0.00	0.89	0.22	53.56	1.11	0.00	35.78	0.00	0.00	0.00	0.00	0.44	0.22	0.22	0.00	1.56	0.00	1.56	0.22	0.44	
Gujarat	1.97	0.00	0.68	0.66	0.00	0.00	0.66	0.00	1.32	0.66	0.66	4.61	31.58	0.00	0.00	0.66	0.00	0.00	1.32	40.13	0.66	2.63	0.00	10.53	0.66	0.66	
Haryana	0.84	0.00	0.21	1.47	0.00	0.84	0.00	1.26	2.31	0.00	0.21	0.63	0.42	0.00	0.00	0.21	0.00	0.21	37.95	22.22	0.00	0.63	0.00	23.90	0.42	6.29	
Himachal Pradesh	0.40	0.00	0.13	1.59	0.13	0.93	4.91	0.00	8.36	0.27	0.00	0.93	0.40	0.00	0.00	0.00	0.00	0.27	35.81	33.95	0.27	0.13	0.00	7.69	0.40	3.45	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	47.43	0.00	0.00	0.17	0.40	0.06	0.06	0.17	0.11	0.00	1.71	0.00	6.22	0.00	0.00	0.06	0.00	0.06	0.17	0.23	0.11	42.58	0.00	0.29	0.11	0.06	
Kerala	2.60	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	11.04	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.65	66.23	0.00	1.30	0.00	1.30	
Madhya Pradesh	1.75	0.00	0.41	6.63	0.00	1.54	0.62	0.10	0.72	0.21	0.51	0.00	12.26	0.21	0.21	0.10	0.00	24.41	3.09	10.81	0.00	0.41	0.10	33.32	1.96	0.62	
Maharashtra	9.35	0.07	0.20	1.71	0.27	8.87	0.34	0.14	0.27	39.70	1.36	20.12	0.00	0.00	0.00	0.41	0.07	0.82	0.95	2.18	0.14	3.07	0.07	8.46	0.95	0.48	
Manipur	0.59	1.18	79.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	5.33	0.00	0.00	0.00	0.59	5.33	1.78	0.59	0.00	4.73	0.00	
Meghalaya	0.18	0.00	86.45	0.82	0.00	0.00	0.00	0.14	1.18	7.16	0.50	0.00	0.54	0.23	0.00	0.05	0.00	0.41	0.00	1.00	0.05	0.14	0.36	0.32	0.36	0.05	
Mizoram	0.00	0.00	36.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.03	15.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.36	6.06	0.00	3.03	
Nagaland	0.00	0.00	66.34	10.03	0.00	0.00	0.00	0.00	0.97	0.00	3.56	0.32	0.32	2.27	0.65	0.00	0.00	3.56	0.00	0.65	0.00	0.32	2.59	1.94	6.47	0.00	
Orissa	11.03	0.13	0.26	13.79	0.00	0.00	0.39	0.53	0.53	0.79	0.39	17.91	0.79	0.26	0.79	0.00	0.13	0.00	0.66	0.39	0.53	0.26	0.13	0.92	49.38	0.00	
Punjab	0.74	0.00	0.25	6.95	0.25	0.99	21.59	10.42	4.71	0.00	0.50	2.23	2.73	0.00	0.00	0.00	0.00	0.00	0.00	9.88	0.00	0.00	0.00	22.08	2.73	14.14	
Rajasthan	1.87	0.00	0.42	1.25	0.00	7.08	15.83	0.42	0.73	0.00	0.42	26.67	2.92	0.42	0.00	0.00	0.42	20.42	0.00	0.00	0.42	0.00	16.25	3.75	0.83		
Sikkim	4.55	0.00	3.03	9.09	0.00	0.00	0.00	1.52	0.00	0.00	0.00	1.52	0.00	0.00	1.52	0.00	0.00	1.52	1.52	0.00	0.00	0.00	0.00	4.55	71.21	0.00	
Tamil Nadu	17.03	1.10	0.55	0.55	0.00	9.89	0.00	0.55	0.00	13.19	39.56	0.55	3.85	1.10	0.00	0.00	0.00	0.00	1.10	2.20	2.20	0.00	0.55	2.20	2.75	1.10	
Tripura	10.10	0.00	56.06	4.55	0.00	0.00	0.00	0.51	0.51	0.51	0.51	0.51	0.00	0.00	3.03	1.52	0.00	1.52	0.00	2.51	4.55	0.51	0.00	4.04	10.61	0.51	
Uttar Pradesh	0.07	0.49	0.21	60.53	0.28	0.42	2.64	1.04	0.80	0.28	0.21	7.92	0.90	0.00	0.07	0.14	0.07	0.35	10.01	5.07	0.00	0.14	0.14	0.00	7.16	0.97	
West Bengal	9.78	0.10	10.26	54.35	0.20	0.49	0.10	0.00	0.10	0.39	0.78	0.68	0.88	0.00	0.00	0.00	0.00	4.99	2.35	1.08	6.84	0.59	0.49	5.38	0.00	0.20	
Delhi	0.97	0.03	0.50	7.59	0.05	1.82	11.17	0.92	10.85	0.24	0.45	2.48	1.34	0.03	0.05	0.05	0.03	0.37	15.20	9.91	0.08	0.90	0.08	30.11	4.79	0.00	

Source: Calculated from ORGCC, 1991

Table A.59 Interstate Natural Calamity Migration, Male, All Durations of Residence, India, 1991

States	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	1.95	1.17	0.78	0.78	0.39	0.39	0.39	0.78	21.48	1.95	1.17	19.14	0.00	0.00	0.00	0.00	20.31	0.00	2.34	0.00	25.00	0.39	1.17	0.39	0.00	
Arunachal Pradesh	0.08	0.00	94.37	2.25	0.32	0.24	0.08	0.56	0.00	0.16	0.00	0.00	0.00	0.16	0.08	0.00	0.24	0.08	0.00	0.00	0.40	0.00	0.24	0.24	0.40	0.08	
Assam	3.35	0.84	0.00	23.46	1.40	3.35	0.00	2.23	0.00	0.28	0.56	0.56	0.56	1.68	5.59	1.40	1.96	1.68	0.84	0.00	2.51	0.56	10.61	8.66	27.93	0.00	
Bihar	1.02	0.00	0.00	0.00	0.68	1.02	0.00	0.34	0.00	0.00	0.00	1.70	0.68	0.00	0.00	0.00	0.00	2.04	0.00	2.38	0.00	0.34	0.00	13.95	75.85	0.00	
Goa	3.98	0.44	0.00	0.00	0.00	0.44	0.00	0.88	0.00	57.96	1.33	0.00	30.09	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	1.77	0.00	1.77	0.00	0.88	
Gujarat	1.39	0.00	1.39	0.00	0.00	0.00	1.39	0.00	1.39	1.39	0.00	6.94	22.22	0.00	0.00	0.00	0.00	0.00	1.39	40.28	0.00	2.78	0.00	18.06	1.39	0.00	
Haryana	1.10	0.00	0.00	2.20	0.00	1.10	0.00	1.83	1.47	0.00	0.00	0.37	0.73	0.00	0.00	0.00	0.00	0.37	38.46	22.71	0.00	0.73	0.00	26.01	0.37	2.56	
Himachal Pradesh	0.64	0.00	0.00	1.29	0.21	0.86	4.08	0.00	8.58	0.43	0.00	0.86	0.64	0.00	0.00	0.00	0.00	0.00	35.84	33.26	0.21	0.21	0.00	9.23	0.21	3.43	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	48.60	0.00	0.00	0.17	0.25	0.08	0.08	0.25	0.17	0.00	1.70	0.00	5.09	0.00	0.00	0.00	0.00	0.08	0.08	0.25	0.00	42.49	0.00	0.42	0.08	0.08	
Kerala	3.30	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	12.09	0.00	0.00	12.09	0.00	0.00	0.00	0.00	1.10	0.00	0.00	1.10	67.03	0.00	1.10	0.00	1.10	
Madhya Pradesh	2.59	0.00	0.49	6.05	0.00	1.78	0.81	0.00	0.49	0.16	0.32	0.00	11.82	0.00	0.00	0.16	0.00	27.04	2.43	9.88	0.00	0.32	0.16	32.75	2.10	0.65	
Maharashtra	10.11	0.11	0.11	1.72	0.23	7.82	0.34	0.11	0.46	37.59	1.38	22.41	0.00	0.00	0.00	0.11	0.11	0.57	1.03	2.53	0.23	2.76	0.11	8.97	0.69	0.46	
Manipur	0.87	0.00	83.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	5.37	0.00	0.00	0.00	0.67	3.38	1.34	0.67	0.00	4.03	0.00	
Meghalaya	0.27	0.00	65.28	1.02	0.14	0.00	0.00	0.07	1.23	8.32	0.48	0.00	0.41	0.27	0.00	0.07	0.00	0.41	0.00	0.82	0.07	0.00	0.34	0.41	0.41	0.00	
Mizoram	0.00	0.00	38.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.10	9.52	0.00	4.76	
Nagaland	0.00	0.00	69.19	11.62	0.00	0.00	0.00	0.00	0.00	0.00	4.04	0.51	0.00	2.02	1.01	0.00	0.00	2.53	0.00	0.51	0.00	0.00	3.54	1.52	3.54	0.00	
Orissa	10.73	0.20	0.39	11.51	0.00	0.00	0.59	0.59	0.59	0.39	0.20	18.62	0.98	0.20	0.59	0.00	0.20	0.00	0.78	0.39	0.78	0.20	0.00	0.78	51.33	0.00	
Punjab	0.41	0.00	0.00	6.61	0.41	1.24	21.49	11.98	4.55	0.00	0.00	1.24	2.07	0.00	0.00	0.00	0.00	0.00	0.00	8.26	0.00	0.00	0.00	23.97	2.48	15.29	
Rajasthan	2.68	0.00	0.67	1.34	0.00	10.07	17.45	0.67	0.87	0.00	0.00	28.19	3.38	0.00	0.00	0.00	0.00	0.67	19.48	0.00	0.00	0.67	0.00	10.07	2.68	1.34	
Sikkim	4.44	0.00	4.44	8.89	0.00	0.00	4.44	2.22	0.00	0.00	0.00	2.22	0.00	0.00	2.22	0.00	0.00	2.22	2.22	0.00	0.00	0.00	0.00	6.67	64.44	0.00	
Tamil Nadu	17.39	1.09	1.09	1.09	0.00	11.96																					

Table A.60 Interstate Natural Calamity Migration, Female, All Durations of Residence, India, 1991

States	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi		
Andhra Pradesh	0.00	2.08	1.56	1.56	1.56	0.52	0.00	0.52	22.92	2.60	2.08	18.23	0.00	0.00	0.00	0.00	9.38	0.00	0.52	1.04	29.17	0.00	3.65	2.08	0.00			
Arunachal Pradesh	0.52	0.00	92.99	2.60	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.26	0.78	0.00	0.78	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.78	0.00		
Assam	5.03	3.77	0.00	22.84	0.00	1.89	1.89	2.52	0.00	0.00	1.89	1.89	0.63	0.00	4.40	0.00	1.89	1.26	0.63	0.00	2.52	0.63	6.92	9.43	30.19	0.00		
Bihar	2.29	0.00	0.92	0.00	3.21	0.92	1.83	0.00	0.00	0.00	0.46	2.29	0.46	0.00	0.00	0.00	0.00	3.21	1.83	1.38	1.83	0.00	0.00	23.39	55.96	0.00		
Goa	0.89	0.45	0.00	0.89	0.00	0.45	0.00	0.89	0.45	49.11	0.89	0.00	41.52	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.00	1.34	0.00	1.34	0.45	0.00		
Gujarat	2.50	0.00	0.00	1.25	0.00	0.00	0.00	0.00	1.25	0.00	1.25	2.50	40.00	0.00	0.00	1.25	0.00	0.00	1.25	40.00	1.25	2.50	0.00	3.75	0.00	1.25		
Haryana	0.49	0.00	0.49	0.49	0.00	0.49	0.00	0.49	3.43	0.00	0.49	0.98	0.00	0.00	0.00	0.49	0.00	0.00	37.25	21.57	0.00	0.49	0.00	21.08	0.49	11.27		
Himachal Pradesh	0.00	0.00	0.35	2.08	0.00	1.04	6.25	0.00	7.99	0.00	0.00	1.04	0.00	0.00	0.00	0.00	0.69	35.76	35.07	0.35	0.00	0.00	0.00	5.21	0.69	3.47		
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Karnataka	45.03	0.00	0.00	0.17	0.70	0.00	0.00	0.00	0.00	0.00	1.75	0.00	8.55	0.00	0.00	0.00	0.00	0.00	0.35	0.17	0.35	42.76	0.00	0.00	0.17	0.00		
Kerala	1.59	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	17.46	0.00	0.00	9.52	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	65.08	0.00	1.59	0.00	1.59		
Madhya Pradesh	0.28	0.00	0.28	7.64	0.00	1.13	0.28	0.28	1.13	0.28	0.85	0.00	13.02	0.57	0.57	0.00	0.00	19.82	4.25	12.48	0.00	0.57	0.00	34.31	1.70	0.57		
Maharashtra	8.22	0.00	0.34	1.68	0.34	10.40	0.34	0.17	0.00	42.79	1.34	18.78	0.00	0.00	0.00	0.84	0.00	1.17	0.84	1.68	0.00	3.52	0.00	7.72	1.34	0.50		
Manipur	0.00	10.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	20.00	5.00	0.00	0.00	10.00	0.00		
Meghalaya	0.00	0.00	88.78	0.41	0.00	0.00	0.00	0.27	1.08	4.88	0.54	0.00	0.81	0.14	0.00	0.00	0.00	0.41	0.00	1.35	0.00	0.41	0.41	0.14	0.27	0.14		
Mizoram	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00		
Nagaland	0.00	0.00	61.26	7.21	0.00	0.00	0.00	0.00	2.70	0.00	2.70	0.00	0.90	2.70	0.00	0.00	0.00	5.41	0.00	0.90	0.00	0.90	0.90	2.70	11.71	0.00		
Orissa	11.65	0.00	0.00	18.47	0.00	0.00	0.00	0.40	0.40	1.61	0.80	16.47	0.40	0.40	1.20	0.00	0.00	0.00	0.40	0.40	0.40	0.40	0.40	1.20	45.38	0.00		
Punjab	1.24	0.00	0.62	7.45	0.00	0.82	21.74	8.07	4.97	0.00	1.24	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	11.80	0.00	0.00	0.00	19.25	3.11	12.42		
Rajasthan	0.00	0.00	0.00	1.10	0.00	2.20	13.19	0.00	1.10	0.00	1.10	24.18	2.20	1.10	0.00	0.00	0.00	0.00	21.98	0.00	0.00	0.00	0.00	26.37	5.49	0.00		
Sikkim	4.76	0.00	0.00	9.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.71	0.00		
Tamil Nadu	16.67	1.11	0.00	0.00	0.00	7.78	0.00	1.11	0.00	14.44	45.56	0.00	1.11	0.00	0.00	0.00	0.00	0.00	1.11	3.33	3.33	0.00	0.00	2.22	2.22	0.00		
Tripura	6.76	0.00	64.88	2.70	0.00	0.00	0.00	1.35	0.00	1.35	0.00	0.00	0.00	0.00	4.05	2.70	0.00	0.00	0.00	0.00	4.05	0.00	0.00	4.05	8.11	0.00		
Uttar Pradesh	0.00	0.00	0.00	58.85	0.37	0.93	1.86	0.56	0.74	0.56	0.56	8.75	0.74	0.00	0.19	0.19	0.00	0.19	9.87	5.03	0.00	0.00	0.00	0.00	9.31	1.30		
West Bengal	10.28	0.00	8.89	56.11	0.56	0.28	0.00	0.00	0.28	0.28	0.56	0.83	1.39	0.00	0.00	0.00	0.00	2.22	1.67	1.67	5.83	0.56	0.56	8.06	0.00	0.00		
Delhi	0.73	0.00	0.36	5.32	0.06	1.21	14.38	1.21	8.94	0.06	0.48	2.66	1.63	0.00	0.06	0.06	0.06	0.36	14.86	9.24	0.06	1.03	0.00	32.39	4.83	0.00		

Source: Calculated from ORGCC, 1991

All Durations of Residence
Rural to Rural

Table A.61 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Person, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	2.09	1.05	0.52	1.05	0.00	0.52	0.00	0.52	17.80	1.05	2.09	23.56	0.00	0.00	0.00	0.00	24.08	0.00	0.00	0.52	21.47	0.52	3.14	0.00	0.00	
Arunachal Pradesh	0.07	0.00	95.95	1.63	0.36	0.14	0.07	0.43	0.00	0.00	0.00	0.07	0.00	0.14	0.07	0.00	0.28	0.07	0.00	0.00	0.21	0.00	0.14	0.21	0.14	0.00	
Assam	2.00	2.25	0.00	21.50	1.00	3.50	0.75	3.00	0.00	0.00	0.50	1.00	0.50	1.50	5.50	1.25	2.00	1.75	0.25	0.00	2.00	0.00	11.00	8.00	30.75	0.00	
Bihar	1.08	0.00	0.00	0.00	1.88	0.54	1.08	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00	1.34	0.00	1.34	0.27	0.27	0.00	18.55	73.12	0.00	
Goa	0.00	0.53	0.00	1.06	0.00	0.00	0.00	1.06	0.53	61.70	0.53	0.00	34.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.70	11.11	0.00	0.00	0.00	0.00	0.00	0.00	74.07	0.00	0.00	0.00	7.41	0.00	0.00	
Haryana	0.00	0.00	0.00	0.47	0.00	0.00	0.00	1.88	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	36.15	0.00	0.00	0.00	26.29	0.00	1.41	
Himachal Pradesh	0.33	0.00	0.00	2.30	0.00	1.31	5.90	0.00	6.56	0.00	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.66	50.49	22.30	0.00	0.00	0.00	6.89	0.33	1.31	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	58.27	0.00	0.00	0.10	0.20	0.00	0.10	0.10	0.00	0.00	1.10	0.00	6.47	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	33.27	0.00	0.10	0.10	0.00	0.00
Kerala	1.49	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	25.37	0.00	0.00	16.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.22	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.87	0.00	0.17	6.09	0.00	0.70	0.35	0.00	0.35	0.00	0.17	0.00	9.22	0.17	0.17	0.00	0.00	26.26	1.74	13.57	0.00	0.35	0.00	39.48	0.17	0.17	
Maharashtra	6.44	0.00	0.00	0.00	0.17	6.27	0.00	0.00	0.17	47.36	0.33	36.80	0.00	0.00	0.00	0.33	0.00	0.66	0.17	0.50	0.00	0.00	0.00	0.83	0.00	0.00	
Manipur	0.00	0.00	89.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.71	0.71	0.00	0.00	3.57	0.00	
Meghalaya	0.00	0.00	91.74	0.45	0.10	0.00	0.00	0.15	0.64	5.14	0.45	0.00	0.30	0.05	0.00	0.00	0.00	0.15	0.00	0.59	0.00	0.05	0.05	0.00	0.15	0.00	
Mizoram	0.00	0.00	17.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.17	8.70	0.00	0.00	0.00	
Nagaland	0.00	0.00	73.22	8.20	0.00	0.00	0.00	0.00	0.00	0.00	3.83	0.00	0.55	2.19	1.09	0.00	0.00	3.83	0.00	0.00	0.00	0.00	0.00	1.09	6.01	0.00	
Orissa	9.00	0.00	0.00	11.02	0.00	0.00	0.00	0.73	0.37	0.18	0.00	21.75	0.92	0.18	0.73	0.00	0.18	0.00	0.18	0.00	0.00	0.00	0.18	0.73	53.82	0.00	
Punjab	0.00	0.00	0.00	4.31	0.86	0.00	30.17	25.00	4.31	0.00	0.86	0.86	1.72	0.00	0.00	0.00	0.00	0.00	0.00	16.38	0.00	0.00	0.00	13.79	0.86	0.86	
Rajasthan	0.00	0.00	0.00	1.52	0.00	8.33	21.21	0.76	0.00	0.00	0.00	34.85	0.00	0.76	0.00	0.00	0.00	0.76	18.18	0.00	0.00	0.00	0.00	12.88	0.76	0.00	
Sikkim	2.38	0.00	2.38	7.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	4.76	80.95	0.00	
Tamil Nadu	23.81	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.05	38.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	2.38	2.38	0.00	2.38	2.38	0.00	0.00	
Tripura	3.19	0.00	72.34	7.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	1.06	0.00	3.19	0.00	0.00	3.19	1.06	0.00	2.13	4.26	1.06	
Uttar Pradesh	0.09	0.28	0.09	74.16	0.00	0.09	1.86	0.74	0.09	0.00	0.09	6.69	0.09	0.09	0.00	0.00	0.09	0.09	7.62	4.18	0.00	0.00	0.00	0.00	3.62	0.09	
West Bengal	0.93	0.19	11.73	71.69	0.19	0.00	0.19	0.00	0.19	0.74	0.37	0.37	1.12	0.00	0.00	0.00	0.00	4.84	0.93	0.00	3.35	0.37	0.37	2.23	0.00	0.19	
Delhi	0.00	0.00	0.00	8.82	0.00	2.10	25.63	0.00	0.42	0.42	0.00	3.36	0.42	0.00	0.00	0.00	0.00	0.00	14.71	8.40	0.00	0.00	0.00	35.29	0.42	0.00	

Source: Calculated from ORGCC, 1991

Table A.62 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Male, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	1.79	0.89	0.00	0.89	0.00	0.00	0.00	0.89	17.86	0.89	2.68	22.32	0.00	0.00	0.00	0.00	29.46	0.00	0.00	0.00	19.64	0.89	1.79	0.00	0.00	
Arunachal Pradesh	0.09	0.00	95.98	1.37	0.37	0.18	0.09	0.55	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.27	0.09	0.00	0.00	0.27	0.00	0.18	0.18	0.18	0.00	
Assam	1.45	1.09	0.00	21.01	1.45	4.35	0.00	2.90	0.00	0.00	0.00	0.72	0.36	2.17	5.80	1.81	2.17	1.81	0.36	0.00	1.45	0.00	11.96	7.97	31.16	0.00	
Bihar	0.00	0.00	0.00	0.00	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00	1.73	0.00	0.43	0.00	14.72	80.52	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.50	0.00	0.00	22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	8.33	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	16.67	0.00	0.00	
Haryana	0.00	0.00	0.00	0.75	0.00	0.00	0.00	3.01	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.83	33.08	0.00	0.00	0.00	28.57	0.00	0.00	
Himachal Pradesh	0.55	0.00	0.00	1.66	0.00	1.66	4.97	0.00	5.52	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	51.38	21.55	0.00	0.00	0.00	9.39	0.95	1.66	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	60.03	0.00	0.00	0.15	0.00	0.00	0.15	0.15	0.00	0.00	1.20	0.00	4.64	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	33.38	0.00	0.15	0.00	0.00	
Kerala	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	23.68	0.00	0.00	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.63	0.00	0.00	0.00	0.00	
Madhya Pradesh	1.29	0.00	0.26	5.66	0.00	1.03	0.51	0.00	0.00	0.00	0.00	0.00	8.48	0.00	0.00	0.00	0.00	28.79	2.06	11.83	0.00	0.26	0.00	39.59	0.00	0.26	
Maharashtra	7.16	0.00	0.00	0.00	0.27	6.37	0.00	0.00	0.27	41.11	0.27	42.18	0.00	0.00	0.00	0.27	0.00	0.27	0.27	0.53	0.00	0.00	0.00	1.06	0.00	0.00	
Manipur	0.00	0.00	92.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	0.78	0.00	0.00	2.34	0.00	
Meghalaya	0.00	0.00	90.64	0.59	0.15	0.00	0.00	0.07	0.74	6.24	0.45	0.00	0.30	0.07	0.00	0.00	0.00	0.15	0.00	0.37	0.00	0.00	0.07	0.00	0.15	0.00	
Mizoram	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.54	15.38	0.00	0.00	0.00	
Nagaland	0.00	0.00	74.58	11.02																							

Table A.63 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	2.53	1.27	1.27	1.27	0.00	1.27	0.00	0.00	17.72	1.27	1.27	25.32	0.00	0.00	0.00	0.00	16.46	0.00	0.00	1.27	24.05	0.00	5.06	0.00	0.00	
Arunachal Pradesh	0.00	0.00	95.85	2.56	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.32	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	
Assam	3.23	4.84	0.00	22.58	0.00	1.61	2.42	3.23	0.00	0.00	1.61	1.61	0.81	0.00	4.84	0.00	1.61	1.61	0.00	0.00	3.23	0.00	8.87	8.06	29.84	0.00	
Bihar	2.84	0.00	0.00	0.00	4.26	0.71	2.84	0.00	0.00	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.71	0.00	0.00	0.00	24.82	60.99	0.00	
Goa	0.00	0.93	0.00	1.85	0.00	0.00	0.00	1.85	0.93	50.00	0.93	0.00	43.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gujarat	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33	0.00	0.00	0.00	0.00	0.00	0.00	80.00	0.00	0.00	0.00	0.00	0.00	0.00	
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.50	41.25	0.00	0.00	0.00	22.50	0.00	3.75	
Himachal Pradesh	0.00	0.00	0.00	3.23	0.00	0.81	7.26	0.00	8.06	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00	1.61	49.19	23.39	0.00	0.00	0.00	3.23	0.00	0.81	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	54.76	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.89	0.00	10.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	33.04	0.00	0.00	0.30	0.00	
Kerala	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.59	0.00	0.00	10.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.62	0.00	0.00	0.00	0.00	
Madhya Pradesh	0.00	0.00	0.00	6.99	0.00	0.00	0.00	0.00	1.08	0.00	0.54	0.00	10.75	0.54	0.54	0.00	0.00	20.97	1.08	17.20	0.00	0.54	0.00	39.25	0.54	0.00	
Maharashtra	5.24	0.00	0.00	0.00	0.00	6.11	0.00	0.00	0.00	57.64	0.44	27.95	0.00	0.00	0.00	0.44	0.00	1.31	0.00	0.44	0.00	0.00	0.00	0.44	0.00	0.00	
Manipur	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	16.67	0.00	
Meghalaya	0.00	0.00	93.93	0.15	0.00	0.00	0.00	0.30	0.44	2.96	0.44	0.00	0.30	0.00	0.00	0.00	0.00	0.15	0.00	1.04	0.00	0.15	0.00	0.00	0.15	0.00	
Mizoram	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	70.77	3.08	0.00	0.00	0.00	0.00	0.00	0.00	1.54	0.00	1.54	1.54	0.00	0.00	0.00	6.15	0.00	0.00	0.00	0.00	0.00	1.54	13.85	0.00	
Orissa	10.29	0.00	0.00	18.29	0.00	0.00	0.00	0.57	0.00	0.57	0.00	18.29	0.57	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	1.14	48.57	0.00	
Punjab	0.00	0.00	0.00	4.00	0.00	0.00	20.00	16.00	8.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	22.00	0.00	0.00	0.00	20.00	2.00	2.00	
Rajasthan	0.00	0.00	0.00	0.00	0.00	4.55	18.18	0.00	0.00	0.00	0.00	34.09	0.00	2.27	0.00	0.00	0.00	0.00	22.73	0.00	0.00	0.00	0.00	15.91	2.27	0.00	
Sikkim	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.33	0.00	
Tamil Nadu	16.67	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	45.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.17	4.17	4.17	0.00	0.00	4.17	0.00	0.00	
Tripura	3.13	0.00	78.13	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	6.25	0.00	
Uttar Pradesh	0.00	0.00	0.00	74.48	0.00	0.26	1.56	0.52	0.00	0.00	0.26	6.25	0.26	0.00	0.00	0.00	0.00	0.00	7.81	3.91	0.00	0.00	0.00	0.00	4.43	0.26	
West Bengal	2.14	0.00	10.16	71.66	0.53	0.00	0.00	0.00	0.53	0.53	0.00	0.00	1.60	0.00	0.00	0.00	0.00	3.21	1.60	0.00	2.67	0.53	0.53	4.28	0.00	0.00	
Delhi	0.00	0.00	0.00	5.00	0.00	2.00	33.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	16.00	3.00	0.00	0.00	0.00	39.00	0.00	0.00	

Source: Calculated from ORGCC, 1991

All Durations of Residence
Rural to Urban

Table A.64 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Person, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	1.83	0.00	1.83	0.00	0.92	0.00	0.00	1.83	28.44	6.42	0.92	19.27	0.00	0.00	0.00	0.00	13.76	0.00	3.67	0.00	18.35	0.00	1.83	0.92	0.00	
Arunachal Pradesh	0.00	0.00	75.31	17.28	0.00	0.00	0.00	0.00	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23	4.94	0.00	
Assam	6.98	0.00	0.00	41.86	0.00	0.00	0.00	0.00	0.00	0.00	4.65	2.33	0.00	0.00	0.00	0.00	0.00	0.00	2.33	0.00	0.00	2.33	2.33	13.95	23.26	0.00	
Bihar	1.39	0.00	1.39	0.00	1.39	1.39	0.00	1.39	0.00	0.00	0.00	6.94	1.39	0.00	0.00	0.00	0.00	9.72	1.39	5.56	0.00	0.00	0.00	27.78	40.28	0.00	
Goa	1.30	1.30	0.00	0.00	0.00	1.30	0.00	2.60	0.00	68.83	0.00	0.00	15.58	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	7.79	0.00	0.00	
Gujarat	0.00	0.00	0.00	1.75	0.00	0.00	0.00	0.00	1.75	0.00	0.00	3.51	33.33	0.00	0.00	0.00	0.00	0.00	0.00	42.11	0.00	3.51	0.00	14.04	0.00	0.00	
Haryana	0.00	0.00	1.14	4.55	0.00	3.41	0.00	1.14	1.14	0.00	1.14	2.27	0.00	0.00	0.00	0.00	0.00	0.00	39.77	12.50	0.00	0.00	0.00	31.82	0.00	1.14	
Himachal Pradesh	0.51	0.00	0.00	0.51	0.51	0.51	3.06	0.00	5.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.67	78.06	0.00	0.00	0.00	3.06	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	45.28	0.00	0.00	0.38	0.00	0.38	0.00	0.00	0.00	0.00	1.89	0.00	3.77	0.00	0.00	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.38	0.00	
Kerala	9.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.71	0.00	0.00	0.00	0.00	
Madhya Pradesh	1.62	0.00	0.00	9.95	0.00	0.54	1.08	0.54	0.00	1.08	0.54	0.00	14.60	0.00	0.54	0.54	0.00	36.24	4.87	5.95	0.00	0.54	0.00	19.20	2.16	0.00	
Maharashtra	11.67	0.00	0.00	3.42	0.40	9.66	0.20	0.00	0.40	39.24	2.21	6.24	0.00	0.00	0.00	0.60	0.20	1.01	1.61	2.01	0.00	4.63	0.00	15.69	0.60	0.20	
Manipur	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.82	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	
Meghalaya	2.41	0.00	25.30	3.61	0.00	0.00	0.00	0.00	9.64	32.53	1.20	0.00	3.61	3.61	0.00	0.00	0.00	1.20	0.00	4.82	0.00	3.61	0.00	6.02	2.41	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	37.21	9.30	0.00	0.00	0.00	0.00	0.00	0.00	4.65	2.33	0.00	2.33	0.00	0.00	0.00	9.30	0.00	2.33	0.00	0.00	16.28	4.65	11.63	0.00	
Orissa	16.50	0.00	0.97	26.21	0.00	0.00	0.00	0.00	0.00	1.94	2.91	7.77	0.00	0.00	1.94	0.00	0.00	0.00	0.97	0.00	0.97	0.97	0.00	0.97	37.86	0.00	
Punjab	0.00	0.00	0.00	11.32	0.00	0.00	15.09	9.43	3.77	0.00	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.32	0.00	0.00	0.00	39.62	3.77	3.77	
Rajasthan	2.78	0.00	2.78	2.78	0.00	5.56	2.78	0.00	0.00	0.00	2.22	5.56	0.00	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	2.78	0.00	27.78	2.78	0.00	
Sikkim	0.00	0.00	0.00	60.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	
Tamil Nadu	20.93	0.00	0.00	2.33	0.00	0.00	0.00	2.33	0.00	9.30	44.19	0.00	2.33	4.65	0.00	0.00	0.00	0.00	0.00	2.33	4.65	0.00	0.00	4.65	0.00	2.33	
Tripura	9.09	0.00	36.36	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	27.27	0.00	
Uttar Pradesh	0.00	0.00	0.00	32.08	0.00	0.00	3.77	2.83	0.00	0.00	0.94	16.98	3.77	0.00	0.94	0.00	0.00	1.89	8.49	12.26	0.00	1.89	0.00	0.00	14.15	0.00	
West Bengal	8.55	0.00	5.56	46.58	0.00	1.71	0.00	0.00	0.00	0.00	1.71	1.71	0.00	0.00	0.00	0.00	0.00	1.71	1.71	2.56	14.10	0.85	0.85	12.39	0.00	0.00	
Delhi	0.19	0.06	0.45	10.86	0.00	2.75	12.90	0.96	4.79	0.19	0.64	3.19	0.38	0.00	0.00	0.00	0.00	0.45	7.73	13.15	0.13	0.45	0.13	37.23	3.38	0.00	

Source: Calculated from ORGCC, 1991

Table A.65 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Male, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	3.17	0.00	1.59	0.00	0.00	0.00	0.00	1.59	23.81	6.35	0.00	22.22	0.00	0.00	0.00	0.00	17.46	0.00	6.35	0.00	15.87	0.00	1.59	0.00	0.00	
Arunachal Pradesh	0.00	0.00	70.00	24.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	
Assam	6.67	0.00	0.00	43.33	0.00	0.00	0.00	0.00	0.00	0.00	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	20.00	20.00	0.00	0.00	
Bihar	3.13	0.00	0.00	0.00	3.13	3.13	0.00	3.13	0.00	0.00	0.00	15.63	0.00	0.00	0.00	0.00	0.00	3.13	0.00	6.25	0.00	0.00	0.00	15.63	46.88	0.00	
Goa	2.38	2.38	0.00	0.00	0.00	0.00	0.00	4.76	0.00	80.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.41	22.22	0.00	0.00	0.00	0.00	0.00	0.00	44.44	0.00	3.70	0.00	22.22	0.00	0.00	
Haryana	0.00	0.00	0.00	7.14	0.00	3.57	0.00	0.00	1.79	0.00	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	41.07	16.07	0.00	0.00	0.00	28.57	0.00	0.00	
Himachal Pradesh	0.82	0.00	0.00	0.00	0.82	0.00	2.46	0.00	7.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.20	76.23	0.00	0.00	0.00	4.10	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	45.79	0.00	0.00	0.53	0.00	0.53	0.00	0.00	0.00	0.00	2.11	0.00	2.63	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	46.84	0.00	0.00	0.53	0.00	
Kerala	18.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.82	0.00	0.00	0.00	0.00	
Madhya Pradesh	2.87	0.00	0.00	9.93	0.00	0.96	1.91	0.00	0.00	0.96	0.00	0.00	16.24	0.00	0.00	0.96	0.00	41.07	1.91	5.73	0.00	0.96	0.00	13.66	2.87	0.00	
Maharashtra	12.46	0.00	0.00	3.46	0.00	7.61	0.00	0.00	0.69	42.21	1.73	5.88	0.00	0.00	0.00	0.00	0.35	0.35	1.73	1.38	0.00	5.19	0.00	15.92	0.69	0.35	
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	88.89	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	
Meghalaya	3.57	0.00	21.43	5.36	0.00	0.00	0.00	0.00	7.14	32.14	0.00	0.00	1.79	3.57	0.00	0.00	0.00	1.79	0.00	5.36	0.00	0.00	5.36	8.93	3.57	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	37.50	12.50	0.00	0.00	0.00	0.00	0.00	0.00	6.25	3.13	0.00	0.00	0.00	0.00	0.00	6.25	0.00	3.13	0.00	0.00	18.75	3.13	9.38	0.00	
Orissa	17.14	0.00	1.43	27.14	0.00	0.00	0.00	0.00	0.00	2.86	1.43	4.29	0.00	0.00	1.43	0.00	0.00	0.00	1.43	0.00	1.43	1.43	0.00	1.43	38.57	0.00	
Punjab	0.00	0.00	0.00	8.82	0.00	0.00	11.76	8.82	5.88	0.00	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.76	0.00	0.00	0.00	44.12	2.94	2.94	
Rajasthan	5.88	0.00	5.88	0.00	0.00	11.76	0.00	0.00	0.00	0.00	0.00	29.41	5.88	0.00	0.00	0.00	0.00	0.00	29.41	0.00	0.00	5.88	0.00	5.88	0.00	0.00	
Sikkim	0.00	0.00	0.00	75.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tamil Nadu	20.00	0.00	0.00	4.00																							

Table A.66 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Female, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	2.17	0.00	2.17	0.00	0.00	2.17	34.78	6.52	2.17	15.22	0.00	0.00	0.00	0.00	8.70	0.00	0.00	0.00	21.74	0.00	2.17	2.17	0.00	
Arunachal Pradesh	0.00	0.00	83.87	6.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.68	0.00	
Assam	7.69	0.00	0.00	38.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	7.69	0.00	0.00	30.77	0.00	
Bihar	0.00	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.50	0.00	0.00	0.00	0.00	15.00	2.50	5.00	0.00	0.00	0.00	37.50	35.00	0.00		
Goa	0.00	0.00	0.00	0.00	0.00	2.86	0.00	0.00	0.00	54.29	0.00	0.00	34.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.57	0.00	0.00	
Gujarat	0.00	0.00	0.00	3.33	0.00	0.00	0.00	0.00	3.33	0.00	0.00	0.00	43.33	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	3.33	0.00	6.67	0.00	0.00	
Haryana	0.00	0.00	3.13	0.00	0.00	3.13	0.00	3.13	0.00	0.00	3.13	3.13	0.00	0.00	0.00	0.00	0.00	0.00	37.50	6.25	0.00	0.00	0.00	37.50	0.00	3.13	
Himachal Pradesh	0.00	0.00	0.00	1.35	0.00	1.35	4.05	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.46	81.08	0.00	0.00	0.00	1.35	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Karnataka	44.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	0.00	0.00	0.00	
Madhya Pradesh	0.00	0.00	0.00	9.98	0.00	0.00	0.00	1.25	0.00	1.25	1.25	0.00	12.47	0.00	1.25	0.00	0.00	29.93	8.73	8.23	0.00	0.00	0.00	29.43	1.25	0.00	
Maharashtra	10.58	0.00	0.00	3.37	0.96	12.50	0.48	0.00	0.00	35.10	2.88	6.73	0.00	0.00	0.00	1.44	0.00	1.92	1.44	2.88	0.00	3.85	0.00	15.38	0.48	0.00	
Manipur	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	14.81	33.33	3.70	0.00	7.41	3.70	0.00	0.00	0.00	0.00	0.00	3.70	0.00	0.00	0.00	0.00	0.00	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	36.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	18.18	0.00	0.00	0.00	0.00	9.09	9.09	18.18	0.00	
Orissa	15.15	0.00	0.00	24.24	0.00	0.00	0.00	0.00	0.00	0.00	6.06	15.15	0.00	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.36	0.00
Punjab	0.00	0.00	0.00	15.79	0.00	0.00	21.05	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53	0.00	0.00	0.00	31.58	5.26	5.26	
Rajasthan	0.00	0.00	0.00	5.26	0.00	0.00	5.26	0.00	0.00	0.00	0.00	15.79	5.26	0.00	0.00	0.00	0.00	0.00	0.00	15.79	0.00	0.00	0.00	47.37	5.26	0.00	
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	
Tamil Nadu	22.22	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	22.22	38.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	5.56	0.00	0.00	0.00	0.00	0.00	
Tripura	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	
Uttar Pradesh	0.00	0.00	0.00	36.36	0.00	0.00	2.27	2.27	0.00	0.00	2.27	13.64	0.00	0.00	2.27	0.00	0.00	2.27	6.82	11.36	0.00	0.00	0.00	0.00	20.45	0.00	
West Bengal	4.26	0.00	5.32	47.87	0.00	1.06	0.00	0.00	0.00	0.00	2.13	2.13	0.00	0.00	0.00	0.00	0.00	1.06	1.06	3.19	11.70	1.06	1.06	18.09	0.00	0.00	
Delhi	0.15	0.00	0.30	7.41	0.00	1.63	18.22	1.19	2.52	0.00	0.74	3.41	0.59	0.00	0.00	0.00	0.00	0.59	7.26	12.30	0.00	0.30	0.00	40.15	3.26	0.00	

Source: Calculated from ORGCC, 1991

Table A.69 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, All Durations of Residence, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi		
Andhra Pradesh	0.00	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	27.27	0.00	9.09	9.09	0.00	0.00	0.00	0.00	4.55	0.00	0.00	0.00	40.91	0.00	0.00	0.00	4.55	0.00	
Arunachal Pradesh	3.13	0.00	81.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25	0.00	6.25	0.00	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	
Assam	0.00	0.00	0.00	42.86	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	14.29	14.29	0.00	0.00	
Bihar	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.19	0.00	0.00	44.19	0.00	0.00	0.00	0.00	2.33	2.33	2.33	0.00	2.33	0.00	0.00	2.33	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	
Haryana	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.67	0.00	0.00	0.00	0.00	0.00	0.00	20.00	20.00	0.00	0.00	0.00	13.33	6.67	26.67	0.00	
Himachal Pradesh	0.00	0.00	0.00	2.33	0.00	2.33	4.65	0.00	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.47	2.33	0.00	0.00	0.00	6.98	2.33	9.30	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	17.07	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	2.44	0.00	2.44	0.00	0.00	0.00	0.00	0.00	1.22	0.00	1.22	74.39	0.00	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	6.67	0.00	0.00	0.00	60.00	0.00	6.67	0.00	6.67	0.00	
Madhya Pradesh	4.35	0.00	4.35	4.35	0.00	4.35	0.00	0.00	4.35	0.00	0.00	0.00	21.74	0.00	0.00	0.00	0.00	8.70	4.35	8.70	0.00	0.00	0.00	30.43	0.00	4.35	0.00	
Maharashtra	8.82	0.00	0.00	5.88	0.00	14.71	0.00	0.00	0.00	41.18	0.00	26.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Manipur	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	44.44	0.00	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	22.22	0.00	0.00	0.00	0.00	
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	62.07	10.34	0.00	0.00	0.00	0.00	10.34	0.00	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	0.00	0.00	6.90	0.00	0.00	
Orissa	5.56	0.00	0.00	22.22	0.00	0.00	0.00	0.00	0.00	5.56	0.00	11.11	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	0.00	44.44	0.00	0.00	
Punjab	0.00	0.00	0.00	11.11	0.00	0.00	22.22	5.56	16.67	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	0.00	0.00	16.67	5.56	5.56	0.00	
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	
Tamil Nadu	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tripura	4.35	0.00	56.52	0.00	0.00	0.00	0.00	4.35	0.00	4.35	0.00	0.00	0.00	0.00	13.04	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	4.35	8.70	0.00	0.00	
Uttar Pradesh	0.00	0.00	0.00	12.20	0.00	0.00	7.32	0.00	0.00	0.00	0.00	19.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.95	2.44	0.00	0.00	0.00	26.83	9.76	0.00	
West Bengal	11.11	0.00	11.11	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	22.22	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Delhi	0.00	0.00	0.00	5.13	0.00	2.56	12.82	0.00	7.69	0.00	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	10.26	7.69	0.00	0.00	0.00	43.59	5.13	0.00	0.00	

Source: Calculated from ORGCC, 1991

All Durations of Residence
Urban to Urban

Table A.70 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence 0 - 9 years, India, 1991

States	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi		
Andhra Pradesh	0.00	1.05	0.00	0.00	1.05	2.11	1.05	0.00	0.00	24.21	1.05	0.00	11.58	0.00	0.00	0.00	0.00	6.32	0.00	3.16	1.05	44.21	0.00	0.00	3.16	0.00		
Arunachal Pradesh	4.76	0.00	76.19	4.76	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	
Assam	22.86	0.00	0.00	11.43	2.86	0.00	0.00	0.00	0.00	2.86	2.86	0.00	0.00	0.00	11.43	0.00	0.00	0.00	2.86	0.00	0.00	0.00	5.71	17.14	20.00	0.00	0.00	
Bihar	5.56	0.00	0.00	0.00	0.00	5.56	0.00	0.00	0.00	0.00	2.78	5.56	5.56	0.00	0.00	0.00	0.00	0.00	8.33	0.00	8.33	0.00	0.00	5.56	52.78	0.00	0.00	
Goa	4.21	0.00	0.00	0.00	0.00	1.05	0.00	0.00	0.00	45.26	3.16	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.16	0.00	1.05	0.00	2.11	0.00	
Gujarat	3.51	0.00	1.75	0.00	0.00	0.00	0.00	0.00	1.75	1.75	1.75	7.02	38.60	0.00	0.00	1.75	0.00	0.00	3.51	21.05	1.75	3.51	0.00	8.77	1.75	1.75	0.00	
Haryana	0.00	0.00	0.00	0.72	0.00	0.72	0.00	0.00	5.80	0.00	0.00	0.00	0.72	0.00	0.00	0.72	0.00	0.72	46.38	6.52	0.00	2.17	0.00	19.57	0.72	15.22	0.00	
Himachal Pradesh	0.83	0.00	0.83	0.00	0.00	0.83	6.67	0.00	19.17	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.50	26.67	0.83	0.00	0.00	10.83	0.83	9.17	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00
Karnataka	27.91	0.00	0.00	0.47	0.93	0.00	0.00	0.47	0.47	0.00	2.79	0.00	9.77	0.00	0.00	0.00	0.00	0.00	0.47	1.40	0.00	53.49	0.00	1.40	0.00	0.47	0.00	
Kerala	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.00	0.00	4.00	0.00	4.00	0.00	
Madhya Pradesh	3.03	0.00	0.00	4.55	0.00	6.82	1.52	0.00	1.52	0.00	2.27	0.00	17.42	0.76	0.00	0.00	0.00	9.09	6.06	6.06	0.00	0.76	0.76	27.27	9.09	3.03	0.00	
Maharashtra	9.47	0.00	1.05	2.11	0.35	11.93	1.40	0.00	0.35	25.61	2.11	9.47	0.00	0.00	0.00	0.35	0.00	0.70	1.75	6.32	0.70	7.37	0.35	12.98	3.51	2.11	0.00	
Manipur	7.69	15.38	30.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	15.38	0.00	0.00	23.08	0.00	0.00	
Meghalaya	0.00	0.00	21.28	10.64	0.00	0.00	0.00	0.00	6.38	21.28	0.00	0.00	4.26	0.00	0.00	2.13	0.00	8.51	0.00	10.64	0.00	2.13	4.26	2.13	4.26	2.13	0.00	
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	53.85	26.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	3.85	0.00	3.85	3.85	3.85	0.00	0.00	0.00	
Orissa	30.00	0.00	0.00	17.50	0.00	0.00	2.50	0.00	2.50	2.50	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	2.50	0.00	0.00	5.00	17.50	0.00	0.00	
Punjab	1.65	0.00	0.55	7.14	0.00	1.65	19.23	3.30	3.85	0.00	0.55	2.75	3.30	0.00	0.00	0.00	0.00	0.00	0.00	4.95	0.00	0.00	0.00	24.73	2.75	23.63	0.00	
Rajasthan	5.66	0.00	0.00	0.00	0.00	3.77	11.32	0.00	3.77	0.00	0.00	16.98	5.66	0.00	0.00	0.00	0.00	0.00	16.98	0.00	0.00	0.00	0.00	22.64	11.32	1.89	0.00	
Sikkim	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	
Tamil Nadu	13.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.24	46.55	1.72	5.17	0.00	0.00	0.00	0.00	0.00	0.00	1.72	1.72	0.00	0.00	1.72	8.62	1.72	0.00	
Tripura	36.36	0.00	30.30	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.03	6.06	0.00	0.00	0.00	18.18	0.00	0.00	
Uttar Pradesh	0.00	0.00	0.70	11.27	0.00	3.52	2.82	2.11	7.75	2.11	0.70	7.04	2.82	0.00	0.00	0.00	0.00	0.70	25.35	8.45	0.00	0.00	0.00	0.00	19.01	5.63	0.00	
West Bengal	37.66	0.00	5.84	22.08	0.00	0.65	0.00	0.00	0.00	0.00	1.30	0.65	1.95	0.00	0.00	0.00	0.00	1.95	8.44	1.30	9.09	0.00	0.65	7.79	0.00	0.65	0.00	
Delhi	1.76	0.00	0.59	4.86	0.11	0.96	7.95	1.07	17.56	0.21	0.32	1.87	2.29	0.05	0.11	0.05	0.05	0.37	21.56	7.31	0.05	1.44	0.05	22.73	6.67	0.00	0.00	

Source: Calculated from ORGCC, 1991

Table A.71 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence 0 - 9 years, India, 1991

States	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi		
Andhra Pradesh	0.00	1.75	0.00	0.00	1.75	1.75	1.75	0.00	0.00	26.32	0.00	0.00	8.77	0.00	0.00	0.00	0.00	10.53	0.00	42.11	0.00	0.00	42.11	0.00	0.00	1.75	0.00	
Arunachal Pradesh	0.00	0.00	76.92	7.69	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	
Assam	22.73	0.00	0.00	18.18	4.55	0.00	0.00	0.00	0.00	4.55	0.00	0.00	0.00	0.00	13.64	0.00	0.00	0.00	4.55	0.00	0.00	0.00	9.09	13.64	9.09	0.00	0.00	
Bihar	7.69	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	15.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	7.69	61.54	0.00	0.00	
Goa	3.45	0.00	0.00	0.00	0.00	1.72	0.00	0.00	0.00	43.10	3.45	0.00	41.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.00	1.72	0.00	3.45	0.00	
Gujarat	4.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	4.00	4.00	0.00	8.00	28.00	0.00	0.00	0.00	0.00	0.00	4.00	20.00	0.00	4.00	0.00	16.00	4.00	0.00	0.00	
Haryana	0.00	0.00	0.00	0.00	0.00	1.61	0.00	0.00	3.23	0.00	0.00	0.00	1.61	0.00	0.00	0.00	0.00	1.61	46.77	4.84	0.00	3.23	0.00	25.81	1.61	9.68	0.00	
Himachal Pradesh	1.37	0.00	0.00	0.00	0.00	1.37	5.48	0.00	20.55	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.66	28.77	0.00	0.00	0.00	8.22	0.00	8.22	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00
Karnataka	26.43	0.00	0.00	0.00	0.71	0.00	0.00	0.71	0.71	0.00	1.43	0.00	9.29	0.00	0.00	0.00	0.00	0.00	0.00	1.43	0.00	56.43	0.00	2.14	0.00	0.71	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.25	0.00	6.25	0.00	6.25	0.00	
Madhya Pradesh	5.88	0.00	0.00	1.47	0.00	8.82	1.47	0.00	1.47	0.00	2.94	0.00	17.65	0.00	0.00	0.00	0.00	10.29	4.41	4.41	0.00	0.00	1.47	23.53	11.76	4.41	0.00	
Maharashtra	9.26	0.00	0.62	3.09	0.62	10.49	1.85	0.00	0.62	23.46	3.09	8.64	0.00	0.00	0.00	0.00	0.00	1.23	1.85	9.88	1.23	4.94	0.62	14.81	1.85	1.85	0.00	
Manipur	10.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	10.00	0.00	0.00	30.00	0.00	0.00	
Meghalaya	0.00	0.00	23.08	11.54	0.00	0.00	0.00	0.00	7.69	23.08	0.00	0.00	0.00	0.00	0.00	3.85	0.00	7.69	0.00	11.54								

Table A.72 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence 0 - 9 years, India, 1991

States	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	2.63	0.00	0.00	0.00	21.05	2.63	0.00	15.79	0.00	0.00	0.00	0.00	0.00	0.00	2.63	2.63	47.37	0.00	0.00	5.26	0.00
Arunachal Pradesh	12.50	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	23.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.08	38.46	0.00
Bihar	4.35	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	4.35	8.70	0.00	0.00	0.00	0.00	0.00	0.00	13.04	0.00	13.04	0.00	0.00	4.35	47.83	0.00
Goa	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.65	2.70	0.00	37.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.41	0.00	0.00	0.00	0.00
Gujarat	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13	6.25	46.88	0.00	0.00	3.13	0.00	0.00	3.13	21.88	3.13	3.13	0.00	3.13	0.00	3.13
Haryana	0.00	0.00	0.00	1.32	0.00	0.00	0.00	0.00	7.89	0.00	0.00	0.00	0.00	0.00	0.00	1.32	0.00	0.00	46.05	7.89	0.00	1.32	0.00	14.47	0.00	19.74
Himachal Pradesh	0.00	0.00	2.13	0.00	0.00	0.00	8.51	0.00	17.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.15	23.40	2.13	0.00	0.00	14.89	2.13	10.64
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	30.67	0.00	0.00	1.33	1.33	0.00	0.00	0.00	0.00	0.00	5.33	0.00	10.67	0.00	0.00	0.00	0.00	0.00	1.33	1.33	0.00	48.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	7.81	0.00	4.69	1.56	0.00	1.56	0.00	1.56	0.00	17.19	1.56	0.00	0.00	0.00	7.81	7.81	7.81	0.00	1.56	0.00	31.25	6.25	1.56
Maharashtra	9.76	0.00	1.63	0.81	0.00	13.82	0.81	0.00	0.00	28.46	0.81	10.57	0.00	0.00	0.00	0.81	0.00	0.00	1.63	1.63	0.00	10.57	0.00	10.57	5.69	2.44
Manipur	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	19.05	9.52	0.00	0.00	0.00	0.00	4.76	19.05	0.00	0.00	9.52	0.00	0.00	0.00	0.00	9.52	0.00	9.52	0.00	4.76	4.76	0.00	4.76	4.76
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	16.67	0.00	0.00
Orissa	27.78	0.00	0.00	11.11	0.00	0.00	0.00	0.00	5.56	5.56	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	5.56	5.56	0.00	0.00	0.00	5.56	22.22	0.00
Punjab	2.82	0.00	1.41	7.04	0.00	1.41	21.13	2.82	1.41	0.00	1.41	4.23	7.04	0.00	0.00	0.00	0.00	0.00	0.00	7.04	0.00	0.00	0.00	16.90	2.82	22.54
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	4.35	0.00	0.00	13.04	4.35	0.00	0.00	0.00	0.00	0.00	26.09	0.00	0.00	0.00	0.00	34.78	13.04	0.00
Sikkim	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.33	0.00
Tamil Nadu	13.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33	56.67	0.00	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	0.00	0.00	3.33	6.67	0.00
Tripura	33.33	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	14.75	0.00	6.56	0.00	0.00	6.56	4.92	1.64	11.48	4.92	0.00	0.00	0.00	0.00	0.00	18.03	9.84	0.00	0.00	0.00	0.00	18.03	3.28
West Bengal	42.59	0.00	7.41	29.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.41	0.00	0.00	7.41	0.00	0.00
Delhi	1.20	0.00	0.48	3.59	0.12	0.72	8.97	1.44	15.31	0.00	0.24	2.27	2.63	0.00	0.12	0.12	0.12	0.24	21.17	7.66	0.12	1.79	0.00	25.00	6.70	0.00

Source: Calculated from ORGCC, 1991

Table A.75 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	92.00	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	4.76	4.76	0.00	33.33	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	4.76	28.57	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	66.67	0.00
Goa	0.00	0.00	0.00	3.57	0.00	0.00	0.00	0.00	0.00	21.43	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	53.33	0.00	0.00	0.00	13.33	0.00	0.00
Himachal Pradesh	0.00	0.00	0.00	11.76	0.00	0.00	0.00	0.00	11.76	0.00	0.00	5.88	0.00	0.00	0.00	0.00	0.00	5.88	35.29	11.76	0.00	0.00	0.00	17.65	0.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	50.00	0.00	0.00	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.50	0.00	0.00	0.00	0.00
Kerala	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	4.17	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	25.00	0.00	8.33	0.00	0.00	0.00	37.50	0.00	0.00
Maharashtra	6.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.42	3.03	45.45	0.00	0.00	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manipur	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	96.69	0.00	0.00	0.00	0.00	0.83	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	44.44	11.11	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	11.11	0.00	0.00	0.00	0.00	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	8.33	0.00	0.00	20.83	0.00	0.00	0.00	0.00	0.00	4.17	0.00	20.83	0.00	0.00	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.67
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	22.22	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	11.11	11.11	11.11
Rajasthan	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00
Sikkim	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00
Tamil Nadu	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	20.00	0.00	0.00
Tripura	0.00	0.00	71.43	28.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	83.72	0.00	0.00	2.33	0.00	0.00	0.00	0.00	1.16	0.00	0.00	0.00	0.00	0.00	0.00	3.49	5.81	0.00	0.00	0.00	0.00	2.33	1.16
West Bengal	0.00	0.00	9.80	84.31	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delhi	0.00	0.00	0.00	0.00	0.00	0.00	38.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	50.00	0.00	0.00

Source: Calculated from ORGCC, 1991

Duration of Residence 5 - 9 years
Rural to Urban

Table A.76 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	5.88	0.00	0.00	0.00	0.00	0.00	29.41	17.65	0.00	11.76	0.00	0.00	0.00	0.00	17.65	0.00	0.00	0.00	17.65	0.00	0.00	0.00	0.00	
Arunachal Pradesh	0.00	0.00	40.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	
Assam	0.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	
Bihar	11.11	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	11.11	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	65.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	12.50	0.00	0.00	0.00	0.00	0.00	0.00	37.50	0.00	0.00	0.00	37.50	0.00	0.00	
Haryana	0.00	0.00	0.00	5.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	45.00	10.00	0.00	0.00	0.00	25.00	0.00	0.00	
Himachal Pradesh	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.74	65.22	0.00	0.00	0.00	4.35	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.29	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
Madhya Pradesh	0.00	0.00	0.00	20.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	25.00	5.00	10.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	
Maharashtra	12.20	0.00	0.00	6.10	0.00	4.88	0.00	0.00	0.00	36.59	1.22	6.10	0.00	0.00	0.00	1.22	0.00	0.00	1.22	0.00	0.00	9.76	0.00	19.51	1.22	0.00	
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	57.14	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.14	21.43	7.14	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	37.50	37.50	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	
Orissa	7.69	0.00	0.00	46.15	0.00	0.00	0.00	0.00	0.00	7.69	15.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.08	0.00	
Punjab	0.00	0.00	0.00	15.79	0.00	0.00	15.79	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53	0.00	0.00	0.00	42.11	5.26	0.00	
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	42.86	0.00	0.00	0.00	0.00	42.86	0.00	0.00	
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	
Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uttar Pradesh	0.00	0.00	0.00	42.86	0.00	0.00	7.14	7.14	0.00	0.00	0.00	7.14	0.00	0.00	0.00	0.00	0.00	0.00	21.43	14.29	0.00	0.00	0.00	0.00	0.00	0.00	
West Bengal	0.00	0.00	9.09	59.09	0.00	4.55	0.00	0.00	0.00	0.00	0.00	4.55	0.00	0.00	0.00	0.00	0.00	4.55	0.00	4.55	4.55	0.00	0.00	9.09	0.00	0.00	
Delhi	0.24	0.24	0.47	16.00	0.00	0.47	13.41	0.24	0.24	0.24	1.18	3.76	0.71	0.00	0.00	0.00	0.00	0.71	2.59	8.94	0.00	0.24	0.00	44.71	5.65	0.00	

Source: Calculated from ORGCC, 1991

Table A.77 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.27	18.18	0.00	18.18	0.00	0.00	0.00	0.00	27.27	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	
Arunachal Pradesh	0.00	0.00	23.08	69.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	
Assam	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	
Bihar	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	50.00	0.00	0.00	
Haryana	0.00	0.00	0.00	9.09	0.00	9.09	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	45.45	18.18	0.00	0.00	0.00	9.09	0.00	0.00	
Himachal Pradesh	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	66.67	0.00	0.00	0.00	5.56	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	57.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.58	0.00	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
Madhya Pradesh	0.00	0.00	0.00	18.18	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	0.00	0.00	18.18	0.00	9.09	0.00	0.00	0.00	27.27	0.00	0.00	
Maharashtra	16.67	0.00	0.00	7.14	0.00	7.14	0.00	0.00	0.00	23.81	0.00	11.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	16.67	0.00	0.00	
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	37.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	37.50	12.50	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	33.33	50.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Orissa	0.00	0.00	0.00	57.14	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.57	0.00	
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	25.00	8.33	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	33.33	8.33	0.00	
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tamil Nadu	0.00	0.00	0.																								

Table A.78 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	33.33	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	71.43	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00
Assam	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	20.00	0.00	0.00
Goa	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	46.15	0.00	0.00	46.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	44.44	0.00	0.00	0.00	0.00	44.44	0.00	0.00	0.00
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.56	0.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	11.11	11.11	0.00	0.00	0.00	22.22	0.00	0.00	
Maharashtra	7.50	0.00	0.00	5.00	0.00	2.50	0.00	0.00	0.00	50.00	2.50	0.00	0.00	0.00	0.00	2.50	0.00	0.00	2.50	0.00	0.00	2.50	0.00	22.50	2.50	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	83.33	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00
Orissa	16.67	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00
Punjab	0.00	0.00	0.00	42.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.14	0.00	0.00	0.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	60.00	0.00	0.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Bengal	0.00	0.00	10.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	10.00	10.00	0.00	0.00	10.00	0.00	0.00	0.00
Delhi	0.49	0.00	0.49	13.59	0.00	0.00	18.93	0.00	0.00	0.00	0.97	4.85	0.49	0.00	0.00	0.00	0.00	0.97	1.46	8.25	0.00	0.00	0.00	43.20	6.31	0.00	

Source: Calculated from ORGCC, 1991

Duration of Residence 5 - 9 years
Urban to Rural

Table A.79 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	94.44	0.00	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	33.33	0.00	16.67	0.00	0.00	16.67	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.14	0.00	0.00	42.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	16.67	0.00	0.00	0.00	16.67	16.67	16.67
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	6.25	0.00	6.25	0.00	0.00	0.00	3.13	0.00	0.00	0.00	0.00	0.00	53.13	6.25	0.00	0.00	0.00	18.75	0.00	6.25
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	36.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	80.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	22.22	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	11.11	0.00	0.00	0.00	44.44	0.00	0.00
Maharashtra	15.38	0.00	0.00	0.00	0.00	15.38	0.00	0.00	0.00	38.46	0.00	23.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	75.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	71.43	14.29	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00
Orissa	0.00	0.00	0.00	37.50	0.00	0.00	0.00	0.00	0.00	12.50	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	12.50	12.50	0.00	0.00	0.00	0.00	12.50	0.00
Punjab	0.00	0.00	0.00	10.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	5.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	10.00	35.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	47.62	0.00	0.00	4.76	0.00	0.00	0.00	0.00	23.81	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	0.00	0.00	0.00	14.29	0.00
West Bengal	14.29	0.00	14.29	57.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00
Delhi	0.00	0.00	0.00	10.00	0.00	10.00	10.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00

Source: Calculated from ORGCC, 1991

Table A.80 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	92.31	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	25.00	0.00	25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	33.33	0.00	0.00	0.00	0.00	0.00	0.00
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	5.56	0.00	0.00	0.00	5.56	0.00	0.00	0.00	0.00	0.00	38.89	11.11	0.00	0.00	0.00	22.22	0.00	11.11
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	60.00	0.00	0.00
Maharashtra	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	66.67	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00
Orissa	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	33.33	0.00	0.00	0.00	0.00	0.00	0.00
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	60.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	0.00	0.00	0.00	0.00																						

Table A.81 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.64	0.00	0.00	36.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	33.33	33.33
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	7.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.43	0.00	0.00	0.00	0.00	14.29	0.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00
Maharashtra	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	0.00	55.56	0.00	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	54.55	27.27	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00
Punjab	0.00	0.00	0.00	20.00	0.00	0.00	10.00	0.00	20.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	10.00	10.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	0.00	0.00	0.00	33.33	0.00
West Bengal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delhi	0.00	0.00	0.00	0.00	0.00	20.00	20.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00

Source: Calculated from ORGCC, 1991

Duration of Residence 5 - 9 years
Urban to Urban

Table A.82 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.32	0.00	0.00	5.26	0.00	0.00	0.00	0.00	15.79	0.00	5.26	0.00	47.37	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	75.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	33.33	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00
Goa	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.45	13.64	0.00	27.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.55	0.00	4.55	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.54	0.00	0.00	7.69	0.00	0.00	0.00	30.77	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	3.70	0.00	0.00	0.00	22.22	0.00	7.41
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.21	50.00	2.63	0.00	0.00	2.63	0.00	5.26
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	27.59	0.00	0.00	0.00	3.45	0.00	0.00	0.00	0.00	0.00	10.34	0.00	3.45	0.00	0.00	0.00	0.00	0.00	0.00	6.90	0.00	41.38	0.00	3.45	0.00	3.45
Kerala	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	41.67	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	33.33	0.00	0.00
Maharashtra	18.37	0.00	0.00	0.00	0.00	6.12	0.00	0.00	0.00	22.45	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	4.08	4.08	0.00	12.24	0.00	14.29	4.08	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	33.33	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	66.67	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	14.29	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	14.29	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	28.57	0.00
Punjab	1.98	0.00	0.99	11.88	0.00	0.99	13.86	3.96	0.00	0.00	0.00	3.96	1.98	0.00	0.00	0.00	0.00	0.00	0.00	1.98	0.00	0.00	0.00	25.74	1.98	30.69
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	20.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	30.00	10.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	50.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	83.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	6.25	18.75	0.00	0.00	0.00	6.25	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.75	12.50	0.00	0.00	0.00	12.50	12.50
West Bengal	16.67	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	16.67
Delhi	1.10	0.00	0.27	7.69	0.00	0.55	6.87	1.10	4.40	0.27	0.55	2.47	1.92	0.00	0.00	0.00	0.00	0.55	14.84	14.29	0.00	2.47	0.27	30.49	9.89	0.00

Source: Calculated from ORGCC, 1991

Table A.83 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.27	0.00	9.09	0.00	45.45	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	66.67	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	20.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00
Goa	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.45	18.18	0.00	18.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.71	5.88	0.00	0.00	0.00	29.41	0.00
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	61.90	0.00	0.00	0.00	0.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	25.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	45.00	0.00	5.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	16.67	0.00	0.00
Maharashtra	22.73	0.00	0.00	0.00	0.00	4.55	0.00	0.00	0.00	13.64	0.00	13.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.55	9.09	0.00	13.64	0.00	13.64	4.55
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	25.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	88.89	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	33.33	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00
Punjab	1.47	0.00	0.00	11.76	0.00	1.47	13.24	4.41	0.00	0.00	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94	0.00	0.00	0.00	30.88	1.47	29.41
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	25.00	0.00	0.00																							

Table A.84 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence 5 - 9 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.50	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.45	9.09	0.00	36.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.56	0.00	0.00	11.11	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	10.00	0.00	20.00	
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.29	35.29	5.88	0.00	0.00	5.88	0.00	11.76	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	33.33	0.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	50.00	0.00	0.00	0.00
Maharashtra	14.81	0.00	0.00	0.00	0.00	7.41	0.00	0.00	0.00	29.63	0.00	14.81	0.00	0.00	0.00	0.00	0.00	0.00	3.70	0.00	0.00	11.11	0.00	14.81	3.70	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	50.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	25.00	0.00	0.00
Punjab	3.03	0.00	3.03	12.12	0.00	0.00	15.15	3.03	0.00	0.00	0.00	6.06	6.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.15	3.03	33.33	
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	11.11	22.22	0.00	0.00	0.00	0.00	22.22	0.00	0.00
West Bengal	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	
Delhi	1.78	0.00	0.00	5.33	0.00	0.00	8.88	1.18	1.78	0.00	0.59	2.96	2.96	0.00	0.00	0.00	0.00	0.59	12.43	15.38	0.00	2.37	0.00	33.14	10.65	0.00	

Source: Calculated from ORGCC, 1991

Duration of Residence Less than 5 years
Rural to Rural

Table A.85 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	2.13	0.00	0.00	0.00	0.00	0.00	0.00	31.91	0.00	4.26	21.28	0.00	0.00	0.00	0.00	21.28	0.00	0.00	2.13	14.89	0.00	2.13	0.00	0.00	
Arunachal Pradesh	0.00	0.00	96.09	2.23	0.28	0.28	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.28	0.14	0.00	0.00	
Assam	5.00	3.75	0.00	22.50	3.75	6.25	2.50	6.25	0.00	0.00	1.25	0.00	1.25	0.00	8.75	1.25	1.25	0.00	1.25	0.00	0.00	0.00	7.50	6.25	21.25	0.00	
Bihar	1.30	0.00	0.00	0.00	0.00	0.00	2.60	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	29.87	63.64	0.00	
Goa	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.00	64.33	0.64	0.00	34.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	18.18	0.00	0.00	0.00	0.00	0.00	0.00	63.64	0.00	0.00	0.00	9.09	0.00	0.00	
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.14	55.68	0.00	0.00	0.00	17.05	0.00	1.14	
Himachal Pradesh	0.00	0.00	0.00	6.67	0.00	0.00	2.67	0.00	8.00	0.00	0.00	2.67	0.00	0.00	0.00	0.00	0.00	1.33	40.00	21.33	0.00	0.00	0.00	17.33	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	59.04	0.00	0.00	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.74	0.00	9.59	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	29.52	0.00	0.00	0.00	0.00	
Kerala	2.50	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	30.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	
Madhya Pradesh	2.74	0.00	0.00	8.90	0.00	2.74	0.00	0.00	1.37	0.00	0.00	0.00	14.38	0.00	0.00	0.00	0.00	27.40	0.00	15.75	0.00	0.68	0.00	24.66	0.68	0.68	
Maharashtra	5.23	0.00	0.00	0.00	0.35	5.92	0.00	0.00	0.35	40.42	0.70	43.90	0.00	0.00	0.00	0.35	0.00	1.39	0.00	0.00	0.00	0.00	1.39	0.00	0.00	0.00	
Manipur	0.00	0.00	80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	98.14	0.70	0.12	0.00	0.00	0.12	0.00	0.23	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.12	0.00	0.12	0.00	0.12	
Mizoram	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25	0.00	0.00	0.00	0.00	0.00	0.00	68.75	12.50	0.00	0.00	0.00	
Nagaland	0.00	0.00	68.18	14.77	0.00	0.00	0.00	0.00	0.00	0.00	8.82	0.00	1.14	4.55	0.00	0.00	0.00	3.41	0.00	0.00	0.00	0.00	0.00	0.00	1.14	0.00	
Orissa	14.89	0.00	0.00	22.34	0.00	0.00	0.00	0.00	0.00	1.06	0.00	28.72	1.06	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	29.79	0.00	
Punjab	0.00	0.00	0.00	0.00	2.27	0.00	27.27	20.45	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	22.73	2.27	2.27	0.00	
Rajasthan	0.00	0.00	0.00	4.08	0.00	8.16	22.45	0.00	0.00	0.00	0.00	32.65	0.00	0.00	0.00	0.00	0.00	0.00	24.49	0.00	0.00	0.00	0.00	8.16	0.00	0.00	
Sikkim	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	0.00	0.00	0.00	78.57	0.00	
Tamil Nadu	23.53	11.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.65	35.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.88	0.00	0.00	5.88	0.00	0.00	
Tripura	0.00	0.00	59.26	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.41	3.70	3.70	0.00	
Uttar Pradesh	0.00	0.00	0.15	86.18	0.00	0.15	0.77	0.00	0.00	0.00	0.15	3.53	0.00	0.00	0.00	0.00	0.00	0.15	2.46	4.61	0.00	0.00	0.00	0.00	1.69	0.15	
West Bengal	0.54	0.00	9.19	76.76	0.54	0.00	0.00	0.00	0.00	2.16	0.54	0.00	2.70	0.00	0.00	0.00	0.00	3.78	1.08	0.00	0.54	0.00	0.00	1.62	0.00	0.54	
Delhi	0.00	0.00	0.00	11.11	0.00	0.00	14.29	0.00	0.00	0.79	0.00	6.35	0.00	0.00	0.00	0.00	0.00	0.00	23.81	7.94	0.00	0.00	0.00	34.92	0.79	0.00	

Source: Calculated from ORGCC, 1991

Table A.86 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	3.85	0.00	0.00	0.00	0.00	0.00	0.00	30.77	0.00	3.85	26.92	0.00	0.00	0.00	0.00	23.08	0.00	0.00	0.00	7.69	0.00	3.85	0.00	0.00	
Arunachal Pradesh	0.00	0.00	95.88	2.06	0.37	0.37	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.37	0.19	0.00	0.00	0.00	
Assam	2.38	2.38	0.00	19.05	7.14	9.52	0.00	7.14	0.00	0.00	0.00	0.00	2.38	0.00	9.52	2.38	2.38	0.00	2.38	0.00	0.00	0.00	11.90	4.76	16.67	0.00	
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.50	0.00	0.00	0.00	0.00	27.50	70.00	0.00	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.06	0.00	0.00	23.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	25.00	0.00	0.00	
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.49	57.14	0.00	0.00	0.00	18.37	0.00	0.00	
Himachal Pradesh	0.00	0.00	0.00	6.25	0.00	0.00	4.17	0.00	4.17	0.00	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00	37.50	25.00	0.00	0.00	0.00	20.83	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	61.85	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	8.09	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	28.32	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	4.35	0.00	0.00	0.00	0.00	0.00	0.00	17.39	0.00	0.00	30.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.83	0.00	0.00	0.00	0.00	
Madhya Pradesh	4.65	0.00	0.00	8.14	0.00	4.65	0.00	0.00	0.00	0.00	0.00	0.00	13.95	0.00	0.00	0.00	0.00	31.40	0.00	12.79	0.00	1.16	0.00	22.09	0.00	1.16	
Maharashtra	5.29	0.00	0.00	0.00	0.59	7.06	0.00	0.00	0.59	35.88	0.59	47.65	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	1.76	0.00	0.00	0.00	
Manipur	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	98.51	0.93	0.19	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.00	20.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	67.65	17.65	0.00	0.00	0.00	0.00	0.00	0.00	7.35	0.00	0.00	4.41	0.00	0.00	0.00	1.47	0.00	0.00	0.00	0.00	0.00	1.47	0.00	0.00	
Orissa	13.46	0.00	0.00	19.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	
Punjab	0.00	0.00	0.00	0.00	3.70	0.00	29.63	29.63	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.81	0.00	0.00	0.00	18.52	0.00	0.00	
Rajasthan	0.00	0.00	0.00	6.25	0.00	6.25	28.13	0.00	0.00	0.00	0.00	28.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.13	0.00	0.00	0.00	3.13	0.00	0.00	
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	85.71	0.00	
Tamil Nadu	20.00	20.00	0.00</																								

Table A.87 Rural to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	4.76	14.29	0.00	0.00	0.00	0.00	19.05	0.00	0.00	4.76	23.81	0.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	96.72	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	7.89	5.26	0.00	26.32	0.00	2.63	5.26	5.26	0.00	0.00	2.63	0.00	0.00	0.00	7.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	7.89	26.32	0.00	0.00
Bihar	2.70	0.00	0.00	0.00	0.00	0.00	5.41	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.43	56.76	0.00	0.00
Goa	0.00	0.00	0.00	1.16	0.00	0.00	0.00	0.00	0.00	54.65	1.16	0.00	43.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.21	53.85	0.00	0.00	0.00	15.38	0.00	2.56	0.00
Himachal Pradesh	0.00	0.00	0.00	7.41	0.00	0.00	0.00	0.00	14.81	0.00	0.00	3.70	0.00	0.00	0.00	0.00	0.00	3.70	44.44	14.81	0.00	0.00	0.00	11.11	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	54.08	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	1.02	0.00	12.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.63	0.00	0.00	0.00	0.00	0.00
Kerala	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.06	0.00	0.00	17.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.41	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	3.33	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	21.67	0.00	20.00	0.00	0.00	0.00	28.33	1.67	0.00	0.00
Maharashtra	5.13	0.00	0.00	0.00	0.00	4.27	0.00	0.00	0.00	47.01	0.85	38.46	0.00	0.00	0.00	0.85	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	
Manipur	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	97.52	0.31	0.00	0.00	0.00	0.31	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.31	0.00	0.31	0.00	0.00	0.31	0.00	0.00
Mizoram	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	70.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00	5.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	16.67	0.00	0.00	26.19	0.00	0.00	0.00	0.00	0.00	2.38	0.00	11.90	2.38	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	35.71	0.00
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	23.53	5.88	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.53	0.00	0.00	0.00	29.41	5.88	5.88	0.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	11.76	11.76	0.00	0.00	0.00	0.00	41.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.65	0.00	0.00	0.00	17.65	0.00	0.00	0.00
Sikkim	0.00	0.00	0.00	28.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.43	0.00
Tamil Nadu	25.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	8.33	0.00	0.00
Tripura	0.00	0.00	66.67	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	82.38	0.00	0.41	1.23	0.00	0.00	0.00	0.41	3.28	0.00	0.00	0.00	0.00	0.00	0.00	4.10	4.51	0.00	0.00	0.00	0.00	3.28	0.41	0.00
West Bengal	1.16	0.00	10.47	74.42	1.16	0.00	0.00	0.00	0.00	1.16	0.00	0.00	3.49	0.00	0.00	0.00	0.00	4.65	1.16	0.00	1.16	0.00	0.00	1.16	0.00	0.00	
Delhi	0.00	0.00	0.00	5.88	0.00	0.00	19.61	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00	0.00	0.00	23.53	3.92	0.00	0.00	0.00	45.10	0.00	0.00	

Source: Calculated from ORGCC, 1991

Duration of Residence Less than 5 years
Rural to Urban

Table A.88 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	27.59	0.00	3.45	17.24	0.00	0.00	0.00	0.00	20.69	0.00	6.90	0.00	17.24	0.00	3.45	0.00	0.00	
Arunachal Pradesh	0.00	0.00	76.47	17.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.88	0.00	0.00
Assam	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	22.22	0.00	
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	12.50	0.00	0.00	0.00	37.50	25.00	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	10.00	0.00	0.00	0.00	0.00	
Haryana	0.00	0.00	3.23	3.23	0.00	6.45	0.00	3.23	3.23	0.00	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.61	9.68	0.00	0.00	0.00	16.13	0.00	0.00	
Himachal Pradesh	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.06	92.42	0.00	0.00	0.00	0.76	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	38.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.78	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.86	0.00	0.00	0.00	0.00	
Madhya Pradesh	3.55	0.00	0.00	10.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.82	0.00	0.00	0.00	0.00	24.82	3.55	7.09	0.00	0.00	0.00	25.53	0.00	0.00	
Maharashtra	20.79	0.00	0.00	1.98	0.00	8.91	0.00	0.00	0.00	23.76	3.96	9.90	0.00	0.00	0.00	0.00	0.00	1.98	0.00	4.95	0.00	0.99	0.00	22.77	0.00	0.00	
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	61.54	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	15.38	7.69	0.00	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	53.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.67	0.00	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.67	0.00	6.67	0.00	
Orissa	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	14.29	7.14	7.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	0.00	42.86	7.14	14.29	
Rajasthan	0.00	0.00	20.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	
Sikkim	0.00	0.00	0.00	50.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tamil Nadu	18.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.64	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	
Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	
Uttar Pradesh	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.73	0.00	0.00	0.00	0.00	0.00	0.00	4.55	9.09	0.00	4.55	0.00	0.00	9.09	0.00	
West Bengal	0.00	0.00	12.50	68.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	
Delhi	0.00	0.00	0.88	9.96	0.00	0.44	7.74	0.88	15.04	0.00	0.66	1.33	0.22	0.00	0.00	0.00	0.00	0.44	9.96	16.15	0.22	0.66	0.22	33.41	1.77	0.00	

Source: Calculated from ORGCC, 1991

Table A.89 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	18.75	0.00	0.00	0.00	0.00	25.00	0.00	12.50	0.00	18.75	0.00	0.00	0.00	0.00	
Arunachal Pradesh	0.00	0.00	70.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	
Assam	0.00	0.00	0.00	62.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	25.00	0.00	
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	33.33	0.00	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00	20.00	0.00	0.00	0.00	0.00	
Haryana	0.00	0.00	0.00	4.76	0.00	4.76	0.00	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.14	9.52	0.00	0.00	0.00	19.05	0.00	0.00	
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25	92.50	0.00	0.00	0.00	1.25	0.00	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	42.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.63	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
Madhya Pradesh	6.67	0.00	0.00	13.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.67	0.00	0.00	0.00	0.00	33.33	6.67	0.00	0.00	0.00	0.00	13.33	0.00	0.00	
Maharashtra	23.84	0.00	0.00	3.64	0.00	5.45	0.00	0.00	0.00	27.27	5.45	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.64	0.00	0.00	0.00	21.82	0.00	0.00	
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	54.55	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	18.18	9.09	0.00	0.00	
Mizoram	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	58.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	
Orissa	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	33.33	0.00	0.00	
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	10.00	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00	10.00	
Rajasthan	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sikkim	0.00	0.00	0.00	50.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tamil Nadu	0.00	0.00																									

Table A.90 Rural to Urban Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence Less Than 5 years, India, 1991

Female

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Jharkhand	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	30.77	0.00	7.69	15.38	0.00	0.00	0.00	0.00	15.38	0.00	0.00	0.00	15.38	0.00	7.69	0.00	0.00
Arunachal Pradesh	0.00	0.00	85.71	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	40.00	40.00	0.00
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	10.00	0.00	0.00	10.00	0.00	10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	10.00	0.00	0.00	0.00	10.00	0.00	0.00
Himachal Pradesh	0.00	0.00	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.77	92.31	0.00	0.00	0.00	0.00	0.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	35.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.88	0.00	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.94	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.71	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	7.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.73	0.00	0.00	0.00	0.00	15.15	0.00	15.15	0.00	0.00	0.00	39.39	0.00	0.00
Maharashtra	17.39	0.00	0.00	0.00	0.00	13.04	0.00	0.00	0.00	19.57	2.17	10.87	0.00	0.00	0.00	0.00	0.00	4.35	0.00	6.52	0.00	2.17	0.00	23.91	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00
Orissa	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Punjab	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	25.00	25.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Uttar Pradesh	0.00	0.00	0.00	54.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	9.09	0.00
West Bengal	0.00	0.00	0.00	77.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00
Delhi	0.00	0.00	0.52	4.17	0.00	0.00	10.94	1.04	7.81	0.00	1.04	2.08	0.52	0.00	0.00	0.00	0.00	0.52	9.90	16.67	0.00	0.52	0.00	41.67	2.60	0.00

Source: Calculated from ORGCC, 1991

Duration of Residence Less than 5 years
Urban to Rural

Table A.91 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	15.00	0.00	5.00	15.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	92.31	0.00	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56	2.56
Assam	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	14.29	0.00	28.57	0.00	14.29	0.00	0.00	14.29	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	90.00	0.00	0.00
Goa	8.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.60	0.00	0.00	43.86	0.00	0.00	0.00	0.00	0.00	0.00	1.75	0.00	7.02	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	5.56	0.00	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	27.78	0.00	0.00	0.00	11.11	5.56	11.11
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	3.85	0.00	11.54	0.00	0.00	3.85	1.92	0.00	0.00	0.00	0.00	0.00	44.23	7.69	0.00	0.00	0.00	11.54	0.00	15.38
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	28.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.80	0.00	10.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.62	0.00	1.45	0.00	0.00
Kerala	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	0.00	11.11	0.00	0.00	0.00	0.00	5.56	0.00	0.00	0.00	66.67	0.00	5.56	0.00	0.00
Madhya Pradesh	0.00	0.00	7.69	3.85	0.00	3.85	0.00	0.00	7.69	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	7.69	7.69	15.38	0.00	0.00	0.00	26.92	7.69	3.85
Maharashtra	13.16	0.00	0.00	0.00	0.00	7.89	0.00	0.00	0.00	42.11	0.00	28.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	5.26	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	83.33	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nagaland	0.00	0.00	86.05	6.98	0.00	0.00	0.00	0.00	0.00	0.00	4.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	0.00	0.00
Orissa	0.00	0.00	0.00	28.57	0.00	0.00	0.00	0.00	0.00	7.14	0.00	21.43	7.14	0.00	0.00	0.00	0.00	0.00	7.14	7.14	0.00	0.00	0.00	0.00	21.43	0.00
Punjab	0.00	0.00	0.00	9.38	0.00	0.00	6.25	0.00	12.50	0.00	0.00	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	6.25	0.00	0.00	0.00	21.88	9.38	21.88
Rajasthan	0.00	0.00	0.00	0.00	0.00	22.22	22.22	0.00	0.00	0.00	0.00	11.11	22.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	11.11
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	8.33	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	37.50	0.00	0.00	3.13	0.00	0.00	0.00	0.00	21.88	0.00	0.00	0.00	0.00	0.00	0.00	6.25	3.13	0.00	0.00	0.00	0.00	28.13	0.00
West Bengal	10.00	0.00	10.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	20.00	0.00	0.00	0.00	0.00	0.00
Delhi	0.00	0.00	0.00	2.08	0.00	2.08	6.25	0.00	12.50	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	47.92	2.08	0.00

Source: Calculated from ORGCC, 1991

Table A.92 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	10.00	10.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	89.66	0.00	0.00	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	3.45
Assam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	83.33	0.00
Goa	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	53.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.45	27.27	0.00	0.00	0.00	9.09	0.00	9.09
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	3.57	0.00	3.57	0.00	0.00	7.14	3.57	0.00	0.00	0.00	0.00	0.00	39.29	7.14	0.00	0.00	0.00	14.29	0.00	21.43
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.88	0.00	11.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.06	0.00	1.96	0.00	0.00
Kerala	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.82	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	6.25	6.25	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	6.25	6.25	12.50	0.00	0.00	0.00	25.00	12.50	0.00
Maharashtra	27.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.89	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	11.11	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	75.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nagaland	0.00	0.00	95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00
Orissa	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	12.50	0.00	0.00	0.00	0.00	0.00	12.50	12.50	0.00	0.00	0.00	0.00	12.50	0.00
Punjab	0.00	0.00	0.00	5.26	0.00	0.00	5.26	0.00	5.26	0.00	0.00	0.00	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.05	10.53	31.58
Rajasthan	0.00	0.00	0.00	0.00	0.00	28.57	14.29	0.00	0.00	0.00	0.00	0.00	28.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	14.29
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	0.00	0.00	0.00</																							

Table A.93 Urban to Rural Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi		
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	10.00	20.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	
Arunachal Pradesh	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Assam	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	
Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.26	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	3.70	0.00	3.70	0.00	0.00	0.00	0.00	0.00	
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Haryana	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	28.57	0.00	0.00	0.00	14.29	14.29	14.29	0.00	
Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	4.17	0.00	20.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	8.33	0.00	0.00	0.00	8.33	0.00	8.33	0.00	
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00
Karnataka	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.22	0.00	0.00	0.00	0.00	0.00	
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.57	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	42.86	0.00	14.29	0.00	0.00	0.00	
Madhya Pradesh	0.00	0.00	10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	10.00	20.00	0.00	0.00	0.00	30.00	0.00	10.00	0.00	
Maharashtra	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	45.00	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Meghalaya	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nagaland	0.00	0.00	78.26	13.04	0.00	0.00	0.00	0.00	0.00	0.00	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Orissa	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	16.67	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	
Punjab	0.00	0.00	0.00	15.38	0.00	0.00	7.69	0.00	23.08	0.00	0.00	15.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.08	7.69	7.69	0.00	
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tripura	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.50	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	
Uttar Pradesh	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.25	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	43.75	0.00	0.00	
West Bengal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Delhi	0.00	0.00	0.00	0.00	0.00	4.55	13.64	0.00	13.64	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	0.00	0.00	45.45	0.00	0.00	0.00	

Source: Calculated from ORGCC, 1991

Duration of Residence Less than 5 years
Urban to Urban

Table A.94 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Person, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	8.00	0.00	0.00	4.00	48.00	0.00	0.00	4.00	0.00
Arunachal Pradesh	0.00	0.00	85.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	25.00	50.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00
Goa	4.88	0.00	0.00	0.00	0.00	2.44	0.00	0.00	0.00	31.71	0.00	0.00	58.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	0.00	0.00	0.00	0.00	0.00
Gujarat	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	9.09	36.36	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	27.27	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.09	0.00	0.00	0.00	1.89	0.00	0.00	0.00	0.00	1.89	52.83	11.32	0.00	0.00	0.00	5.66	0.00	11.32
Himachal Pradesh	4.00	0.00	4.00	0.00	0.00	0.00	4.00	0.00	28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	44.00	0.00	0.00	0.00	0.00	4.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	29.41	0.00	0.00	0.00	0.00	0.00	0.00	2.94	2.94	0.00	5.88	0.00	20.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.24	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	8.33	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	4.17	0.00	8.33	4.17	0.00	8.33	0.00	0.00	0.00	12.50	4.17	0.00	0.00	0.00	0.00	0.00	4.17	0.00	0.00	0.00	37.50	4.17	12.50
Maharashtra	11.67	0.00	5.00	5.00	1.67	8.33	1.67	0.00	1.67	18.33	5.00	10.00	0.00	0.00	0.00	0.00	0.00	1.67	0.00	5.00	0.00	6.67	1.67	16.67	0.00	0.00
Manipur	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	33.33	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Punjab	0.00	0.00	0.00	2.86	0.00	0.00	22.86	0.00	11.43	0.00	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.86	0.00	0.00	0.00	25.71	5.71	25.71
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	17.65	0.00	11.76	0.00	0.00	11.76	5.88	0.00	0.00	0.00	0.00	0.00	11.76	0.00	0.00	0.00	0.00	35.29	5.88	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00
Tamil Nadu	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.67	60.00	6.67	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.67	6.67	0.00
Tripura	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	13.51	0.00	2.70	2.70	2.70	21.62	2.70	2.70	8.11	5.41	0.00	0.00	0.00	0.00	0.00	18.92	5.41	0.00	0.00	0.00	0.00	10.81	2.70
West Bengal	0.00	0.00	18.18	54.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delhi	0.68	0.00	0.68	4.91	0.00	0.34	3.38	0.68	46.19	0.34	0.00	1.18	1.52	0.00	0.17	0.00	0.17	0.68	20.98	1.86	0.00	1.02	0.00	12.69	2.54	0.00

Source: Calculated from ORGCC, 1991

Table A.95 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Male, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.41	0.00	0.00	5.88	0.00	0.00	0.00	0.00	11.76	0.00	0.00	0.00	52.94	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Goa	3.57	0.00	0.00	0.00	0.00	3.57	0.00	0.00	0.00	32.14	0.00	0.00	60.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gujarat	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	0.00	4.76	0.00	0.00	0.00	0.00	4.76	66.67	4.76	0.00	0.00	0.00	4.76	0.00	4.76
Himachal Pradesh	7.69	0.00	0.00	0.00	0.00	0.00	7.69	0.00	23.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38	46.15	0.00	0.00	0.00	0.00	0.00	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	31.58	0.00	0.00	0.00	0.00	0.00	0.00	5.26	5.26	0.00	0.00	0.00	15.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.11	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	12.50	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	7.69	0.00	0.00	0.00	23.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.77	7.69	23.08
Maharashtra	7.69	0.00	2.56	7.69	2.56	5.13	0.00	0.00	2.56	17.95	7.69	7.69	0.00	0.00	0.00	0.00	0.00	2.56	0.00	7.69	0.00	5.13	2.56	20.51	0.00	0.00
Manipur	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	33.33	66.67	0.00	0.00	0.																			

Table A.96 Urban to Urban Stream of Interstate Natural Calamity Migration Matrix, Female, Duration of Residence Less Than 5 years, India, 1991

	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu and Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Delhi	
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	37.50	0.00	0.00	0.00	12.50	0.00
Arunachal Pradesh	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00
Goa	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.77	0.00	0.00	53.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00
Gujarat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	20.00	0.00	0.00	0.00
Haryana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.75	15.63	0.00	0.00	0.00	6.25	0.00	15.63
Himachal Pradesh	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	41.67	0.00	0.00	0.00	0.00	0.00	8.33	0.00
Jammu and Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Karnataka	26.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33	0.00	26.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	9.09	0.00	9.09	9.09	0.00	9.09	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	45.45	0.00	0.00
Maharashtra	19.05	0.00	9.52	0.00	0.00	14.29	4.76	0.00	0.00	19.05	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	9.52	0.00	0.00	0.00
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orissa	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Punjab	0.00	0.00	0.00	8.33	0.00	25.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	25.00	0.00	25.00
Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	14.29	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	42.86	0.00	0.00
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Tamil Nadu	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	55.56	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	0.00
Tripura	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.00	0.00	0.00	16.67	0.00	5.56	0.00	0.00	16.67	5.56	5.56	11.11	11.11	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	11.11	0.00
West Bengal	0.00	0.00	20.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delhi	0.81	0.00	0.00	3.66	0.00	0.41	4.07	0.41	44.31	0.00	0.00	1.22	2.03	0.00	0.41	0.00	0.41	0.41	20.73	1.22	0.00	1.22	0.00	15.45	3.25	0.00	

Source: Calculated from ORGCC, 1991

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