Regional Patterns of Migration in Nepal

Harka Gurung

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ABSTRACT Nepal has been experiencing rapid population growth in recent decades. Another significant demographic feature is the increasing volume of population redistribution. This paper presents an overview of migration in Nepal over the last three decades based on census data and selected survey reports. During the period 1952/54–1981, regional population growth rates varied from 1.22 percent in the Mountain and Hill zones to 3.34 percent in the Tarai and 3.46 percent in the Inner Tarai. Much of this regional differential in growth rate was due to migration. The principal migration trajectory was from the highlands to the Tarai lowlands. The last two decades recorded about a sevenfold increase in out-migrants from the highlands and about a sixfold increase in in-migrants to the lowlands.

Increasing pressure of population on limited land resources induced the out-migration from the highlands. In the past, out-migration was primarily directed outside the country to new frontier lands in the eastern Himalaya and for military and other service in India. Since the mid-1950s, there has been a major shift in the migrants' destination. The opening of the lowlands through malaria control and resettlement programs provided a new frontier for large-scale rural-to-rural migration. Other forces accentuating migration to the lowlands were the concentration of infrastructural and development activities there. Immigration from high-density areas across the open border with India is growing, as well. Thus the lowlands have now emerged as the area of migrant convergence from within and outside the country.

The consequences of migration are most apparent at the destination: The lowlands are undergoing significant changes in demographic character, social composition, land use, and economic development. Recent economic and demographic processes have all the potential of transforming the lowlands into a dynamic region. This development has various policy implications for Nepal's population redistribution, spatial development, and sociopolitical future.

INTRODUCTION

Nepal covers an area of 147,181 square kilometers mainly along the southern slope of the central Himalaya. The relief is rugged with a wide variety of terrain. About 28 percent of the land surface lies more than 3,000 meters above sea level, including about 5,000 square kilometers under permanent snow. Over 60 percent of the land is between 300 and 3,000 meters in elevation; only 11 percent is below 300 meters. The rise of the land from south to north is not abrupt but rises through a succession of ranges arranged *en echelon* with intervening depressions that are inhabited. These habitation zones include the Tarai plain (the tropical lowlands), the Inner Tarai valleys, the hill complex, and high elevated valleys (Gurung 1971).

In terms of population geography, the country represents a transition zone between the densely populated Gangetic plain and the barren marches of the Tibetan plateau. Thus rural population density within the country ranges from 300 persons per square kilometer in some Tarai districts to only 3 persons in certain Mountain districts. In addition to this contrast in altitude, there are east–west sectoral variations due to the lateral disposition

of the country between longitudes 80°4 to 88°12 east and latitudes 26°22 to 30°27 north. The more humid and wetter eastern part of the country supports a larger proportion of the total population.

The last census of population, taken in June 1981, recorded a total population of 15 million of which 51.2 percent were males. The division by age group was 43 percent below 15 years, 54 percent between 15 and 64 years, and 3 percent above 64 years, yielding a high dependency ratio of 0.86. This census recorded a crude birth rate of 42 and a crude death rate of 19 per 1,000 per year. The infant mortality rate was 150 per 1,000 live births; the total fertility rate was 6.3 live births per woman of ages 15 to 49. Life expectancy at birth was 47.5 years for males and 44.5 years for females. The average annual rate of population growth for the intercensal period 1971–81 was a high 2.66 percent.

Data Sources

The vital registration system in Nepal is still in its preliminary stage. This paper is based primarily on census data since 1952/54, when the first modern census was made. Migration data in the various censuses, however, show a wide divergence both in scope and in unit of enumeration (Table 1). The 1952/54 census included migration data only on the population absent from home for more than six months. The absentee population in-

Table 1. Census data on migration and unit of enumeration: 1952/54, 1961, 1971, and 1981

Item	1952/54		1961		1971		1981	
	District	Region	District	Region	District[a]	Region	District[a]	Region
Number of census districts and regions	55	9	55	10	75	10	75	15
Place of birth			•	•	•	•	•	•
Duration of stay								•
Population absent								
Inside country	•	•	•	•				•
Outside country	•	•	•	•			•	•
Reasons for migration								
Inside country								•
Outside country							•	•
Foreign-born			•	•	•		•	
Duration of stay							•	
Reasons for migration							•	
Foreign citizens			•	•	•		•	•

Source: Nepal, DOS (1957); Nepal, CBS (1967, 1975, 1984).

a. Census and administrative districts correspond in areal extent.

cluded both those reported inside and outside the country. The 1961 census covered data on place of birth, absentee population, foreign-born population, and foreign citizens. These data were presented at the census district and regional levels. The 1971 census did not include data on absentee population (Nepal, CBS, 1977). It provided data on place of birth both at district and regional levels. Data on foreign-born and foreign citizens were given at administrative district and zonal levels. The 1981 census includes migration data on various aspects. Data available both at district and at regional levels are population absent outside the country, foreign-born population, and foreign citizens. Data on place of birth (Nepal-born), duration of stay, absentee population inside the country, and reasons for migration are given only at the regional level.

Since none of the Nepalese censuses provides data on the place of previous residence, the measure of migration is based on the comparison of data on place of birth (origin) and place of enumeration (destination). The analysis of data on migration is based on respective census regions of 1961, 1971, and 1981 that are not comparable. A major problem in comparative analysis of Nepal's population in spatial terms is the constant change in the boundary of regions and their number from one census to another (Figure 1). The censuses of 1952/54 and 1961 recognized four major natural zones: Hill, Kathmandu Valley, Inner Tarai, and Tarai. These regions were subdivided into nine census regions in 1952/54 and 10 census regions in 1961. The regions in the two censuses were comparable except in the case of the Western Hill, which was subdivided into Western Hill and Far Western Hill in 1961.

There was a major realignment of zones and census regions in 1971. The Inner Tarai was subsumed under either the adjoining Hill or the Tarai zones. Moreover a new zone, the Mountain, was created out of the northern part of the Hill zone. The three main zones (Tarai, Hill, Mountain) were subdivided into three east-west sectors. Kathmandu Valley was retained as a distinct region. Thus there were 10 census regions in 1971.

The regional division in the 1981 census was yet another major departure from that of 1971. It retained the three basic zones of the Tarai, Hill, and Mountain and included Kathmandu Valley under the Hill division. These three natural divisions were further subdivided according to the five development regions: Far West, Midwest, West, Central, and East. The combination of three natural divisions and five development regions yields 15 census regions. Most census data on migration are given according to these regions (Nepal, CBS, 1984: vol. II).

Regional Division

Population redistribution through migration can be taken as an indicator of relative development among regions and provides a useful basis for spatial planning. Thus there is need for a more realistic definition and divi-

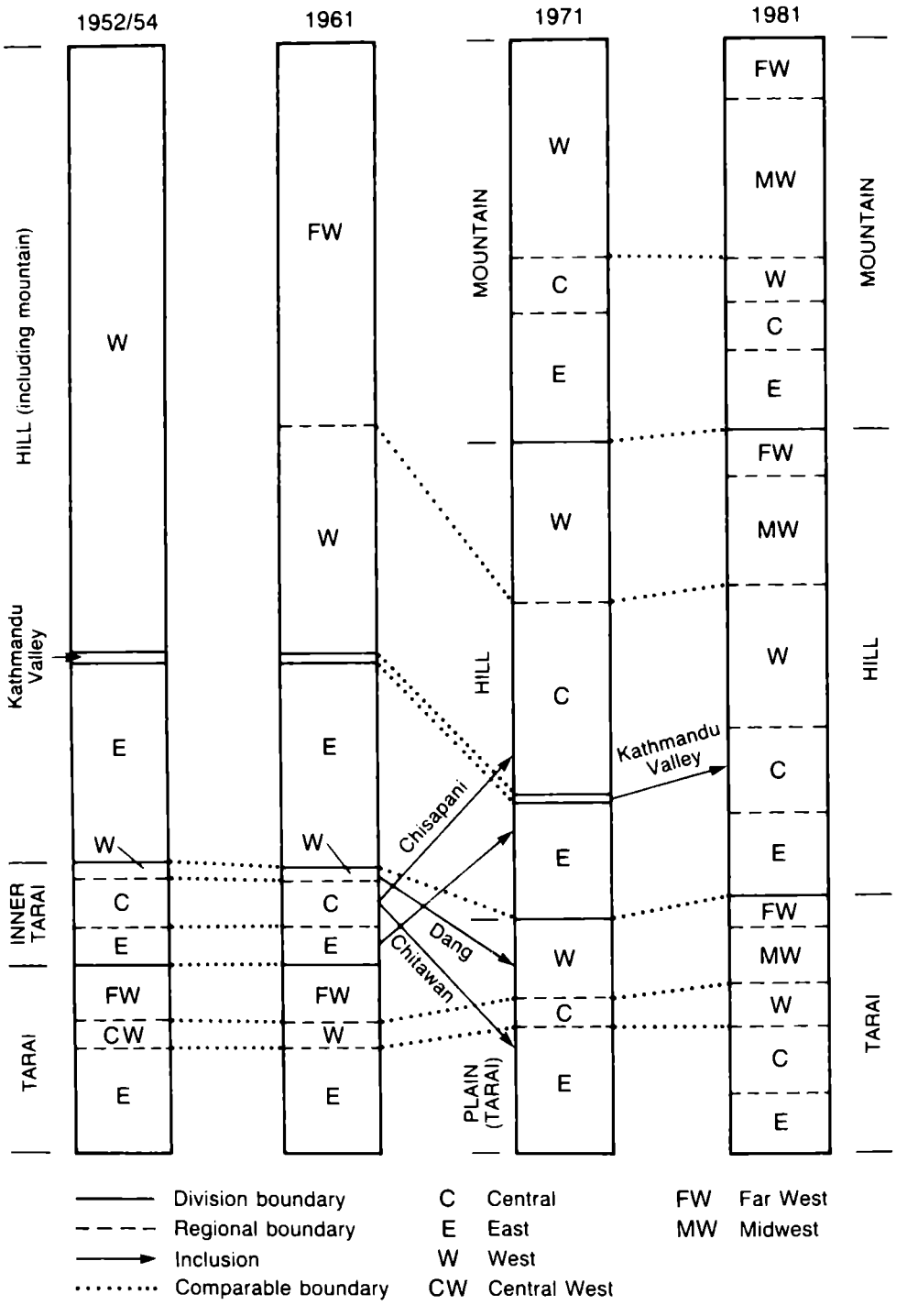


Figure 1. Changes in census regions: 1952/54–1981

Source: Various censuses.

Note: The subdivisions in each bar are proportional to regional land areas.

sion of regions. The basic objective of regionalization is to define areas of homogeneity or similar value in spatial terms. The object of inquiry may be a particular element or composite of elements. Geographic regions that encompass both natural and cultural phenomena represent the composite category. In the case of Nepal, a set of geographical regions can be based on the combination of north-south natural divisions and east-west drainage basins.

The north-south or altitudinal perspective yields four basic zones of human occupance: Mountain, Hill, Inner Tarai, and Tarai. These differ in vegetation type, cultivated plants, domesticated animals, and seasonal rhythm due to vertical zonation of ecological conditions. The east-west sectoral division conforms to the three major drainage basins of the Kosi (east), Gandaki (center), and Karnali (west). These sectors also represent broad culture areas. The east is the home of numerous tribes, the west is the native area of caste groups, and these two social groups interface in the central basin. The matrix of four vertical elevation zones and three drainage basins provides a set of 12 geographic regions. As well, Kathmandu Valley deserves a separate regional identity within the Hill zone owing to its unique metropolitan character. Thus one can conceive of 13 geographic regions as shown here:

	Drainage basins		
Elevation zone	Western (Karnali)	Central (Gandaki)[a]	Eastern (Kosi)
Mountain (temperate)	1. Western Mountain	2. Central Mountain	3. Eastern Mountain
Hill (subtropical)	4. Western Hill	5. Central Hill	7. Eastern Hill
		6. Kathmandu Valley	
Inner Tarai (tropical)	8. Western Inner Tarai	9. Central Inner Tarai	10. Eastern Inner Tarai
Tarai (tropical)	11. Western Tarai	12. Central Tarai	13. Eastern Tarai

a. Including upper Bagmati.

In this paper, I have adopted these regional divisions wherever the data permit such an approach (Maps 1, 2, 5, and 6). This scheme applies particularly to the treatment of historical, cultural, economic, and most demographic aspects. In the case of migration data that are not amenable to regrouping into 13 geographic regions, the presentation is according to the 15 census regions (Maps 3 and 4).

I have used various regional terms in this paper. Sector refers to the east-west division of the country according to the three major river basins. Elevation zone refers to the four natural divisions of Mountain, Hill (including Kathmandu Valley), Inner Tarai, and Tarai. Macro region refers to the highlands including Mountain and Hill elevation zones as contrasted to the lowlands, which include the Inner Tarai and Tarai. Geographic region refers to the various subdivisions of the four elevation zones. Census region refers to the subdivisions according to the official threefold ecological division of the five development regions.

POPULATION GROWTH AND DISTRIBUTION

Growth Process

The first census of Nepal, taken in 1911, recorded a total population of 5.63 million. The next two censuses recorded successive declines: 5.57 million in 1920 and 5.53 million in 1930 (Nepal, DOS, 1957: pt. I, sec. 1, table 6). The census of 1941 recorded a total population of 6.28 million and indicated an increase of 11.5 percent in three decades. Since then there has been a steady increase in Nepal's population. The total population recorded in subsequent censuses was 8.47 million in 1952/54,[1] 9.41 million in 1961, 11.56 million in 1971, and 15.02 million in 1981 (Appendix Table 1). The census of 1952/54 is considered more reliable than the previous efforts, and it also provides a basis for comparison at the regional level. The increase in population during the period 1952/54–1981 was 81.9 percent at an average annual growth rate of 2.16 percent. The intercensal growth rates show an accelerating increase: 1.65 percent for 1952/54–1961, 2.07 percent for 1961–71, and 2.66 percent for 1971–81.

The change in the size of regional population during 1952/54–1981 gives some idea of the volume and trend of population redistribution. Compared to an average growth rate of 2.16 percent for the period, regional growth rates varied from 1.22 percent in the Mountain/Hill zone to 3.34 percent in the Tarai and 3.46 percent in the Inner Tarai (Table 2). The Western Tarai and Western Inner Tarai recorded very high growth rates of 4.79 and 4.71 percent respectively. In the Mountain/Hill zone, Kathmandu Valley was the only region to exceed the national average in growth rate. Eastern Hill recorded the lowest growth rate, 1.01 percent.

Consequently, the share of total population in the Mountain/Hill zone declined from 65.3 percent in 1952/54 to 51.3 percent in 1981 while the share of the Tarai increased from 28.8 to 40.1 percent during the same period (Table 2). The population share of the Inner Tarai increased from 5.9 to 8.5 percent. The total population increased by 82.4 percent in the Eastern, 73.7 percent in the Western, and 70.9 percent in the Central sector of the country.

1. The 1952/54 census recorded 8.47 million as the total population and 8.26 million as the present population. (Nepal, DOS, 1957: pt. I, sec. 1, tables 1 and 2).

Table 2. Population share, growth rate, and density by region: 1952/54–1981

Region	Population (%)		Growth rate (%)	Density (persons/km²)		Increase in density (persons/km²)
	1952/54	1981	1952/54–1981	1952/54	1981	1952/54–1981
Nepal	100.0	100.0	2.16	57.6	102.1	+44.5
Mountain and Hill	65.3	51.3	1.22	53.3	74.4	+21.1
West	18.0	13.4	1.13	32.3	42.5	+10.2
Central	21.9	17.6	1.54	64.7	92.3	+27.6
Kathmandu Valley	4.9	5.1	2.25	462.5	852.4	+389.9
East	20.4	15.2	1.01	64.5	85.3	+20.8
Inner Tarai	5.9	8.5	3.46	34.0	87.6	+53.6
West	1.5	2.9	4.71	23.1	80.0	+56.9
Central	2.1	3.4	3.85	38.8	108.3	+69.5
East	2.3	2.3	2.23	42.0	75.4	+33.4
Tarai	28.8	40.1	3.34	84.7	209.1	+124.4
West	2.8	5.5	4.79	25.6	90.3	+64.7
Central	4.3	6.4	3.64	69.4	182.1	+112.7
East	21.8	28.1	2.99	128.2	295.0	+166.8

Source: Appendix Tables 1 and 2.

Density of population increased in all regions. There were 390 more persons per square kilometer in Kathmandu Valley compared to the national average increase of 44.5 more persons per square kilometer (Table 2). Density increases were high in the Tarai, particularly in the Eastern and Central sectors. Western Mountain/Hill recorded the lowest increase in density followed by Eastern Mountain/Hill (Table 2). The increase of persons per square kilometer was 22.5 in the Western, 44.1 in the Central, and 67.9 in the Eastern sector. Thus, the increase in population density was more pronounced in the south than the north and in the east than the west.

A comparison of 1971 and 1981 data after due adjustment of district boundary changes of 1975 reveals a significant contrast in population change by geographic region (Gurung 1981). The population of the country increased by 3.46 million during the decade 1971–81 (Appendix Table 2). Of this increase, 68.9 percent was in the lowlands and 31.1 percent in the highlands. Nine Tarai districts registered the highest absolute increases exceeding 100,000 persons; four Mountain districts recorded an absolute decline ranging from 415 to 6,454 persons.

The total population increased by 30 percent during 1971–81. Of the 75 districts, increases in 24 exceeded the national average: one Mountain, four Hill, five Inner Tarai and 14 Tarai districts (Appendix Table 2). Of the

36 Hill districts, only four had more than a 30 percent population increase. A high increase in Mugu and a decrease in adjacent Humla in the Western Mountain region may be attributed to errors in population adjustment according to the boundary change of 1975. In broad regional terms, the population increase for 1971–81 was progressively higher from north to south. The increases in the Tarai and Inner Tarai were 50.3 and 40.7 percent respectively. It was 15.9 percent in the Hill region and 12.0 percent in the Mountain Zone. Percentage increases were higher in the west, both in the Tarai and Inner Tarai. Taking the aggregate of regions from east to west, there was a slight variation in percentage increase: 28.0 percent in the Central sector to 30.3 percent in the East and 32.9 percent in the West.

Compared to the national average growth rate of 2.66 percent during 1971–81, some 51 districts of 75 had less than the national growth rate and 46 of these were Mountain and Hill districts (Appendix Table 2). Four Mountain districts recorded absolute declines. Four contiguous districts in the West and Central sectors and nine Mountain and Hill districts in the East had very low growth rates. Of the 11 districts with a very high growth rate (exceeding 4 percent), eight were in the Tarai. Among these, five Tarai districts, Morang and Jhapa in the east and Bardiya, Kailali, and Kanchanpur in the west, had growth rates exceeding 6 percent.

The Tarai as a whole recorded an average growth rate of 4.16 percent during 1971–81 (Table 3). The Inner Tarai's growth rate of 3.48 percent was also much higher than the national average. It was low for the Hill (1.48 percent) and the Mountain (1.14 percent) zones. Among geographic regions, the Western Tarai had the highest growth rate (6.62 percent) and the Central Mountain region the lowest, a decline of 1.20 percent. As a general regional pattern, growth rates were progressively higher from north to south and from east to west.

Urbanization Trend

The ratio of urban population to total population has increased progressively due to population growth and the addition of designated urban localities in subsequent censuses.[2] In 1952/54, the 10 designated urban localities had a population of 238,275 or 2.8 percent of the total population (Nepal, DOS, 1957: app. I, pt. 1). In 1961, the number of urban localities increased to 16 and their population was 366,222 or 3.7 percent of the total population (Nepal, CBS, 1967; vol. II, table 5). In 1971, the number of urban localities remained 16 as in 1961; five of these were new localities. The

2. In Nepal, *nagar* (town) *panchayats* are defined as urban and *gaon* (village) *panchayats* as rural. The *panchayats* are territorial divisions incorporating one or more settlement units. Again, designation of town *panchayats* is not strictly on a functional basis but is based on other criteria such as population size and administrative role. Thus of the total economically active population residing in 23 designated urban localities in the 1981 census, 63.7 percent were engaged in agricultural occupations (Nepal, CBS, 1984: vol. III, table 20).

Table 3. Area, population, density, and growth rate by geographic region: 1971–81

Region	Area (%)	1981 population (%)	Density (persons/ km²)	1971–1981 Growth rate (%)
Nepal (75)[a]	100.0	100.0	102.1	2.66
Mountain (15)	33.5	7.1	21.7	1.14
West (8)	19.9	3.5	18.1	1.67
Central (3)	5.0	0.3	6.8	-1.20
East (4)	8.6	3.3	38.7	0.90
Hill (36)	37.0	44.3	122.0	1.48
West (10)	12.0	9.9	82.2	1.44
Central (13)	14.5	17.3	121.6	1.82
Kathmandu Valley (3)	0.6	5.1	852.4	2.35
East (10)	9.6	12.0	126.9	1.04
Inner Tarai (6)	9.9	8.5	87.6	3.48
West (2)	3.7	2.9	80.0	4.03
Central (2)	3.2	3.3	108.3	3.60
East (2)	3.1	2.3	75.4	2.66
Tarai (18)	19.6	40.1	209.1	4.16
West (4)	6.3	5.5	90.3	6.62
Central (3)	3.6	6.4	182.1	4.24
East (11)	9.8	28.2	295.0	3.73

Source: Appendix Table 2.

a. The number of districts is given in parentheses.

1971 urban population of 461,938 constituted 4 percent of the total population (Nepal, CBS, 1975: vol. V, table 39). The 1981 census included 23 urban localities with a population of 956,721 or 6.4 percent of the total population (Nepal, CBS, 1984: vol. III, table 3). Urban localities were distributed as follows: 12 in the Tarai, four each in the Hill and Inner Tarai, and three in Kathmandu Valley.

The intercensal increase in urban population was 4.1 percent during 1952/54–1961, 24 percent during 1961–71, and 129.6 percent during 1971–81. The population increase of seven localities retained as urban since 1952/54 was 26 percent during 1952/54–1961, 26.3 percent during 1961–71, and 64.8 percent during 1971–81. The average annual growth rate of 23 urban localities during the last decade was 7.6 percent compared to 2.66 percent for the total population. There have been regional shifts in urban population size in favor of the Tarai. In 1952/54, the Tarai had 17.4 percent of the total urban population; the remaining 82.6 percent was concentrated in Kath-

mandu Valley. By 1981, the Tarai claimed 43.2 percent of the total urban population. The rest was distributed as follows: 38 percent in Kathmandu Valley, 10.1 percent in the Inner Tarai, and 8.7 percent in the Hill zone (Table 4). Urban population as a percentage of regional population in the Tarai increased from 1.7 to 6.8 during 1952/54–1981 but remained unchanged for Kathmandu Valley.

The list of prominent settlements in the 1952/54 census provides a useful basis for tracing the population of present urban localities (Nepal, DOS, 1957: app. II, pp. 2–10). The list did not include prominent localities of Kaski district including that of Pokhara town; the lack of data for Birendranagar and Mahendranagar, however, is understandable. Birendranagar (then Surkhet) was not a permanently inhabited place until the malaria eradication program was introduced there in 1964. Mahendranagar was a tropical wilderness until the headquarters of Kanchanpur district was shifted there from Belauri in 1962. The present rank of Mahendranagar as sixth among urban localities is not due to the sudden growth of urban activities, however, but to incorporation of extensive rural areas.[3]

The total population of urban localities in 1952/54 was 238,275 persons. If the population of the 21 prominent settlements (including 3,295 for Pokhara) is added, it comes to 243,583 or 2.8 percent of the total population (Table 4). The regional distribution of this population was 74.3 percent in Kathmandu Valley, 20.7 percent in the Tarai, 4.5 percent in the Hill zone, and only 0.5 percent in the Inner Tarai. Hetauda then had 189 persons and Bharatpur only 91. Biratnagar, now the second-largest city in the country, then had a population of 8,060 persons.

The overall increase in urban population during 1952/54–1981 thus comes to 292.8 percent. The average annual growth rate of 5.0 percent for urban localities was more than twice that of the total population for the same period. Urban population growth was highest in the Inner Tarai; Bharatpur and Hetauda registered extreme growth rates of 23.6 and 21.3 percent respectively. The Tarai urban localities averaged a growth rate of 7.8 percent. The growth of the Hill urban population was 7.5 percent. The urban population growth rate in Kathmandu Valley was half the national average.

Distribution Pattern

The total population of Nepal recorded in the 1981 census was 15,022,839 with an average density of 102 persons per square kilometer. Since much of the territory is marginal, being either too high or too steep, the country is heavily populated and over 91 percent of the population subsists on traditional agriculture. The distribution of population is extremely uneven due to sharp variations in topography and land resources (Gurung 1975).

3. Of the 16,717 persons economically active and 10 years of age and over in Mahendranagar, 89.8 percent cited agriculture as their major occupation (Nepal, CBS, 1984: vol. III, table 20).

Nevertheless, distinct patterns can be discerned that distinguish the highlands and the lowlands as contrasting areas in population size and density.

Among the geographic regions, the three in the Mountain zone covering a third of Nepal's total area have only 7 percent of the total population (Table 3). The Hill zone with 37 percent of the area has 44 percent of the population while the Tarai zone with 20 percent of the area has 40 percent of the total population. The Inner Tarai zone has 10 percent of the total area and 9 percent of the population. Kathmandu Valley, covering only 0.6 percent of the total area, has 5.1 percent of the total population. The largest concentration of population is in the Eastern Tarai. With less than 10 percent of the total area, it supports 28 percent of the total population. In contrast, the Western Mountain region with 20 percent of the total area has only 3.5 percent of the total population.

Another evident pattern is the concentration of population in the eastern sector of the country: The eastern third has 30.1 percent of the total area and 45.7 percent of the total population as against the western with 42.1 percent of the area and 21.8 percent of the population. Progressively larger population size from west to east is most evident in the Tarai, where the eastern sector has five times more population than the western sector, although it is only 1.6 times as large in area. In the Hill zone, the central sector has nearly twice the population of the western sector. It is only in the marginal Mountain region that the west leads other sectors in population size.

Population density by district and region shows a wide variation. Of the 75 districts, 19 exceed the national average of 102 persons per square kilometer (Appendix Table 2). Six districts have fewer than 25 persons per square kilometer and four of these have fewer than five persons to a square kilometer. These are all in the Mountain region where no district has a density exceeding 70 persons per square kilometer.

Four Tarai districts and the three Kathmandu Valley districts have high densities exceeding 300 persons per square kilometer. The high-density Tarai districts make a compact bloc around Janakpur, the ancient heartland of Mithila. Kathmandu and Bhaktapur districts have extreme densities exceeding 1,000 persons per square kilometer.

According to elevation zones, the Tarai has a high density of 209 persons per square kilometer (Table 3). The average density of 122 persons per square kilometer for the Hill zone also exceeds the national average. The average density for the Mountaln zone is 21.7 persons per square kilometer. Of the 13 geographic regions, six exceed the average national density and Kathmandu Valley is eight times the national average. The overall density increases from 52.9 in the West to 106.4 in the Central and 150.1 in the Eastern sector. The highlands, including the Mountain and Hill zones, cover 70.5 percent of the total area but support 51.3 percent of the total population. The density of population per square kilometer is 74.4 in the highlands and 168.2 in the lowlands.

Table 4. Population growth of prominent localities and urban localities: 1952/54–1981

Urban localities	Population 1952/54	Percentage of total	Population 1981	Percentage of total	Absolute change	Percentage change	Annual growth rate (%)
Hill	11,017	4.5	83,376	8.7	72,359	658.8	7.5
Ilam[a] (East)	920	0.4	9,773	1.0	8,853	962.3	8.5
Dhankuta[a] (East)	2,097	0.9	13,836	1.4	11,739	559.8	6.7
Pokhara (Central)	3,295b	1.4	46,642	4.9	43,347	1,315.0	10.3
Tansen[a] (Central)	4,705	1.9	13,125	1.4	8,420	179.0	3.9
Kathmandu Valley	181,082	74.3	363,507	38.0	182,425	100.7	2.6
Kathmandu[c]	106,579	43.8	235,160	24.6	128,581	120.6	3.0
Lalitpur[c]	42,183	17.2	79,875	8.3	37,692	89.4	2.4
Bhaktapur[c]	32,320	13.3	48,472	5.1	16,152	50.0	1.5
Inner Tarai	1,139	0.5	96,861	10.1	95,722	8,404.0	17.9
Hetauda[a] (Central)	189	0.1	34,792	3.6	34,603	18,308.5	21.3
Bharatpur[a] (Central)	91	0.0	27,602	2.9	27,511	30,231.9	23.6
Tribhuvannagar[a] (West)	859	0.4	20,608	2.2	19,749	2,299.1	12.5
Birendranagar[d] (West)			13,859	1.4			

Tarai	50,345	20.7	412,977	43.2	362,632	720.3	7.8
Bhadrapur[a] (East)	1,478	0.6	9,761	1.0	8,283	560.4	6.7
Biratnagar[c] (East)	8,060	3.3	93,544	9.8	85,484	1,060.6	8.8
Dharan[a] (East)	4,486	1.8	42,146	4.4	37,660	839.5	8.0
Rajbiraj[a] (East)	2,376	1.0	16,444	1.7	14,068	592.1	6.9
Lahan[a] (East)	1,777	0.7	13,775	1.4	11,998	675.2	7.3
Janakpur[c] (East)	7,037	2.9	34,840	3.6	27,803	395.1	6.1
Birganj[c] (East)	10,037	4.1	43,642	4.6	33,605	334.8	5.2
Siddarthanagar[a] (Central)	1,154	0.5	31,119	3.3	29,965	2,596.0	13.0
Butwal-Khasyauli[a] (Central)	2,597	1.1	22,583	2.4	19,986	769.6	8.3
Nepalganj[c] (West)	10,813	4.4	34,015	3.6	23,202	214.6	4.3
Dhangarhi[a] (West)	530	0.2	27,274	2.9	26,774	5,046.0	15.7
Mahendranagar[d] (West)			43,834	4.6			
Total	243,583	100.0	956,721	100.0	713,138	292.8	5.0

Source: Nepal, DOS (1957: app. I and II, pp. 1-10); Nepal, CBS (1984: vol. III, table 1).

a. Designated only as prominent place but not as urban locality in 1952/54 census.

b. Records of Nepal Malaria Eradication Organization.

c. Designated urban locality in 1952/54 census.

d. New settlement.

Since Nepal is predominantly an agricultural country, the density of population on cultivated ground gives a more realistic measure of population pressure on land. According to the only available land-use data, based on aerial photographs taken during 1979, the gross cultivated area was 2,968,017 hectares (Kenting Earth Sciences 1986b; Appendix Table 3). Of this total, 2,645,886 hectares or 89.1 percent was recorded as net cultivated area (Kenting Earth Sciences 1986a; Table 5). Thus the net cultivated area constituted 17.9 percent of Nepal's total land area. The lowlands, including the Inner Tarai and the Tarai, with 29.5 percent of the total area, had 56.4 percent of the total net cultivated land. The share of the Tarai alone came to 47.3 percent (Table 5). The Mountain zone, covering 33.5 percent of the country's total area, had only 7.3 percent of the total net cultivated area. Among individual regions, the Eastern Tarai had 30.7 percent and the Central Mountain region only 0.4 percent of the total net cultivated area.

Table 5. Population density on net cultivated land by geographic region: 1981

	1981 population[a] (%)	Net cultivated land[b] (hectares)	Percentage of total area	Percentage of regional area	Persons per hectare
Nepal	100.0	2,645,886	100.0	17.9	5.7
Mountain	7.1	193,658	7.3	3.9	5.5
West	3.5	93,611	3.5	3.2	5.7
Central	0.3	10,107	0.4	1.4	4.9
East	3.3	89,880	3.4	7.1	5.4
Hill	44.2	958,213	36.1	17.5	6.9
West	9.9	255,494	9.6	14.2	5.8
Central	17.3	356,479	13.5	16.6	7.3
Kathmandu Valley	5.1	35,390	1.3	38.3	21.7
East	12.0	310,850	11.7	22.0	5.8
Inner Tarai	8.5	241,435	9.1	16.6	5.3
West	2.9	96,031	3.6	17.6	4.5
Central	3.3	80,304	3.0	17.5	6.3
East	2.3	65,100	2.5	14.4	5.3
Tarai	40.1	1,252,580	47.3	43.3	4.8
West	5.5	210,383	7.9	22.7	4.0
Central	6.4	228,615	8.6	44.1	4.2
East	28.2	813,582	30.7	56.2	5.2

a. Nepal, CBS (1984).

b. Kenting Earth Sciences (1986a: app. 6).

The country had an average of 5.7 persons per net cultivated hectare (Table 5). The Tarai had a density of 4.8 persons and the Inner Tarai 5.3 persons per net cultivated hectare. The Hill zone had the highest (6.9) and the Mountain region the next highest (5.5) density of persons per net cultivated hectare. Kathmandu Valley had an extremely high density of 21.7 persons per net cultivated hectare. Other geographic regions exceeding the national average in agricultural density were the Central Hill and Central Inner Tarai. The Western Tarai had the lowest density of population on net cultivated land. At the macro-regional level, the lowlands with 56.4 percent of the total net cultivated land had 4.9 persons per hectare as against 6.7 persons per hectare in the highlands.

EMIGRATION

Nepal has been a population-exporting country since the beginning of the nineteenth century. Population increase in the Hill, the traditional zone of settlement, forced people to move to other areas within the country or to seek their livelihood abroad. One of the principal avenues for out-migration was recruitment in the British Indian army, and the men were drawn mostly from tribes in the central and eastern hills. Although the bulk of this mercenary labor force returned home after the minimum service of 15 years, many were encouraged to settle in India, thus creating Gurkha colonies around cantonment areas.

There were also significant waves of Nepalese migrating to new frontier lands of the eastern Himalaya and even as far as northern Burma since the second half of the nineteenth century. Availability of land for pioneer farming and demand for labor in tea and timber were the main reasons for this eastward migration. By the close of the nineteenth century, more than half the population of Darjeeling district were migrants from Nepal (Varma 1972–73). Their influx into neighboring Sikkim after 1882 was even more pronounced: Nepalese settlers in Sikkim increased fivefold during the period 1891–1931 and now constitute more than 80 percent of the total population. Even in Bhutan, with a conservative immigration policy, nearly a third of the country's total population is estimated to be of Nepalese origin.

Volume and Source

The census data on absentee population living abroad indicate an increasing volume of out-migration from the country. The 1941 census reported 81,817 persons away from home for six months or more (Kansakar 1974:152). The absentees then constituted 1.3 percent of the enumerated population. Of the total absentee population, 86.0 percent were from the Central Mountain/Hill zones and 11.3 percent from the Eastern Mountain/Hill, both traditional source areas for Gurkha recruitment. No absentees were reported from the Western Mountain/Hill zone, the Eastern and Western Inner Tarai, and the Central and Western Tarai.

The 1952/54 census reported 198,120 persons absent outside the country. This number constituted 2.3 percent of the total population (Table 6). The Mountain/Hill zone contributed 97.2 percent of those abroad. The Central Mountain/Hill zone alone contributed 48.5 percent of the total. The absentee population from the Inner Tarai and the Tarai was only 1.9 and 0.9 percent respectively. Compared to 1941, absentees abroad increased by 2.4 times. The increase of absentees abroad from the Eastern Mountain/Hill zone was 5.4 times. The Western Mountain/Hill, Western and Eastern Inner Tarai, and Central and Western Tarai regions, which had not reported absentees abroad in 1941, recorded a total of 46,315 such absentees in 1952/54.

In the 1961 census, the number of those away from home for six months or more was 386,824 persons or 4.1 percent of the total population. Of this, number 328,470 persons or 82.2 percent of the total absentees were outside the country (Table 6). Thus the absentee population increased by 211.5 percent within and 65.8 percent outside the country during 1952/54–1961. The Mountain and Hill zones, particularly the Central Mountain/Hill, were the main source of absentees abroad. There was also a considerable increase in the absentee population abroad from the Tarai and Inner Tarai regions. The 1971 census did not include data on absentee population.

The 1981 census provides the latest data on absentee population outside Nepal. The total number of persons reported outside the country was 402,977 or 2.7 percent of the enumerated population (Table 6). The Mountain and Hill zones contributed nearly 90 percent of absentees abroad; the share of the Central Mountain/Hill alone was half the total; another fifth was from the Western Mountain/Hill. The share of the Tarai was 7.3 percent and that of the Inner Tarai 3.4 percent of the total absentees abroad. The six districts with the highest percentage (exceeding 9 percent) of absentees abroad were all from the Hill zone, five of these as a compact block in the Central Hills (Map 1). Of the 15 districts with 4 to 9 percent absentees out of the district's total population, 11 were Hill and four Mountain districts. None of the Tarai and Inner Tarai districts recorded more than 2 percent of their total population as absentees abroad. All 11 districts of the Eastern Tarai had less than 1 percent of their population as absentees abroad. This category also included four Mountain and four Hill districts including the three in Kathmandu Valley.

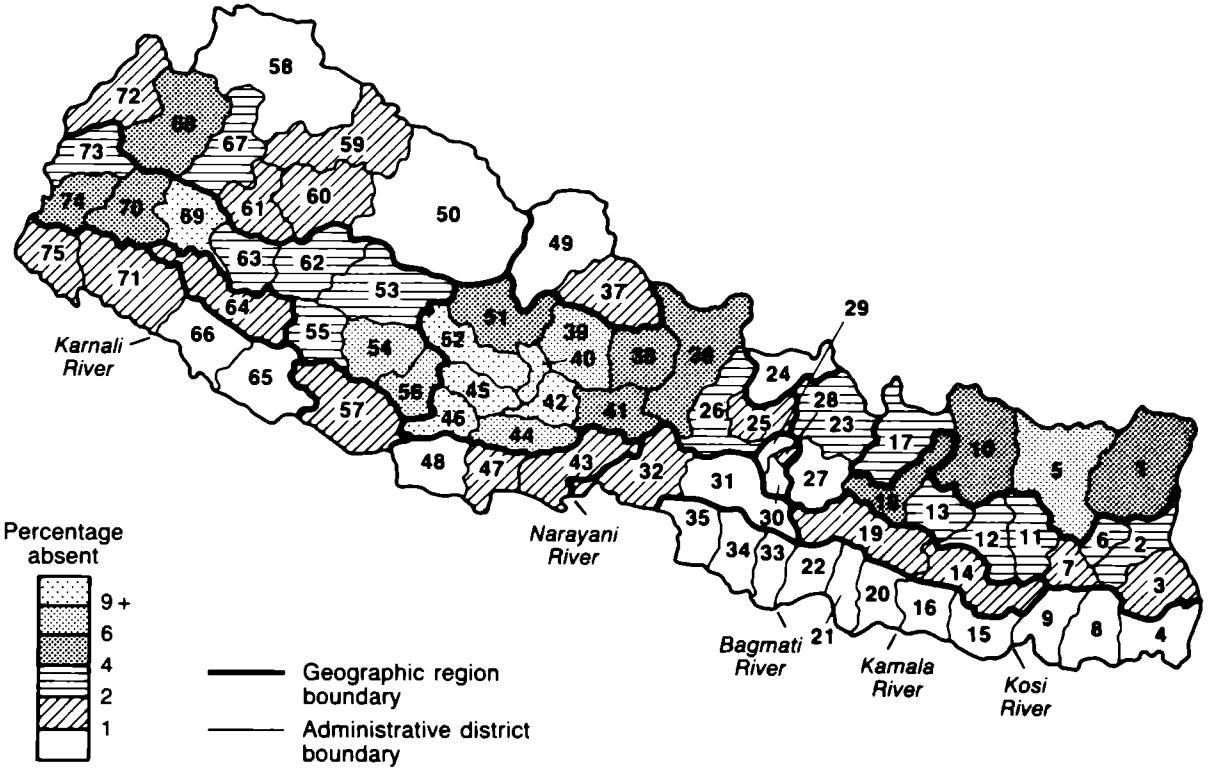
In 1952/54, the total volume of absentees (both within and outside the country) recorded was 216,853; of these 198,120 or 91.4 percent were absent abroad. In 1981, a total of 590,772 absentees was recorded; of these, 402,977 or 68.2 percent were outside the country (Nepal, CBS, 1984: vol. IV, table 3). Thus, during the last three decades, the volume of all absentees increased by 172.4 percent within Nepal and by 103.4 percent outside the country. The increase in absentee population abroad was 1.9 times for the Mountain and Hill zones, 3.5 times for the Inner Tarai, and 16.1 times

Table 6. Number and change in absentees abroad: 1952/54–1981

Region	1952/54		1961		1981		Change 1952/54–1981	
	Number	%	Number	%	Number	%	Number	%
Mountain/Hill	192,424	97.2	312,346	95.1	359,925	89.3	167,097	86.7
West	43,968	22.2	74,164	22.6	82,837	20.6	39,112	89.4
Central	95,992	48.5	150,502	45.8	202,598	50.3	105,959	109.6
Kathmandu Valley	2,911	1.5	7,089	2.2	4,449	1.1	1,538	52.8
East	49,553	25.0	80,591	24.5	70,041	17.4	20,488	41.3
Inner Tarai	3,856	1.9	6,603	2.0	13,510	3.4	10,038	289.1
West	216	0.1	519	0.2	6,354	1.6	6,138	2,841.7
Central	1,712	0.9	2,743	0.8	4,029	1.0	2,711	205.7
East	1,928	1.0	3,341	1.0	3,127	0.8	1,189	61.4
Tarai	1,840	0.9	9,521	2.9	29,542	7.3	27,712	1,514.3
West	123	0.1	444	0.1	6,262	1.6	6,139	4,991.0
Central	173	0.1	1,922	0.6	9,217	2.3	9,054	5,554.6
East	1,544	0.8	7,155	2.2	14,063	3.5	12,519	810.8
Total absentees	198,120	100.0	328,470	100.0	402,977	100.0	204,857	103.4
Absentees abroad as % of total population		2.3		3.5		2.7		

Sources: Nepal, DOS (1957: pt. I, sec. 3, tables 1 and 2); Nepal, CBS, (1967: vol. I, table 13); Nepal, CBS (1984: vol. IV, table 2).

Note: Census regions have been made comparable to those of 1952/54.


Percentage absent
9+
6
4
2
1
Geographic region boundary
Administrative district boundary
Karnali River
Narayani River
Bagmati River
Kamala River
Kosi River

1	Taplejung	16	Siraha	31	Makwanpur	46	Argha Khanchi	61	Kalikot
2	Panchthar	17	Dolakha	32	Chitawan	47	Rupandehi	62	Jajarkot
3	Ilam	18	Ramechhap	33	Rautahat	48	Kapilvastu	63	Dailekh
4	Jhapa	19	Sindhuli	34	Bara	49	Mustang	64	Surkhet
5	Sankhuwa Sabha	20	Dhanusa	35	Parsa	50	Dolpo	65	Banke
6	Terhathum	21	Mahotari	36	Gorkha	51	Myagdi	66	Bardiya
7	Dhankuta	22	Sarlahi	37	Manang	52	Baglung	67	Bajura
8	Morang	23	Sindhu-palchok	38	Lamjung	53	Rukum	68	Bajhang
9	Sunsari	24	Rasuwa	39	Kaski	54	Rolpa	69	Achham
10	Solu-Khumbu	25	Nuwakot	40	Parbat	55	Salyan	70	Doti
11	Bhojpur	26	Dhading	41	Tanahun	56	Pyuthan	71	Kailali
12	Khotang	27	Kabhre-palanchok	42	Syangja	57	Dang-Deokhuri	72	Darchula
13	Okhaldhunga	28	Bhaktapur	43	Nawal Parasi	58	Humla	73	Baitadi
14	Udayapur	29	Kathmandu	44	Palpa	59	Mugu	74	Dadeldhura
15	Saptari	30	Lalitpur	45	Gulmi	60	Jumla	75	Kanchanpur

Map 1. Absentees abroad as a percentage of district population: 1981

Source: Nepal, CBS (1984: vol. I, table 1; vol. IV, table 2).

Note: See Table 6 for percentage of absentees by geographic region.

for the Tarai (Table 6). Absentees from the Central Mountain and Hill regions more than doubled. Absentees outside the country increased by 103.4 percent during the three decades (1952/54–1981). As in earlier decades, an overwhelming majority of these absentees were from the Mountain and Hill regions. The Central Mountain and Hill regions had the highest absolute increase; the Central Tarai had the highest percentage increase of absentees during 1952/54–1981.

Destination

Of the total 198,120 absentees abroad reported in 1952/54, some 79.4 percent were in India, 4.3 percent in other Asian countries, 0.2 percent in China, and 16 percent in other countries and unstated (Table 7). Among the countries in Asia, Malaya (later Malaysia) had 3.3 percent, Burma 0.9 percent, and Pakistan 0.1 percent. Those in Malaya were soldiers and their dependents in the British Gurkhas. While the 1952/54 Nepal census reported 157,323 absentees in India, the Indian census of 1951 reported 278,972 persons as Nepal-born and 82,071 persons as Nepalese nationals residing in India (Table 8). The discrepancy may be attributed to the nonreporting of long-term and whole-family emigrants in the Nepalese census. Nearly 90 percent of the Nepal-born population in India was in the neighboring states of Uttar Pradesh, Bihar, West Bengal, and Assam (Table 8). States (Bombay) and union territories (Delhi) with large cities also recorded a sizable number of Nepal-born. More than 60 percent of the Nepal-born population in India was male. Bihar was the only state with a female preponderance among the Nepal-born.

According to the 1961 census, the 328,470 absentees abroad were distributed as follows: 92 percent in India, 4.8 percent in other Asian countries, 0.2 percent in China, and 2.9 percent in other countries and unstated (Table 7). Those reported in Malaya and Burma increased substantially while those in the other countries and unstated category declined sharply. Thus the number of Nepalese absentees in India increased by 144,829 persons, or 93.1 percent, during 1952/54–1961.

The 1961 census of India, on the other hand, recorded 498,836 Nepal-born and 133,524 Nepalese nationals residing in India (India, ORGCC, 1964:8). The two-thirds undercount in the Nepal census may be attributed to the underreporting of long-term emigrants. The Indian census reported an increase of 78.8 percent in Nepal-born and 62.7 percent in Nepalese nationals during 1951–61. The neighboring states of Uttar Pradesh, Bihar, West Bengal, and Assam claimed 82.7 percent of the Nepal-born population (Table 8). Although males predominated by 56.3 percent, Bihar adjoining the Eastern Tarai had 77.1 percent females among the Nepal-born, indicating considerable marriage migration across the border. According to one estimate: "Approximately 82,000 Nepalis migrated annually to India as of the 1961 census (Indian), and each year approximately 62,000 migrants returned

Table 7. Change in number of absentees abroad by destination: 1952/54–1981

Destination	1952/54		1961		1981		Change 1952/54–1981	
	Number	%	Number	%	Number	%	Number	%
India	157,323	79.4	302,162	92.0	375,196	93.1	217,873	138.5
China (Tibet)	422	0.2	809	0.2	265	0.1	-157	-37.2
Other Asia	8,616	4.3	15,923	4.8	9,054	2.2	438	5.1
Malaya (Malaysia)	6,621	3.3	12,798	3.9				
Burma	1,842	0.9	3,025	0.9				
Pakistan	153	0.1	100	0.0				
Other countries/unstated	31,759	16.0	9,576	2.9	18,462	4.6	-13,297	-41.9
Total	198,120	100.0	328,470	100.0	402,977	100.0	204,857	103.4

Source: Nepal, DOS (1957: pt. I, sec. 3, table 2); Nepal, CBS (1967: vol. I, table 11); Nepal, CBS (1984: vol. IV, table 2).

Table 8. Nepal-born population in India: 1951, 1961, and 1971

State/territory	1951	1961	1971	Change 1951-71 Number	%
Uttar Pradesh	83,900	111,718	83,459	-441	0.5
Male	49,234	63,661	41,236		
Female	34,666	48,057	42,223		
West Bengal	73,299	109,190	100,365	27,066	36.9
Male	45,861	68,501	61,460		
Female	27,438	40,689	38,905		
Assam/Meghalaya/Arunanchal	56,572	82,624	107,216	50,644	89.5
Male	36,350	53,189	66,831		
Female	20,222	29,435	40,385		
Bihar	34,942	108,971	122,528	87,586	25.0
Male	12,257	24,925	18,132		
Female	22,685	84,046	104,396		
Himachal Pradesh	1,854	9,699	19,718	17,324	93.4
Male	1,661	8,845	16,069		
Female	193	854	3,649		
Bombay/Maharastra	9,183	13,704	18,422	9,239	100.0
Male	8,165	11,812	14,107		
Female	1,018	1,892	4,315		
Delhi	1,073	5,892	9,670	8,593	80.0
Male	934	4,544	7,361		
Female	129	1,348	2,309		
Other	18,149	57,038	65,148	46,999	25.8
Male	14,693	45,126	48,547		
Female	3,456	11,912	16,601		
Total	278,972	498,836	526,526	147,554	88.7
Male	169,155	280,603	273,743	104,588	61.8
Female	109,817	218,233	252,783	142,966	13.0

Source: India, ORGCC (1954, 1964, 1976: pt. IID(i), migration tables).

after having lived in India from one to five years. Of the 20,000 who remained, half were males and half were females and at least half of these females [went] to India to marry Indian citizens" (Weiner 1973:621).

The Nepal census of 1971 did not report on the absentee population inside or outside the country. According to the 1971 census of India, there were 486,000 Nepal-born persons residing in India, (India, ORGCC, 1976:8). Thus there was only an increase of 5.6 percent of Nepal-born in India during 1961-71 as compared to the 62.7 percent increase in the preceding decade.

The 1981 census reported that of the total absentees abroad, 375,196 or 93.1 percent were in India. The rest were distributed as 2.2 percent in other Asian countries, 0.1 percent in China, and 4.6 percent in other countries and unstated. The 1981 census of India (based on a 5 percent sample) estimated 501,292 persons as Nepal-born and 444,427 persons with their last place of residence in Nepal (India, ORGCC, 1984:218, 226-27). The estimate indicates a decline of 4.8 percent in the Nepal-born in India in the last decade. The Nepal-born are estimated to be 54 percent female, and 70.4 percent of all Nepal-born are said to be residing in rural areas. Migration to other countries in the region was not significant. Migration to the Tibetan region of China ceased after the political change there in 1959, and migration to Burma was virtually stopped by the Burmese Nationalization Act of 1964.

Characteristics and Reasons

Most of the migrants reported abroad in 1981 were young males. Indeed, more than 80 percent of them were male (Table 9). All age groups had a high percentage of males—nearly 90 percent in the 45–64 age group. Only the dependent age group of those below 14 years had a sizable female population. On average, there were 440 males to 100 females among absentees abroad. Nearly 60 percent were within the age group 15–34 years. Another 15.9 percent were in the age group 35–44 years. Children below 15 years constituted 15.5 percent and those over 55 years only 3 percent. Among males, the largest age group was that of 25–34 years. A third of the females were below 15 years of age.

Military and other service was the reason for living abroad given by two-thirds of the absentees. A large percentage fell under the "Other" category (Table 10). Among the other reasons listed, agriculture claimed 3.5 percent and education (study or training) 2.6 percent. Those reporting marital relation as the reason for being abroad constituted only 0.9 percent. Such a low percentage, masking the true extent of marriage migration across the Indo-Nepal border, might be due to discounting married-away females as household members. Trade was rarely given as the reason for absence abroad (Figure 2).

Those migrating outside the country for service were 96.7 percent male, and two-thirds of them were in the 15–34 age group. Another 19 percent of those reported abroad for military service were between 35 and 44 years of age. Absentees in service abroad were 83.5 percent from the Hill zone (Table 10). More than half were from the Central Hill region alone, the main recruiting area for military and paramilitary services. There were fewer abroad for service from Kathmandu Valley. Service was the principal reason for being abroad in all regions (Map 2), however, ranging from 78 percent in the Western Inner Tarai to 34 percent in the Eastern Mountain region.

Of those absent abroad for agricultural reasons, 83.1 percent were male and 51 percent were in the 15–34 age group (Table 9). They originated mainly

Table 9. Age and sex of absentees abroad by reason: 1981

Age and sex	Service		Education		Agriculture		Marriage		Trade		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Over 65 years	1,339	0.5	8	0.1	250	1.8	3	0.1	36	1.4	731	0.6	2,367	0.6
Male	1,281	0.5	4	0.0	200	1.4	1	0.0	34	1.3	381	0.3	1,901	0.5
Female	58	0.0	4	0.0	50	0.4	2	0.0	2	0.1	350	0.3	466	0.1
55–64 years	7,280	2.8	23	0.2	597	4.2	20	0.6	98	3.9	1,528	1.3	9,546	2.4
Male	7,133	2.8	18	0.2	509	3.6	7	0.2	85	3.4	780	0.7	8,532	2.1
Female	147	0.0	5	0.0	88	0.6	13	0.4	13	0.5	748	0.7	1,014	0.3
45–54 years	21,771	8.4	63	0.6	1,613	11.4	128	3.6	295	11.7	4,224	3.7	28,094	7.0
Male	21,319	8.3	53	0.5	1,362	9.7	23	0.6	261	10.3	2,089	1.8	25,107	6.2
Female	452	0.1	10	0.1	251	1.7	105	2.9	34	1.4	2,135	1.9	2,987	0.7
35–44 years	48,926	19.0	272	2.6	3,023	21.4	412	11.5	495	19.6	11,022	9.6	64,150	15.9
Male	47,731	18.5	241	2.3	2,596	18.4	48	1.3	430	17.0	5,082	4.4	56,128	13.9
Female	1,195	0.5	31	0.3	427	3.0	364	10.1	65	2.6	5,940	5.2	8,022	2.0
25–34 years	88,525	34.3	1,107	10.4	4,731	33.5	1,265	35.2	825	32.7	24,230	21.2	120,683	29.9
Male	85,794	33.3	994	9.3	3,985	28.3	113	3.1	723	28.7	10,439	9.1	102,048	25.3
Female	2,731	1.1	113	1.1	740	5.2	1,152	32.0	102	4.0	13,791	12.2	18,635	4.6
15–24 years	81,720	31.7	3,828	36.0	3,198	22.7	1,609	44.7	634	25.1	24,797	21.7	115,786	28.7
Male	78,941	30.6	3,267	30.7	2,619	18.6	122	3.4	527	20.9	12,016	10.5	97,492	24.2
Female	2,779	1.1	561	5.3	579	4.1	1,487	41.4	107	4.2	12,781	11.2	18,294	4.5
Below 15 years	8,203	3.2	5,339	50.2	693	4.9	159	4.4	140	5.5	47,817	41.8	62,351	15.5
Male	6,948	2.7	3,883	36.5	451	3.2	44	1.2	101	4.0	25,813	22.6	37,240	9.2
Female	1,255	0.5	1,450	13.6	242	1.7	115	3.2	39	1.5	22,004	19.2	25,111	6.2
Total	257,764	100.0	10,640	100.0	14,105	100.0	3,596	100.0	2,523	100.0	114,349	100.0	402,977	100.0
Male	249,147	96.7	8,460	79.5	11,722	83.1	358	10.0	1,161	85.7	56,600	49.5	328,448	81.5
Female	8,617	3.3	2,180	20.5	2,383	16.9	3,290	90.0	362	14.3	57,749	50.5	74,529	18.5

Source: Nepal, CBS (1984: vol. IV, table 2).

Note: Percentages show proportion for each age/sex group of total persons abroad for indicated reason.

Table 10. Reasons for absentees abroad by geographic region: 1981

Region	Service		Agriculture		Education		Marriage		Trade		Other/ unstated		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mountain	17,309	6.7	5,432	38.5	685	6.4	160	4.4	637	25.2	12,091	10.6	36,314	9.0
West	9,032	3.5	79	0.6	85	0.8	20	0.6	134	5.3	2,735	2.4	12,085	3.0
Central	166	*	2	*	17	0.2	0	*	66	2.6	89	0.1	340	0.1
East	8,111	3.1	5,351	37.9	583	5.5	140	3.9	437	17.3	9,267	8.1	23,889	5.9
Hill	215,165	83.5	7,883	55.9	6,447	60.6	1,211	33.7	1,507	59.7	86,949	76.0	319,162	79.2
West	50,480	19.6	1,024	7.3	1,564	14.7	168	4.7	113	4.5	17,403	15.2	70,752	17.6
Central	142,723	55.4	1,116	7.9	3,987	37.5	790	22.0	777	30.8	52,865	46.2	202,258	50.2
East	21,962	8.5	5,743	40.7	896	8.4	253	7.0	617	24.5	16,681	14.6	46,152	11.5
Kathmandu Valley	1,559	0.6	27	0.2	969	9.1	39	1.1	70	2.8	1,785	1.6	4,449	1.1
Inner Tarai	9,582	3.7	140	1.0	353	3.3	41	1.1	58	2.3	3,336	2.9	13,510	3.4
West	4,955	1.9	16	0.1	89	0.8	20	0.6	26	1.0	1,248	1.1	6,354	1.6
Central	2,770	1.1	41	0.3	213	2.0	16	0.4	10	0.4	979	0.9	4,029	1.0
East	1,857	0.7	83	0.6	51	0.5	5	0.1	22	0.9	1,109	1.0	3,127	0.8
Tarai	14,149	5.5	623	4.4	2,186	20.5	2,145	59.6	251	9.9	10,188	8.9	29,542	7.3
West	4,158	1.6	37	0.3	183	1.7	20	0.6	16	0.6	1,848	1.6	6,262	1.6
Central	5,494	2.1	126	0.9	408	3.8	135	3.8	59	2.3	2,995	2.6	9,217	2.3
East	4,497	1.7	460	3.3	1,595	15.0	1,990	55.3	176	7.0	5,345	4.7	14,063	3.5
Total	257,764	100.0	14,105	100.0	10,640	100.0	3,596	100.0	2,523	100.0	114,349	100.0	402,977	100.0
Percentage of total abroad by reason		64.0		3.5		2.6		0.9		0.6		28.4		100.0

Source: Same as Table 9. See also Map 2 and Figure 4.

* Less than 0.05 percent.

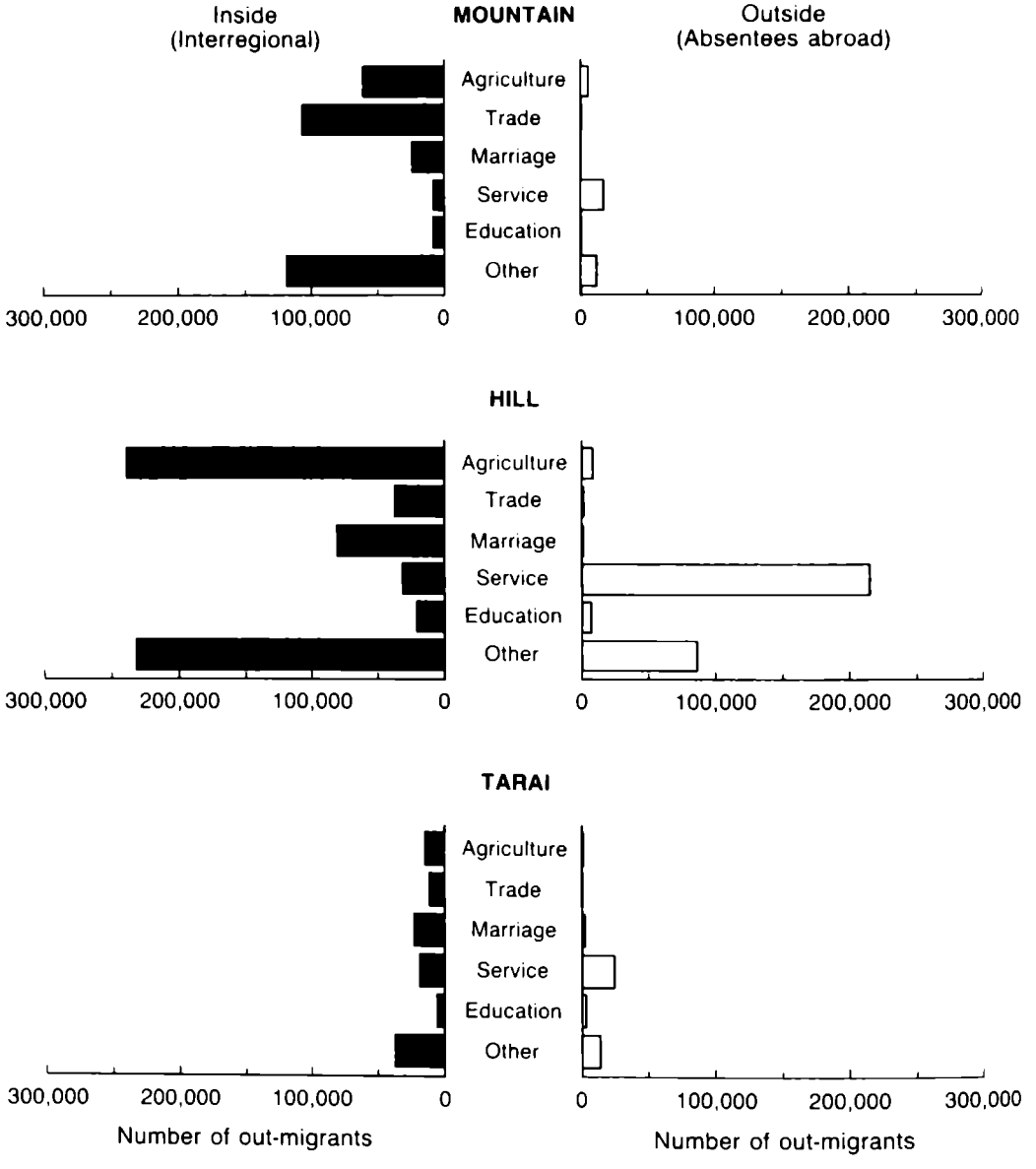


Figure 2. Reasons for migration inside and outside the country, by region of origin: 1981

Source: Tables 10 and 24.

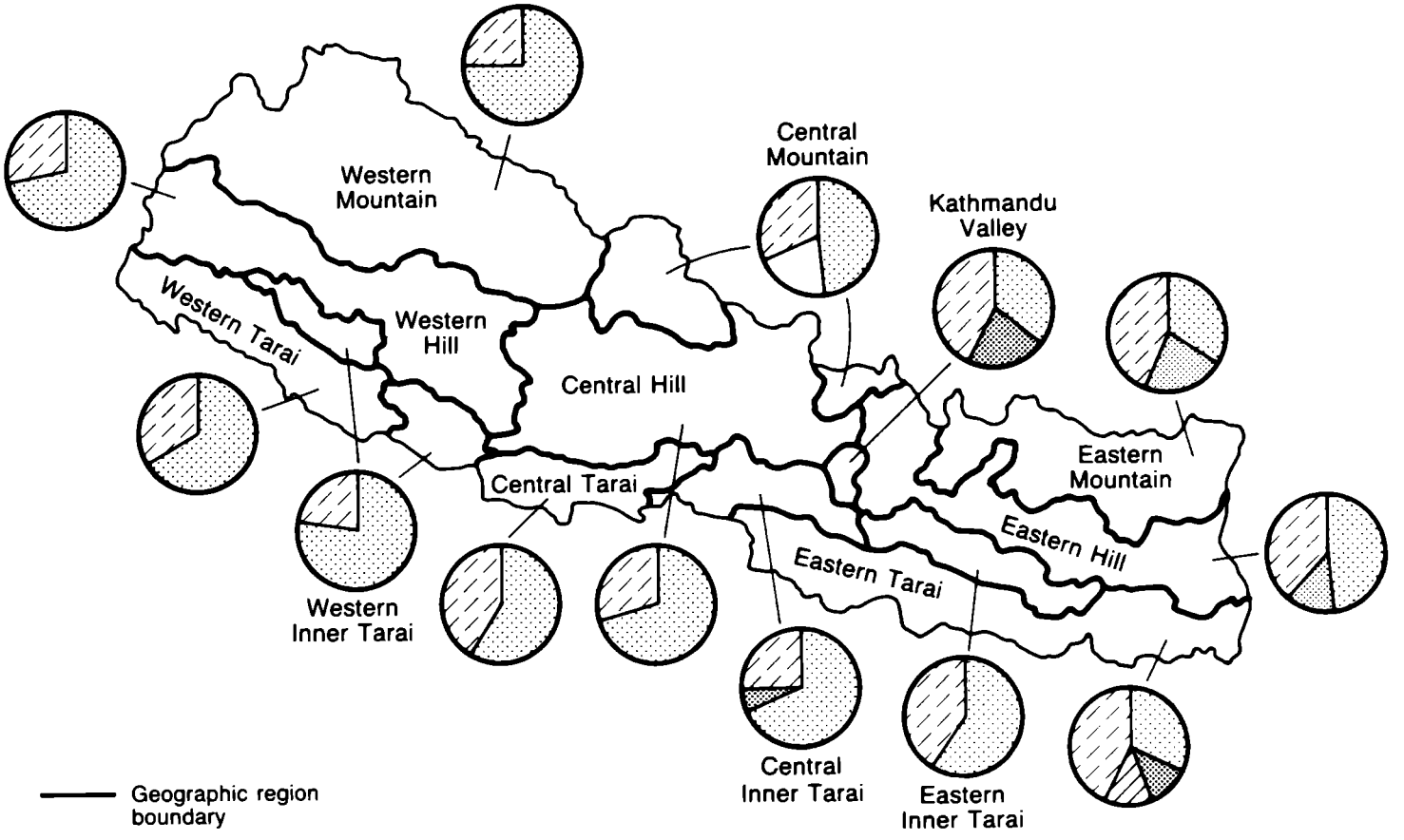
in the Mountain and Hill regions. Nearly 80 percent of those migrating abroad for agriculture were from the Eastern Mountain and Hill regions. Agriculture was the least important reason for out-migration abroad from Kathmandu Valley and the Western Inner Tarai. About two-thirds of those absent abroad for education were from the Hill zone; another 20.5 percent were from the Tarai. Half of those living abroad for education were children below 15 years, and 36 percent were in the 15–24 age group. There was a preponderance of males (79.5 percent) and it increased with age. For Kathmandu Valley, education was the second most important reason for migration abroad after agriculture.

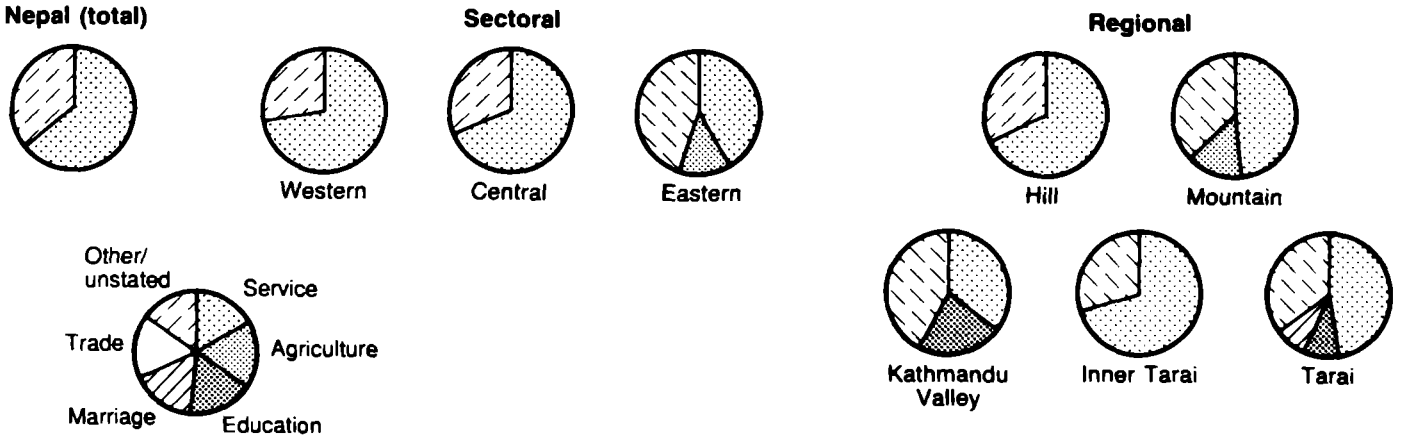
Ninety percent of those living outside the country for marriage reasons were female (Table 9). Nearly 80 percent of these were within the 15–34 age group. Of all those migrating abroad for marriage reasons, nearly 60 percent were from the Tarai and a third were from the Hill zone. The Eastern Tarai alone had 55.3 percent of the total absentees abroad due to marriage. Among those absent abroad for trade, 85.7 percent were male and about 59 percent were in the 15–34 age group. Two-thirds of them came from the Hills and a quarter from the Mountains. Thus Nepalese migrants abroad were mostly in service requiring youthful males. Out-migration for service abroad was the principal reason in all regions and particularly in the Hill and Inner Tarai regions. The second reason of importance varied from agriculture for the Mountain and Hill regions to education for Kathmandu Valley and the Tarai. The Tarai was also noted for marriage migration abroad.

Survey Data

The Demographic Sample Survey 1986–87 of 8,640 households, based on a multistage national probability sample of 129 identifiable clusters from 35 districts, provides the latest data on emigration (Nepal, CBS, 1988). The emigration rate per 1,000 population for the country was 12, with 20 for male and 4 for female. Regional variations ranged from 6 for the Tarai to 13 for the Hill and 33 for the Mountain zones (Nepal, CBS, 1988: table C.1). The emigration rate was lowest among females in the Hill zone (1.52) and highest among males in the Mountain zone (56.01). Of the 566 sample emigrants, 96 percent had moved to India.

Emigrants from rural areas were mostly in the age group 10–19 years: 60.3 percent for female and 40.7 percent for male. Those emigrating from urban areas were mostly in the age group 20–29 years. Thus emigrants are disproportionately selected in the adolescent and young adult age groups. The main reason for emigration was military service: 55.9 percent of the survey sample compared to 64 percent for the 1981 census (Table 9). Seeking a job and education were also important, each accounting for over 10 percent of the sample emigrants. Marital reasons for emigration were recorded only among females (all to India). Comparison of past occupation at origin and present occupation at destination shows a major shift from


Western Mountain
Central Mountain
Kathmandu Valley
Western Tarai
Western Hill
Central Hill
Eastern Mountain
Central Tarai
Eastern Hill
Eastern Tarai
Western Inner Tarai
Central Inner Tarai
Eastern Inner Tarai
Geographic region boundary



Map 2. Reasons for absentees abroad by geographic region: 1981

Source: Nepal, CBS (1984: vol. IV, table 3).

Note: Reasons for absentees abroad that represent 5 percent or less of total reasons indicated within a region are subsumed into the "Other/unstated" category. See Table 10 for percentages of absentees for each reason. Circles are not proportionate to volume.

agriculture to nonagricultural occupations. Of the emigrants from rural areas with 55.7 percent in agriculture, 76.4 percent reported they were employed in other occupations.

IMMIGRATION

While a sizeable number migrate out of the country, particularly from the hills, Nepal has also been a passage and destination for immigrants. Since the second half of the nineteenth century, there had been a deliberate policy of settling yeoman farmers from India in the virgin lands of the Tarai (Regmi 1971). The influx of Tibetan refugees in 1959–60 and Bihari Muslims from Bangladesh in 1971–72, however, represents immigration into Nepal due to political turmoil. Nepal has, therefore, experienced increasing immigration both peaceful and political in recent decades. The nature and magnitude of immigration into Nepal from its two neighbors, India and China, present a contrast. Migratory movements of people across the Nepal–China (Tibet) border have been of limited exent due to physical and political barriers and has virtually ceased since 1959. There is an extensive movement of population between Nepal and India, however, facilitated by an open border extending more than 3,000 kilometers as well as close economic and cultural ties. Increasing development in the Tarai regions contiguous to India has further encouraged immigration across the southern border. Information on immigration is derived from census data on the foreign-born population and foreign citizens.

Foreign-Born

Data relating to the foreign-born population were first recorded in the Nepal census of 1961. Not all foreign-born persons are aliens, however. Nepal has always had a sizable absentee population outside the country and some of those reported as foreign-born in the hills, the home of the Gurkhas, were the offspring of men in the foreign armies and other services. For example, part of the India-born population in the hills and all of the Malaya-born were the children of Nepalese in mercenary service in those countries. Those recorded as Burma-born, however, represent return migrants of Nepalese origin after the implementation of the Burmese Nationalization Act of 1964.

The census of 1961 recorded 337,620 persons or 3.6 percent of the total population as foreign-born (Table 11). Of the foreign-born, 96 percent were born in India. Among the 324,159 India-born, 308,516 or 95.2 percent were reported in the Tarai, 4.2 percent in the Mountain and Hill regions, and 0.7 percent in the Inner Tarai. Other foreign-born were 8,061 from China (Tibet), 2,302 from Pakistan, 1,531 from Malaysia (then Malaya), and 1,052 from Burma. The regional distribution of all foreign-born was 92.3 percent in the Tarai, 6.9 percent in the Mountain and Hill zones, and 0.7 percent in the Inner Tarai. More than 95 percent of the India-born were in the Tarai,

Table 11. Number and change in foreign-born population by region: 1961–81

Region and country of birth	1961		1971		1981		Change 1961–81	
	Number	%	Number	%	Number	%	Number	%
Mountain/Hill	23,594	100.0	22,580	100.0	17,941	100.0	-10,653	-45.2
India	13,498	57.2	15,851	70.2	9,320	72.0	-4,178	-31.0
China	8,050	34.1	1,500	6.6	1,984	15.3	-6,066	-75.4
Other Asia	1,903	8.1	4,624	20.5	1,228	9.5	-675	-35.5
Others/unstated	143	0.6	605	2.7	409	3.2	266	186.0
Inner Tarai	2,235	100.0	6,702	100.0	5,691	100.0	3,456	154.6
India	2,145	96.0	5,724	85.4	5,156	90.6	3,011	140.4
China	4	0.2	4	0.1	36	0.6	32	800.0
Other Asia	83	3.7	968	14.4	461	8.1	378	455.4
Others/unstated	3	0.1	6	0.1	38	0.7	35	1,166.7
Tarai	311,791	100.0	308,166	100.0	215,407	100.0	-96,384	-30.9
India	308,516	98.9	301,143	97.7	207,802	96.5	-100,714	-32.6
China	7	0.0	30	0.0	461	0.2	454	6,485.7
Other Asia	2,899	0.9	6,903	2.2	6,138	2.8	3,239	111.7
Others/unstated	369	0.1	90	0.0	1,006	0.5	637	172.6
Total	337,620	100.0	337,448	100.0	234,039	100.0	-103,581	-30.7
India	324,159	96.0	322,718	95.6	222,278	95.0	-101,881	-31.4
China	8,061	2.4	1,534	0.5	2,481	1.1	-5,580	-69.2
Other Asia	4,885	1.4	12,495	3.7	7,827	3.3	2,942	-60.2
Others/unstated	515	0.1	701	0.2	1,453	0.6	938	182.1

Source: Nepal, CBS (1967: vol. II, table 12); Nepal, CBS (1975: vol. II, table 11); Nepal, CBS (1984: vol. I, pt. II, table 8).

and 96.2 percent of the China-born or Tibet-born were in the Mountain and Hill regions, indicating immigration to regions adjacent to the country of origin.

The 1971 census recorded 337,448 foreign-born persons in Nepal, a marginal decline of 172 persons from the previous census (Table 11). As in the 1961 census, more than 90 percent of the foreign-born were concentrated in the Tarai. Their number decreased slightly in the Mountain and Hill regions and the Tarai but increased in the Inner Tarai. The India-born population constituted 95.6 percent of the total foreign-born, an increase of 2.6 percent since 1961. Those born in China declined sharply due to stepwise migration of Tibetan refugees to India. More than 90 percent of the India-born were concentrated in the Tarai, two-thirds in the Eastern Tarai alone. Those born in other Asian countries increased threefold during 1961–71. The sex ratio (males per 100 females) of the foreign-born was 57.7. The sex ratio of the India-born was 55.8.

The 1981 census reported 14,788,800 as native-born, 234,039 as foreign-born, and 4,554 as birthplace not stated (Table 12). Thus the number of foreign-born in 1981 declined by 30.6 percent compared to 1971. Moreover, the proportion of foreign-born to total population decreased progressively: 3.6 percent in 1961, 2.9 percent in 1971, and 1.6 percent in 1981. Of the total foreign-born, the share by country of birth was 95 percent India, 3.3 percent other Asia, 1.1 percent China, and 0.6 percent others and unstated (Table 11). As in the two previous censuses, more than 90 percent of the foreign-born were concentrated in the Tarai. The share of the Mountain and Hill regions was 5.5 percent; that of the Inner Tarai was 2.4 percent. The

Table 12. Population by country of birth and citizenship: 1961–81

Item	1961	1971	1981	Change 1961–81 Number	%
Native (Nepal) born	9,075,376	11,218,535	14,788,800	5,713,424	63.0
% of total population	96.4	97.1	98.4		
Nepalese citizen	9,302,935	11,419,506	14,539,820	5,236,885	56.3
% of total population	98.8	98.8	96.8		
Ratio of Nepalese citizen to native (Nepal) born	1:0.97	1:0.98	1:1.01		
Foreign-born	337,620	337,448	234,039	-103,581	-30.7
% of total population	3.6	2.9	1.6		
Foreign citizen	110,061	136,477	483,019	732,958	666.0
% of total population	1.2	1.2	3.2		
Ratio of foreign citizen to foreign-born	1:3.10	1:2.47	1:0.48		

Source: Same as Table 11.

India-born population constituted 22 percent of the Mountain and Hill regions, 90.6 percent of the Inner Tarai, and 96.5 percent of the Tarai among the foreign-born. Those reporting as India-born declined by 31.4 percent whereas the decline for China-born was 69.2 percent during 1961–81. Observers have suggested three main reasons for this dramatic decline in foreign-born: misclassification by enumerators; willful distortion on the part of foreign-born citizens to avoid identifying themselves as foreigners; and the possibility that foreign-born persons with long residence in Nepal may no longer consider themselves to be foreigners (Nepal, CBS, 1985b:69).

The majority (56.6 percent) of those reporting as foreign-born had been living in Nepal more than 12 years (Nepal, CBS, 1984: vol. I, pt. II, table 8). Another 38.7 percent reported a one to 11 years' duration of stay in Nepal. There was no significant difference in the duration of stay by country of origin. The age breakdown of the foreign-born was 82.5 percent of 15 to 59 years of age, 8.9 percent under 15 years, and 8.6 percent 60 years and over. Of those in the 15–59 age group, 28.2 percent were male and 71.8 percent female. The overall sex ratio among the foreign-born was 44 males to 100 females (compared to 108 males to 100 females among the native-born and unstated). By broad age groups, the sex ratio was 98.2 for those under 15 years, 39.3 for 15–59 years, and 50.3 for those over 59 years.

Among the foreign-born, 43.3 percent indicated marital relations as the reason for migrating to Nepal (Nepal, CBS, 1984: vol. I, pt. II, table 9). Trade and commerce (10.1 percent) and agriculture (10 percent) were also significant reasons. Service and study or training were cited as reasons for migration into Nepal by 4.9 percent and 1.3 percent of the migrants, respectively. A sizable 25.8 percent cited other reasons or fell in the unstated category. (See Table 28 for reasons given by India-born reported in Nepal.)

Foreign Citizens

The censuses of 1961, 1971, and 1981 also reported the number of foreign citizens in the country. The 1961 census recorded 110,061 foreign citizens in Nepal—1.2 percent of the total population (Table 12). The number of foreign citizens was one-third of the foreign-born population. Thus the bulk of the foreign-born was made up of Nepalese born in foreign countries of parents who had migrated there. Apart from such return migrants, adoption of Nepalese citizenship by aliens also contributed to the size of the foreign-born population as compared to foreign citizens.

Of the total aliens reported in 1961, some 69.3 percent were Indian, 6.8 percent Chinese, 0.5 percent Pakistani, and 23.4 percent unstated (Table 13). Nearly 90 percent of the foreign citizens were in the Tarai (Nepal, CBS, 1967: vol. II, table 9). The Eastern Tarai alone claimed more than half of these. Of the 76,311 Indians in Nepal, 98 percent were concentrated in the Tarai region adjoining India. Most of the Chinese were similarly concentrated in Mountain and Hill regions bordering on Tibet. Thus most aliens in Nepal were living in regions contiguous to their country of origin.

Table 13. Citizenship of population: 1961, 1971, and 1981

Citizenship category	1961		1971		1981		Change 1961–81	
	Number	%	Number	%	Number	%	Number	%
India	76,311	69.3	128,829	94.4	116,755	24.2	40,444	53.0
Other Asia	7,973[a]	7.2	7,184	5.3	7,678[b]	1.6	-295	-3.7
Other countries			464	0.3				
Others/unstated	25,777	23.4			358,586	74.2	332,809	1,291.1
Total	110,061	100.0	136,477	100.0	483,019	100.0	372,958	338.9

Source: Nepal, CBS (1967: vol. II, table 9); Nepal, CBS (1975: vol. II, pt. I, table 12); Nepal, CBS (1984: vol. I, pt. III, table 11).

a. Other Asia includes China and Pakistan.

b. Other Asia includes China only.

The 1971 census recorded 136,477 foreign citizens (Table 13). In contrast to a slight decline in the foreign-born population during 1961-71, foreign citizens increased by 24 percent. The number of foreign citizens in 1971 was 40.4 percent of the foreign-born and 1.2 percent of the total population (Table 12). More than 90 percent of the foreign citizens were residing in the Tarai, mostly in the Eastern Tarai (Nepal, CBS, 1975: vol. II, pt. I, table 12). The Western Mountain and Hill regions had the least number of aliens. Foreign citizens increased in all regions except in the hills, from whence a sizable number of Chinese (Tibetans) migrated elsewhere. Indians constituted 94.4 percent of the total foreigners in the country in 1971 (Table 13). Their increase during 1961-71 was 68.8 percent. Since there was no unstated category in the 1971 census, it is conjectured that some of those enumerated as "unstated" in the 1961 census were Indian citizens. The number of Indians increased in all regions. Of the 128,829 Indian citizens in Nepal in 1971, more than 95 percent were in the Tarai. Within the Tarai itself, the Eastern Tarai had 64.3 percent and the Central Tarai 25 percent of the Indians.

The 1981 census reported 483,019 foreign citizens (Table 13). These were categorized as 24.2 percent Indian, 1.6 percent other Asian (Chinese), and 74.2 percent as others and unstated. Those in the others/unstated category increased from 25,777 in 1961 to 358,586 in 1981. Indians increased by 118.5 percent while the Chinese declined by 2.9 percent during the same period (1961-81). During the successive censuses of 1961, 1971, and 1981, the percentage of foreign-born to total population declined progressively while the percentage of foreign citizens increased from 1.2 percent in 1961 and 1971 to 3.2 percent in 1981 (Table 12).

As admitted by the Central Bureau of Statistics, the 1981 census figures on immigrants are suspect (Nepal, CBS, 1988:6). The first anomaly is in the respective numbers of foreign-born and foreign citizens in the 1981 census compared to those for 1961 and 1971 (Table 12). The earlier two censuses recorded more foreign-born population than foreign citizens by 3.1 times in 1961 and by 2.5 times in 1971. The 1981 census reported foreign citizens as 2.1 times the number of foreign-born. Another anomaly appears in the categorization of the population by citizenship. The age grouping of population categorized as Nepalese, Indian, Chinese, and others and unstated shows an excessively high proportion (23.5 percent) under 5 years of age for others/unstated (Nepal, CBS, 1984: vol. I, pt. III, table 11). The corresponding proportion of those under 5 years of age was 15.3 percent for Nepalese, 8.6 percent for Indians, and 12.1 percent for Chinese. As a general pattern, natives should have a larger number of child dependents than foreigners. The contrary evidence in the 1981 census indicates that the category of others/unstated includes a sizable number of Nepalese citizens. The wide numerical distribution of this category in all districts sup-

ports this proposition.[4] Thus one can draw certain conclusions from the 1981 census figures on foreign-born and foreign citizens: A sizable number of foreign-born seem to have claimed to be Nepal-born; some long-term alien residents no longer regarded themselves as foreigners; and foreign citizens categorized as others/unstated include a sizable number of Nepalese nationals.

Immigration Estimates

The 1961 census reported 328,470 Nepalese outside the country and 337,620 as foreign-born, thus giving a net stock of 9,150 immigrants. The 1981 census reported 402,977 Nepalese outside the country and 234,039 as foreign-born; there was a 22.7 percent increase in emigration and a 30.7 percent decrease in immigration. The net emigration comes to 168,938. On the other hand, projecting the 1971 foreign-born population up to 1981 on the basis of the 1961–71 trend, there would be about 357,000 foreign-born persons in 1981.[5] This would mean 122,961 or 52.5 percent more foreign-born in 1981 than reported in the census.

Applying the intercensal cohort component method to estimate the volume of immigration during 1971–81, we get the following result:[6]

Macro region	1971 census (1)	1981 census (2)	Projected population in 1981 based on 1971 census (3)	Difference between expected and enumerated population 1981 (4) = (2) - (3)	Rate of growth (%)	
					Expected (5)	Reported (6)
Nepal	11,555,983	15,022,839	14,653,806	(+)369,033	2.40	2.66
Mountain and Hill	7,210,017	8,466,011	9,260,211	(-)794,200	2.53	1.62
Tarai	4,345,966	6,556,828	5,393,595	(+)1,163,233	2.18	4.20

The Mountain and Hill regions had a net loss of 794,200 persons; the Tarai had a net gain of 1,163,233 persons. On the basis of natural increase

4. Those reported as "others/unstated" ranged from 89 in Humla to 28,032 in Parsa. Six Tarai and six Hill districts reported more than 10,000 as "others/unstated." Of the 18 Tarai districts, only two reported fewer than 2,000 "others/unstated."

5. Y. B. Karki, personal communication. This figure is computed in the following way:

$$\left\{\frac{2.92 - \left[2.92\left(\frac{3.59 - 2.92}{3.59}\right)\right]}{100}\right\} \times 15{,}022{,}839 = 356{,}799$$

Where 2.92 and 3.59 are the percentages of foreign-born in 1971 and 1961 respectively.

alone, the Tarai would have a population growth rate of 2.18 percent instead of the reported rate of 4.20 percent. Even if all the net loss from the Mountain and Hill regions were added to the expected population of the Tarai, the total would be 6,187,795—yielding a growth rate of 3.60 percent per annum during 1971–81. Thus the difference of 369,033 as additional population may be assumed as the volume of migration from outside the country. This extent of immigration comes to 2.5 percent of the total population.

Given the absence of reliable data on the volume of international migration, the Central Bureau of Statistics made an estimate by two-census projection using estimated mortality rates obtained from the West model life table (Nepal, CBS, 1985b:125–27). The estimation was confined to the male population. The net number of intercensal (1971–81) immigrants came out to be 154,267 for unadjusted and 161,344 for adjusted age data. The net immigrants accounted for 8.21 percent (unadjusted) to 8.58 percent (adjusted) of the total increase in male population during the period 1971–81. Considering that males constituted 30.6 percent of the total foreign-born reported in 1981,[7] the number of immigrants including females would total 441,596 or 88.7 percent more than the census figure. Thus during the two decades (1961–81) immigrants increased by 30.8 percent as compared to emigrants, whose number increased by 22.7 percent.[8] The excess of immigrants over emigrants in 1981 was over four times that of 1961.

6. See Nepal, NCP (1983b). The age groups of the 1971 population were separately survived by appropriate ratios according to region. Expectation of life at birth was about 40 years for the Tarai and 42.5 for the Hill including the Mountain region. Estimated total fertility rates according to 1971 data were 5.4 for the Tarai and 6.0 for the Hill. The total fertility rate was assumed to increase linearly from 6.0 to 6.3 in the Hill and from 5.4 to 5.9 in the Tarai during 1971–81. Life expectancy at birth was uniformly increased at the rate of 0.5 year per annum for both regions.

7. The actual enumerated foreign-born by sex in the two censuses were:

	1971	%	1981	%	Change	%
Male	123,480	36.5	71,555	30.6	-51,925	-42.1
Female	213,968	63.4	162,484	69.4	-51,484	-24.1
Total	337,448	100.0	234,039	100.0	-103,409	-30.6

8. Nepal had a net surplus of immigrants in the two censuses for which data and estimates are available:

	Census year		Increase	
	1961	1981	Absolute	%
A. Emigrants (absentee abroad)	328,470	402,977	74,507	22.7
B. Immigrants	337,620	441,596[a]	103,976	30.8
C. Foreign-born immigrants		234,039[b]		
Excess of B over A	9,150	38,619	29,469	322.1

a. Estimate (Nepal, CBS, 1985b:125–27).

b. Reported (Nepal, CBS, 1984: vol. I, pt. II, table 8).

Another evidence of increasing immigration is the comparatively high rate of growth of population with the Tarai and Indian-origin mother tongues. Of the 10 Hill region mother tongues, seven recorded an absolute decline. Of the seven Tarai mother tongues, only one (Awadhi) recorded a decline during 1971-81.[9] Maithili and Bhojpuri, the two largest groups after the national language (Nepali), showed progressive increases during the intercensal periods 1952/54-1961, 1961-71, and 1971-81. The percentage of growth during this period was 10.3, 17.4, and 25.7 percent for Maithili and 21, 39.7, and 41.7 percent for Bhojpuri. For the period 1952/54-1981, the annual growth rate was 4.23 percent for Nepali but 4.98 percent for Bhojpuri (Nepal, DOS, 1957: vol. I, pt. II, table 9; Nepal, CBS, 1984: vol. I, pt. III, table 12). Growth rates for Santhal (37.03 percent), Rajbansi (2.40 percent), Maithali (2.24 percent), and Tharu (1.85 percent) exceeded those of Hill mother tongues except Nepali. An official Indian source reported that as of 15 July 1980, some 10.9 million Indians were residing abroad and of this number some 3.8 million or 34.7 percent were residing in Nepal. (See *Sunday Statesman* (New Delhi), 6 June 1982, and *Economic Times* (New Delhi), 1 August 1982, pp. 6-8.) It also stated that among those residing in Nepal, 2,387,973 or 62.8 percent had acquired Nepalese citizenship. This statement seems to claim all of the Tarai linguistic population of Nepal as Indians. Although language is not a realistic measure for establishing nationaliity in the modern sense (Weiner 1978), these statistics regarding the number of Indians and their naturalization may be taken as evidence of significant immigration of Indians into Nepal.

The recent Demographic Sample Survey data (Nepal, CBS, 1988: tables B.1 to B.10) show that there are 28 immigrants per 1,000 population for the country (41 for females and 14 for males). This immigration rate is considerably higher than that provided by the 1981 census data—that is, 16 immigrants per 1,000 for the country (22 for females and 9 for males). The immigration rate was higher in urban (47) than rural (26) areas and highest in the Tarai (59) and lowest (2) in the Mountain region. Although earlier observers have noted the low rate of immigration (Rana and Thapa 1975; Banister and Thapa 1981), recent migratory trends and demographic estimates indicate that there has been increasing immigration, particularly in the Tarai and urban areas.

9. The classification of Tarai languages in the 1952/54 census is misleasing, as it reported 300,768 as Maithili, 16,335 as Bhojpuri, and only 27 as Awadhi speakers (Nepal, DOS, 1957: pt. I, sec. 2, table 9). It becomes evident from textual commentary (pt. II, sec. 2, pp. 60-71) that those classified as dialects of Cental Eastern and Far Eastern Tarai were actually Maithili, dialects under Eastern Tarai were Bhojpuri, and those of Far Western Tarai were Awadhi. The language data in the present analysis are derived from these adjustments.

INTERNAL MIGRATION

Traditionally the bulk of the Nepalese population was confined to the hill zone between the mountain barrier to the north and the malarial plain to the south. Until the middle of the present century, internal movement of population was mainly from the drier west to the wetter east along the subtropical hill zone. This migratory movement was part of a larger regional pattern whereby caste groups from Kumaon (India) migrated into Nepal and those from Nepal in turn spilled over into Darjeeling, Sikkim, Bhutan, and Assam in India. The control of endemic malaria in the Tarai and Inner Tarai lowlands in the last three decades has led to a large-scale shift of population from the hills to these new frontier lands (Gurung 1984b: 225–29).

Volume and Trend

The Nepalese census of 1952/54 did not include a question on place of birth, but the data on absentee population provide some measure of out-migration. The census recorded 218,833 persons as absent from home for six months or more; of these only 18,733 or 8.6 percent were reported within the country and the rest outside the country (Table 14). Among those within the country, 73.3 percent were residing in regions other than their region of birth (Nepal, DOS, 1957: pt. I, sec. III, table 2). More than 80 percent of these absentees originated in Mountain/Hill regions, the Eastern Mountain/Hill region alone contributing more than half. Kathmandu Valley with its three large towns was the destination of 55.9 percent of the absentees, and one-third had moved to the Tarai. Of the total net loss of absentees, 98.1 percent were from Mountain/Hill regions. The net gain in Kathmandu Valley (6,218) was higher than in the Tarai (4,442).

The 1961 census provided data both by place of birth and number of absentees. These two sets of data are not comparable, for the census recorded 422,402 as lifetime migrants and 386,424 as absentee population (Table 14)—indicating that data on absentee population underestimate the true extent of migration. Among the absentees, only 15.1 percent were reported within the country. The total absentee population increased by 78.4 percent during 1952/54–1961. This group constituted 2.6 percent of the total population in 1952/54 and 4.1 percent in 1961. For the same period, absentees increased by 1.7 times outside the country and by 3.1 times within the country, indicating increasing internal mobility.

The 1961 census defined persons residing in the place of enumeration over six months away from their place of birth as migrants. Of the total 422,402 lifetime migrants, 57.8 percent had moved within the same defined region and the remaining 42.2 percent were interregional migrants (Table 14). About 80 percent of the interregional migrants originated in the highlands (Table 15). The volume of out-migration from the Mountain/Hill regions was progressively larger from west to east, the latter region account-

Table 14. Population mobility according to censuses: 1952/54–1981

Item	1952/54		1961		1971		1981	
	Number	%	Number	%	Number	%	Number	%
Districts	55		55		75		75	
Regions	9		10		10		15	
Total population	8,473,478	100.0	9,412,996	100.0	11,555,983	100.0	15,022,839	100.0
Away from home	216,853	2.6	386,824	4.1			590,772	3.9
Inside country	18,733	0.2	58,354	0.6			187,795	1.3
Outside country	198,120	2.3	328,470	3.5			402,977	2.7
Native-born			9,075,376	96.4	11,218,535	97.1	14,788,800	98.4
Foreign-born			337,620	3.6	337,448	2.9	234,039	1.6
Nonmigrants			8,652,974	91.9	10,711,610	92.7	13,516,512	90.0
Lifetime migrants (district as unit area)			422,402	4.5			1,272,288	8.5
Migration within defined region			243,965	2.6			233,426	1.6
Interregional migrants			178,437	1.9	506,921	4.4	1,038,862	6.9

Source: Nepal, DOS (1957); Nepal, CBS (1967, 1975, 1984).

Table 15. Interregional migration: 1961

Census region	In-migrants		Out-migrants		Net migration
	Number	%	Number	%	
Highlands	40,579	22.7	141,959	79.6	-101,380
Mountain and Hill[a]	15,831	8.9	121,828	68.3	-105,997
Far West	4,783	2.7	8,656	4.9	-3,873
West	5,694	3.2	38,326	21.5	-32,632
East	5,354	3.0	74,846	41.9	-69,492
Kathmandu Valley	24,748	13.9	20,131	11.3	+4,617
Lowlands	137,858	77.3	36,478	20.4	+101,380
Inner Tarai	36,351	20.4	29,494	16.5	+6,857
West	3,446	1.9	16,754	9.4	-13,308
Central	27,560	15.4	2,188	1.2	+25,372
East	5,345	3.0	10,552	5.9	-5,207
Tarai	101,507	56.9	6,984	3.9	+94,523
Far West	21,170	11.9	545	0.3	+20,625
Central	8,307	4.7	2,591	1.5	+5,716
East	72,030	40.4	3,848	2.2	+68,182
Total	178,437	100.0	178,437	100.0	0

Source: Nepal, CBS (1967: vol. II, table 11).

a. Excluding Kathmandu Valley.

ing for 41.9 percent of all out-migrants. Out-migration from the Tarai was only 3.9 percent of the total; the Far Western Tarai registered the least out-migration. Over three-quarters of the migrants were directed to the lowlands, mostly to the Tarai. The Eastern Tarai claimed 40.4 percent of the total in-migrants. The Central Tarai, including Chitawan district where the first resettlement was initiated in 1955, was the next region of importance in in-migration. Kathmandu Valley had 13.9 percent of the total in-migrants. The highlands had a net loss of 101,380 persons through out-migration; the Eastern Mountain/Hill regions alone accounted for nearly two-thirds. Kathmandu Valley was the sole highland region with a slight net gain. The Tarai had a net gain of 94,523 persons with increasing volume from west to east. Thus high net-gain Tarai regions were contiguous to high net-loss Mountain/Hill regions.

According to the 1971 census, the number of persons residing in regions other than their region of birth was 506,921 (Table 14). Although the 10 census regions of 1961 and 1971 are not strictly comparable (Figure 1), lifetime migration volumes at aggregate and macro-regional levels evidence increasing internal population mobility. At the aggregate level, the proportion of such migrants in the total population increased from 1.9 percent in 1961 to 4.4 percent in 1971 (Table 14). At the macro-regional level, the increase

of out-migrants from the highlands was 3.4 times and the increase of in-migrants to the lowlands 4.1 times during the decade 1961-71 (Tables 15 and 16). Of the total interregional migrants in 1971, over two-thirds originated in the Hill zone, 9 percent each from the Mountain zone and Kathmandu Valley, and only 3.7 percent in the Tarai (Table 16). As in 1961, the Eastern Hill region had the highest volume of out-migration followed by the Central Hill region. The Western Tarai had the least out-migration.

More than 80 percent of the migrants were directed to the Tarai. Of the rest, 10.3 percent moved to the Hill zone, 5.2 percent to Kathmandu Valley, and only 1.9 percent to the Mountain region (Table 16). In-migration to the Tarai region was progressively higher from west to east. The Eastern Tarai's share was 36.7 percent of the total in-migrants. The Central Tarai had another 31.9 percent. The net loss from the highlands was 399,925, and 85.2 percent of this number was from the hills. Kathmandu Valley, which had a net gain of 4,617 in 1961, showed a net loss of 19,044 in 1971. Of the total net gain in the Tarai, 43.9 percent was in the east, 38.8 percent in the central sector, and 17.3 percent in the west.

The 1981 census enumerated 1,272,288 persons or 8.5 percent of the total population as residing in districts other than their district of birth (Ta-

Table 16. Interregional migration: 1971

Census region	In-migrants		Out-migrants		Net migration
	Number	%	Number	%	
Highlands	88,486	17.5	488,411	96.3	-399,925
Mountain	9,733	1.9	49,692	9.8	-39,959
West	2,125	0.4	9,681	1.9	-7,556
Central	1,223	0.2	2,095	0.4	-872
East	6,385	1.3	37,916	7.5	-31,531
Hill[a]	52,313	10.3	393,235	77.6	-340,922
West	5,063	1.0	65,750	13.0	-60,687
Central	29,752	5.9	140,642	27.7	-110,890
East	17,498	3.5	186,843	36.9	-169,345
Kathmandu Valley	26,440	5.2	45,484	9.0	-19,044
Lowlands	418,435	82.5	18,510	3.7	+399,925
Tarai	418,435	82.5	18,510	3.7	+399,925
West	70,885	14.0	1,739	0.3	+69,146
Central	161,751	31.9	6,504	1.3	+155,247
East	185,799	36.7	10,267	2.0	+175,532
Total	506,921	100.0	506,921	100.0	0

Source: Nepal, CBS (1975: vol. II, pt. I, table 10).

a. Excluding Kathmandu Valley.

ble 14). Among these lifetime migrants, 233,426 or 18.3 percent were in other districts but within the defined census region and the remaining 1,038,862 in other regions. The census regions of 1981 are not comparable to those of 1971, and their increase in number from 10 to 15 yields a larger volume of migrants due to the reduction of their defined migration field (Figure 1). However, the aggregation of regions into broad elevation zones (Mountain, Hill, and Tarai) provides some indication of the increasing volume of interregional migration. Thus the comparison of native-born population by place of birth and place of enumeration shows an increase of 108.8 percent in such lifetime migrants from 445,128 in 1971 to 929,585 in 1981 (Nepal, CBS, 1985b: tables 6.2 and 6.3). The increase in out-migration from the Mountain region was six times and that from the Hill zone 1.5 times, while the increase in in-migration to the Tarai was 1.8 times. The proportion of interregional migrants to the total population increased from 4.4 percent in 1971 to 6.9 percent in 1981 (Table 14).

The 1981 census provides data on absentee population—at district and regional levels for those outside the country but only at the regional level for those inside the country. The total absentee population reported was 590,772 or 3.9 percent of the total population (Table 14). Thus, between 1952/54 and 1981, absentees increased by 2.7 times. In 1952/54, only 8.6 percent of the absentees were reported inside the country. In 1981, absentees within the country constituted 31.8 percent of all absentees—indicating increasing internal mobility over the last three decades. During 1952/54-1981, absentees outside the country more than doubled while the increase of absentees inside the country was tenfold.

The absentee population as a percentage of regional population was 5.6 for the Hill, 8.2 for the Mountain, and 1.3 for the Tarai regoins (Table 17). The Eastern Mountain, Western Hill, and Far Western Hill regions had a high percentage of absentees. Of the total absentees from the highlands, 72.2 percent were outside the country. In the Tarai, 56.4 percent were inside the country. Of the total absentees within the country, the Hill region reported 59.8 percent, the Tarai 24.8 percent, and the Mountain region 15.3 percent (Table 17). More than half of these absentees were from the West, Central, and Eastern Hill regions. Far Western Tarai reported the least number of absentees. Of the total absentees, the Hill region reported 68.0 percent, the Mountain region 18.0 percent, and the Tarai 14.0 percent. The Western Hill region reported nearly a third of the total absentees. The Far Western Tarai and Midwestern Mountain regions reported a low number of absentees.

Table 17. Absentee population by census region: 1981

Census region	Within country[a]		Outside country[b]		Total		As percentage of population within region
	Number	%	Number	%	Number	%	
Nepal	187,795	100.0	402,977	100.0	590,772	100.0	3.9
Mountain	28,810	15.3	77,510	19.2	106,320	18.0	8.2
Far West	1,974	1.1	9,632	2.4	11,606	2.0	4.0
Midwest	1,985	1.1	2,453	0.6	4,438	0.8	1.8
West	8,896	4.7	36,606	9.1	45,502	7.7	228.1[c]
Central	6,163	3.3	10,514	2.6	16,677	2.8	4.0
East	9,792	5.2	18,305	4.5	28,097	4.8	13.2
Hill	112,391	59.8	289,415	71.8	401,806	68.0	5.6
Far West	8,646	4.6	37,595	9.3	46,241	7.8	7.7
Midwest	7,207	3.8	36,190	9.0	43,397	7.3	4.2
West	32,593	17.4	156,512	38.8	189,105	32.0	8.8
Central	29,403	15.7	27,289	6.8	56,692	9.6	2.7
East	34,542	18.4	31,829	7.9	66,371	11.2	5.2
Tarai	46,594	24.8	36,052	8.9	82,646	14.0	1.3
Far West	1,201	0.6	4,112	1.0	5,313	0.9	1.2
Midwest	3,509	1.9	5,471	1.3	8,980	1.5	1.3
West	4,224	2.2	9,217	2.3	13,441	2.3	1.4
Central	16,761	8.9	9,220	2.3	26,011	4.4	1.1
East	20,899	11.1	8,032	2.0	28,931	4.9	1.4

a. Nepal, CBS (1984: vol. IV, table 12).

b. Nepal, CBS (1984: vol. IV, table 3).

c. The number of lifetime migrants being higher than enumerated population is unlikely and more artificial than real. The Western mountains comprise two districts, Mustang and Manang. A number of *panchayats* from Mustang were incorporated into a contiguous Hill district in 1975. The population of these *panchayats* in 1981 could therefore have been counted in a census region different from their region of birth. This could lead to the finding of more migrants than enumerated population (see Nepal, CBS, 1987:160).

Direction of Flow

Lifetime internal migration

The principal direction of flow of lifetime internal migrants reported in 1981 was from the highlands to the lowlands. Of the total 1.3 million such migrants, 85.1 percent originated in the highlands and 68.8 percent were destined for the Tarai lowlands (Nepal, CBS, 1987: table 7.9). Among census regions, the Eastern Mountain and Hill regions accounted for 41.8 percent of out-migrants while the Eastern and Central Tarai claimed 47.4 percent of total in-migrants. Of the 319,870 out-migrants from the Mountain region, more than half moved to the Tarai, 42 percent to the Hill region, and 7.1 percent to the Mountain zone. Among Hill out-migrants, nearly a third moved to the Tarai, 22.1 percent to the Hill region, and only 4.4 percent to the Mountain region.

Most of the Tarai out-migrants moved within the Tarai. Those moving from the Tarai to the Hill zone constituted 18.9 percent and those moving to the Mountain zone only 1.2 percent. The Tarai recorded a higher internal population mobility in that 53.8 percent of the out-migrants moved within the Tarai zone (Table 18). Of all out-migrants from the Hill zone, 83.4 percent moved to districts outside the Hill zone. Of all out-migrants from the Mountain zone, 98.5 percent moved to districts in other elevation zones (Hill and Tarai).

Interregional migration

Of the total 1.3 million lifetime internal migrants, 1,038,862 or 81.7 percent were reported in districts outside the region of their birth. More than 90 percent of these interregional migrants originated in the highlands, and two-thirds of them were destined for the Tarai lowlands (Table 18). The Eastern Hill and Mountain regions accounted for 48.2 percent of the total interregional out-migrants (Table 19). Out-migrants from the five Tarai regions constituted only 8.4 percent of the total. The Far Western Tarai region had the least number of out-migrants (Figure 3). Of the total interregional in-migrants, 74.4 percent were in the Tarai, 20.4 percent in the Hill, and 5.2 percent in the Mountain regions (Table 18). The Eastern and Central Tarai had nearly half of the total in-migrants. The Western Mountain region recorded the least number of in-migrants.

Hill-to-Tarai flow was the dominant pattern of interregional migration (Figure 3). Migrants destined for the Tarai region from the adjacent Hill region constituted 87.2 percent in the Far West, 57.1 percent in the Mid-west, 42 percent in the West, 69.8 percent in the Central, and 76.4 percent in the Eastern regions out of their total out-migrants (Table 18). The Western Hill region had a sizable migration stream to the Central Tarai, but it was less than that to the Western Tarai.

A Mountain-to-Hill flow of interregional migrants was also common in all east-west sectors but of smaller volume and with decreasing

Table 18. Origin and destination of interregional migrants: 1981

Origin	Destination											
	Mountain						Hill					
	Far West	Mid-west	West	Central	East	Total	Far West	Mid-west	West	Central	East	Total
Mountain	6,876	5,296	148	5,603	86	18,009	10,851	19,740	40,385	44,481	18,797	134,254
Far West		580	2	8	6	596	1,844	65	61	131	33	2,134
Midwest	651		3	8	12	674	846	1,153	508	185	37	2,729
West	21	49		29	15	114	100	138	5,526	1,377	96	7,237
Central	21	12	17		53	103	90	102	400	10,186	411	11,189
East	6,183	4,655	126	5,558		16,522	7,971	18,282	33,890	32,602	18,220	110,965
Hill	3,521	1,665	820	4,377	23,040	33,423	2,537	7,391	11,530	16,215	4,331	42,004
Far West	1,274	145	4	11	17	1,451		2,364	134	330	52	2,880
Midwest	649	859	9	34	621	2,172	910		1,537	607	121	3,175
West	97	158	648	124	65	1,092	300	1,638		5,512	343	7,793
Central	149	149	101	3,800	1,047	5,246	440	767	4,448		3,815	9,470
East	1,352	354	58	408	21,290	23,462	887	2,622	5,411	9,766		18,686
Tarai	489	369	112	445	781	2,196	1,171	4,369	10,657	11,177	8,295	35,669
Far West	16	9	1	3	2	31	441	98	42	93	25	699
Midwest	13	46	2	16	9	86	95	1,014	158	994	44	2,305
West	32	34	78	39	23	206	91	253	1,174	761	99	2,378
Central	57	138	18	174	108	495	195	653	6,884	5,123	713	13,568
East	371	142	13	213	639	1,378	349	2,351	2,399	4,206	7,414	16,719
Total in-migrants	10,886	7,330	1,080	10,425	23,907	53,628	14,559	31,500	62,572	71,873	31,423	211,927
Percentage	1.0	0.7	0.1	1.0	2.3	5.2	1.4	3.0	6.0	6.9	3.0	20.4

Table 18. *(continued)*

Origin	Destination						Total out-migrants	%
	Tarai							
	Far West	Mid-west	West	Central	East	Total		
Mountain	17,938	8,582	32,635	31,903	71,774	162,832	315,095	30.3
Far West	9,900	114	52	197	248	10,511	13,241	1.3
Midwest	1,466	651	133	163	96	2,509	5,912	0.6
West	667	1,174	22,659	5,953	415	30,868	38,219	3.7
Central	182	241	224	8,651	1,146	10,444	21,736	2.1
East	5,723	6,402	9,567	16,939	69,869	108,500	235,987	22.7
Hill	62,665	42,393	74,714	162,743	218,696	561,211	636,638	61.3
Far West	41,285	971	173	264	347	43,040	47,371	4.6
Midwest	12,486	31,110	4,549	709	327	49,181	54,528	5.2
West	4,086	6,968	64,328	63,210	2,627	141,219	150,104	14.4
Central	2,480	1,976	4,010	83,290	12,803	104,559	119,275	11.5
East	2,328	1,368	1,654	15,270	202,592	223,212	265,360	25.5
Tarai	11,597	3,389	4,086	19,827	10,365	49,264	87,129	8.4
Far West		215	35	102	129	481	1,211	0.1
Midwest	9,486		430	742	189	10,847	13,238	1.3
West	300	613		843	332	2,088	4,672	0.4
Central	735	1,889	2,651		9,715	14,990	29,053	2.8
East	1,076	672	970	18,140		20,858	38,955	3.7
Total in-migrants	92,200	54,364	111,435	214,473	300,835	773,307	1,038,862	
Percentage	8.9	5.2	10.7	20.6	29.0	74.4	100.0	

Source: Nepal, CBS (1984: vol. II, table 8).

Table 19. Interregional migration by census region: 1981

Census region	In-migrants		Out-migrants		Net migration
	Number	%	Number	%	
Mountain	53,628	5.2	315,095	30.3	-261,467
Far West	10,886	1.0	13,241	1.3	-2,355
Midwest	7,330	0.7	5,912	0.6	+1,418
West	1,080	0.1	38,219	3.7	-37,139
Central	10,425	1.0	21,736	2.1	-11,311
East	23,907	2.3	235,987	22.7	-212,080
Hill	211,927	20.4	636,638	61.3	-424,711
Far West	14,559	1.4	47,371	4.6	-32,812
Midwest	31,500	3.0	54,528	5.2	-23,028
West	62,572	6.0	150,104	14.4	-87,532
Central[a]	71,873	6.9	119,275	11.5	-47,402
East	31,423	3.0	265,360	25.5	-233,937
Tarai	773,307	74.4	87,129	8.4	+686,178
Far West	92,200	8.9	1,211	0.1	+90,989
Midwest	54,364	5.2	13,238	1.3	+41,126
West	111,435	10.7	4,672	0.4	+106,763
Central	214,473	20.6	29,053	2.8	+185,420
East	300,835	29.0	38,955	3.7	+261,880
Total	1,038,862	100.0	1,038,862	100.0	0

Source: Nepal, CBS (1984: vol. II, tables 7 and 8).

Note: This table excludes those moving from one district to another within the same region. See also Map 3.

a. Including Kathmandu Valley

intensity westward. In the case of the Western and Eastern Mountain regions, a larger volume was directed to their respective Tarai regions than to their immediate Hill regions (Figure 3). Again, the Eastern Mountain region had more migrants to the Central, Western, and Midwestern Hills than to the adjacent Eastern Hill region. In fact, the Eastern Mountain region appears as a singular locus of exodus sending migrants to all other regions.

Counterstreams of migration from the Tarai to the Hill region and from the Hill to Mountain regions were not significant. A sizable migration from the Eastern Hill to Eastern Mountain regions was the only deviation from the general pattern of flow from higher to lower elevation zones. Lateral flows in all elevation zones were predominantly from east to west. Lateral counterflows, observed among Hill regions, were absent in the Mountain region and not prominent in the Tarai. All Mountain and Hill regions except the Midwestern mountain experienced a net loss through interregional migration (Table 19). The net loss from the Hill regions was 61.8 percent

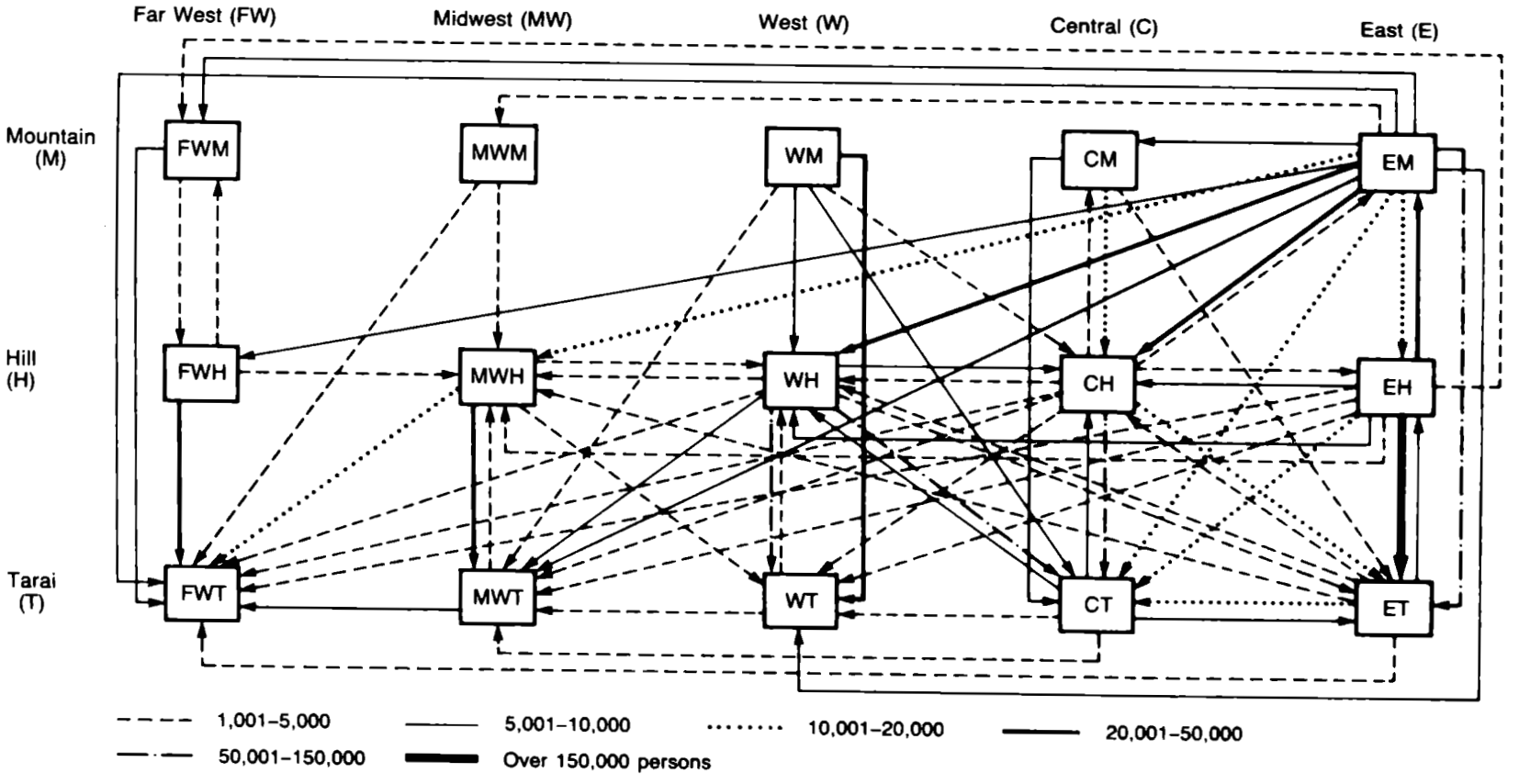


Figure 3. Volume and direction of interregional migration: 1981
Source: Table 18.

of all out-migration, and more than half of this was from the Eastern Hill region alone. The Central Hill region, including metropolitan Kathmandu, also recorded a net loss (Map 3). The net loss from the Eastern Mountain region was higher than that of the Hill regions except Eastern Hill. All Tarai regions gained through net migration. The Eastern and Central Tarai together claimed 65.1 percent of the net gain. The net gain for the Western Tarai was half that of the Central Tarai and one-third that of the Eastern Tarai. The net loss in the Mountain and Hill regions similarly was much greater in the Eastern sector.

In terms of net migration streams, the dominant flow was from the Hill regions to the Tarai (Figure 4). Net migration from the hills to the adjacent Tarai was 74.5 percent in the East, 42 percent in the Central, 59.1 percent in the West, 61.9 percent in the Midwest, and 44.9 percent in the Western sector (Table 20 and Map 3). Mountain regions lost both to adjacent Hill regions and to the Tarai. Mountain-to-Hill net migration showed some deviation in that the Eastern, Midwestern, and Far Western Mountains lost more to other hills than to their immediate hill regions. The overall volume of such net migration was, however, small.

The Eastern Tarai had large net migration volumes (exceeding 50,000) from the Eastern Hill and Mountain regions while the Central Tarai had large volumes from the Central and the Western Hill region (Map 3). Western Tarai in-migrants were mostly from Western Hill and Mountain regions. Net migration from the Eastern Mountain to Central and Western Hill regions and from the Midwestern and Far Western Hills to their adjacent Tarai regions ranged from 20,001 to 50,000 persons (Figure 4). The next net migration stream, 10,001 to 20,000, included those from the Eastern Mountain to Midwestern Hill and Central Tarai regions, from the Eastern Hill to Central Tarai regions, and from the Midwestern Hill to Far Western Tarai regions.

That more out-migrants from the Mountain region were destined for the Tarai provides a clear indication that the Tarai had a stronger pull than the intervening hills. Except for the Midwestern region, which sent more migrants to Far Western than to Midwestern Tarai, there was a clear relationship between the volume of net migration and geographic distance. In other words, the volume of net migration decreased with increasing distance. This relationship was most obvious in the case of the Hill-to-Tarai flow, which constituted the bulk of net migration.

The 15 census regions of 1981 can be categorized according to an index of attraction (ESCAP 1976:53). Thus all five Tarai regions rank high as a destination. The Far Western Tarai with an index of 21.6 was by far the most attractive region. That this region also happened to have the largest percentage of area under forest (Appendix Table 3) suggests that the availability of forest land for conversion to farmland was an important factor of migration in Nepal. In other words, land or agricultural colonization was the main motivation for interregional migration. The next regions of attraction were the Central and Eastern Tarai, which had an index of 18.9 and

13.0 respectively. The index of attraction for Hill regions varied from 2.9 in the East to 9.8 in the Central sector with some urban localities. None of the Mountain regions had an attraction index exceeding 1.5, and the lowest was in the Western Mountain region with a sizable population decline.

Duration of Stay

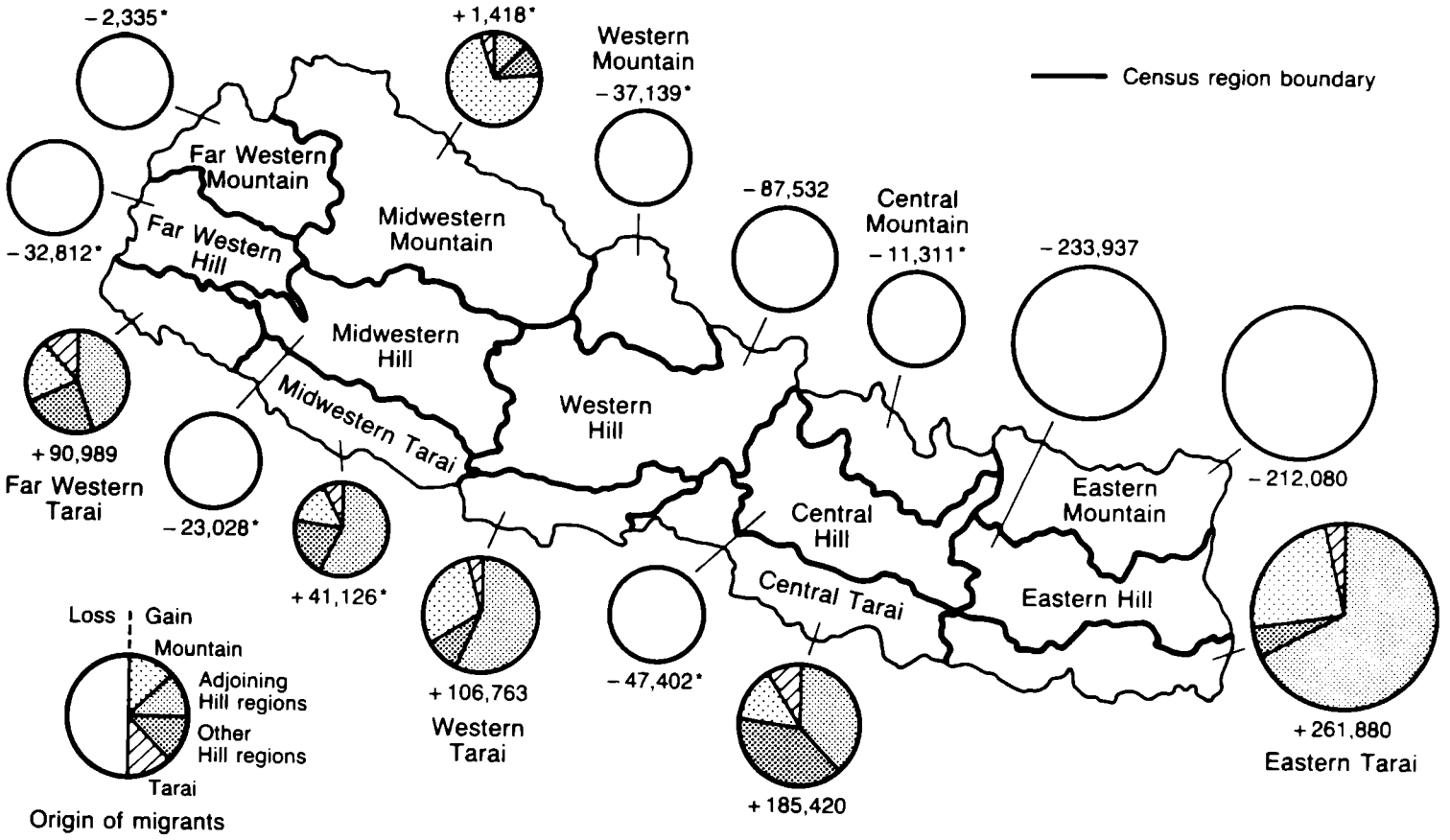
Data on the migrants' duration of stay was collected for the first time in the 1981 census. Of the 1 million interregional migrants, 36.5 percent had been residing in the place of enumeration for 12 years or more (Table 21). Another third had migrated within one to five years. Over one-fifth (22.7 percent) had migrated within six to 11 years and only 2.2 percent in less than a year. The remaining 5.5 percent were in the unstated category. The unstated category was a high 42.7 percent for the Eastern Tarai and 30.8 percent for the Eastern Mountain region of the total in-migrants and a high 55.7 percent for the Eastern Hill region and 23.4 percent for the Eastern Mountain region of the total out-migrants.

A third of the in-migrants to the Mountain region were in the unstated category (Table 21). Of the remainder, 31.5 percent had migrated within one to five years and 26.6 percent over 11 years or more. In the hills, over half had migrated within one to five years and 29.4 percent over 11 years and more. The Tarai had more migrating in the earlier years (over 11 years) than those within one to five years. The Tarai also had a higher percentage of those migrating during the last six to 11 years than reported in the highlands.

Over half of the out-migrants from the Mountain region had moved out within the last five years (Table 21). The next largest group were those of 12 years and longer duration. In the hills, the largest group of out-migrants was of 12 years and longer duration, followed by those of six to 11 years' duration. The Tarai also had more out-migrants of longer duration of residence (over 11 years) than in the hills, but the next largest group was those of one to five years' duration.

Among out-migrants of long duration of stay (over 11 years), the Hill region had 67.7 percent, the Mountain region 22.8 percent, and the Tarai 9.5 percent. The highlands had a share of 93.6 percent among thse of medium duration (six to 11 years) and 92 percent among those of short duration (less than five years), indicating increasing out-migration from these regions in recent years.

Among in-migrants of long duration of stay (over 11 years), the Tarai had 79.8 percent, the Hill region 16.4 percent, and the Mountain region 3.7 percent. The Tarai had a share of 87.3 percent among in-migrants of medium duration and 64.1 percent among those of short duration, suggesting a slight increase in in-migration into the hills in recent years.


-2,335*
+1,418*
Western Mountain
-37,139*
Census region boundary
Far Western Mountain
Far Western Hill
Midwestern Mountain
-32,812*
-87,532
Central Mountain
-11,311*
-233,937
Midwestern Hill
Midwestern Tarai
Western Hill
+90,989
Far Western Tarai
-23,028*
+41,126*
Central Hill
Central Tarai
Eastern Mountain
-212,080
Eastern Hill
Loss
Gain
Mountain
Adjoining Hill regions
Other Hill regions
Tarai
Origin of migrants
+106,763
Western Tarai
-47,402*
+185,420
+261,880
Eastern Tarai

Map 3. Volume of net migration by census region: 1981

Source: Table 19.

Note: Circles representing net migration volume of less than 50,000, indicated by an asterisk (*), have a standard diameter. Circles representing net migration volumes greater than 50,000 are proportionate to volume.

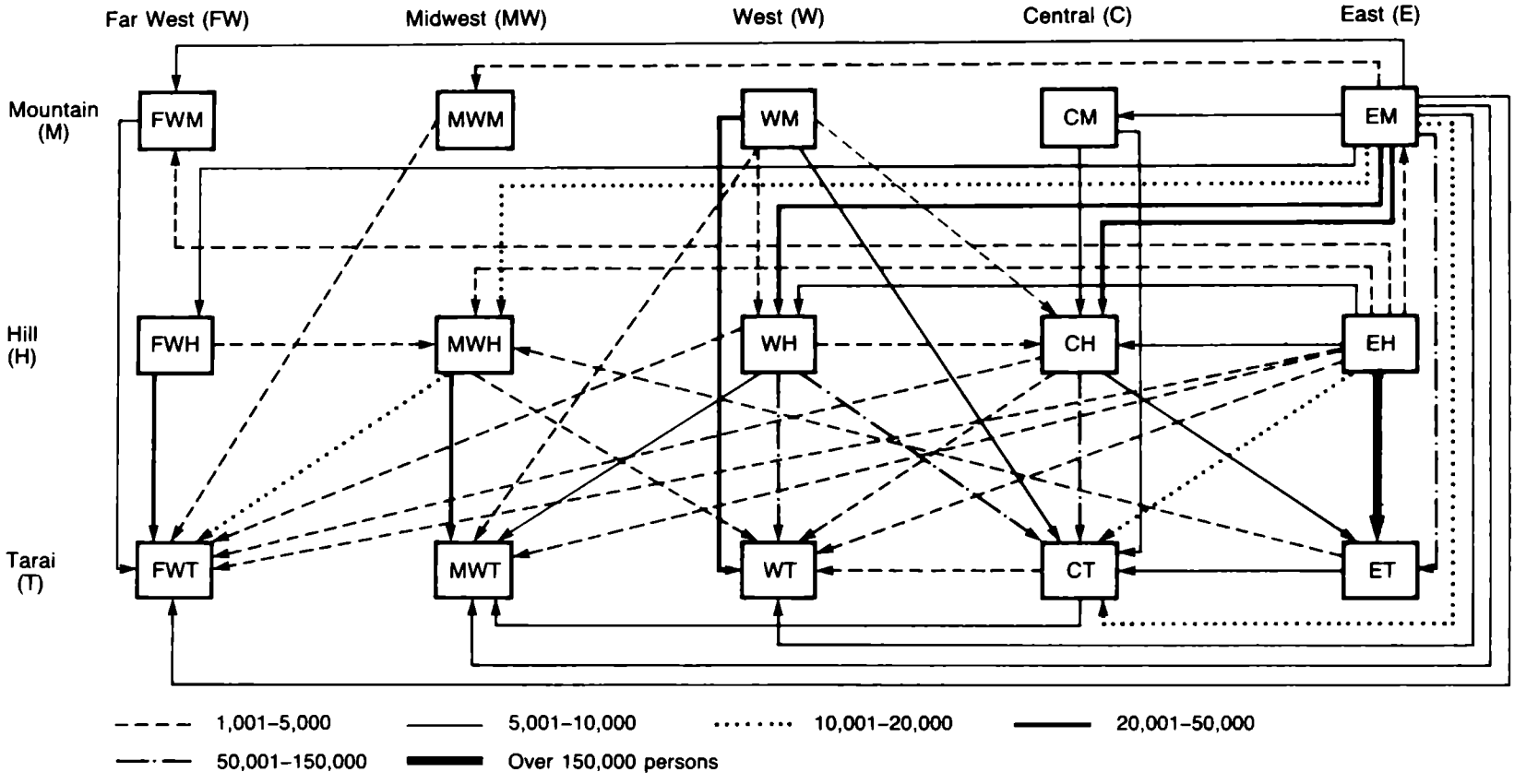


Figure 4. Net migration streams by census region: 1981
Source: Table 20.

Age and Sex

More than 70 percent of the interregional migrants were in the 15–59 age group (Table 22). The proportion of this age group in the total population of Nepal was 60 percent. The child age group (below 15 years) constituted 22.6 percent for interregional migrants and 41.4 percent for the total population. Those in the old age group (over 59 years) comprised 7.2 percent of interregional migrants and 5.7 percent of the total population. Nearly three-quarters of out-migrants from the Hill regions were members of the 15–59 age group. The percentage of out-migrants in this age group was 68.8 for the Tarai and 61.9 for the Mountain regions. Out-migration of the old age group had only a slight regional variation from 6.2 percent for the Mountain to 7.8 percent for the Hill. Out-migration of the child age group ranged from a high 31.9 percent for the Mountain region to a low 17.7 percent for the Hill.

Three-quarters of all in-migrants to the Tarai were in the 15–59 age group. Their proportion among Mountain and Hill in-migrants was just over 60 percent (Table 22). The Tarai had a slightly higher percentage of old-age in-migrants than the Mountain and Hill zones. The situation was reversed in the case of in-migrants of the child age group with a low share for the Tarai and a high share for the Hill region.

Two-thirds of the out-migrants of the 15–59 age group originated in the Hill region, and 77.9 percent of such in-migrants were reported in the Tarai. In the case of old-age migrants, the Hill regions claimed 66.2 percent of out-migrants and the Tarai 78.5 percent of in-migrants. Among the child age group, the proportion of out-migrants from the Mountain regions was quite high but less than that of the Hill regions while the Tarai claimed 62.3 percent of the in-migrants. The proportion of the child age group out-migrating from the Eastern Mountain was significantly high.

Compared to 51.2 percent of males in the total population, 51.3 percent of interregional migrants were males. However, the ratio of 105 males for every 100 females in the 1981 census was lower than that of the 1971 census, which had 107 males for every 100 females (Banister and Thapa 1981:74–75). Among out-migrants, the sex ratio was higher in the highlands (107) and low (87.1) in the Tarai compared to the total sex ratio of 105.3 (Table 23). There were regional variations within each elevation zone. All Mountain regions except the East had more female out-migrants. In the Tarai only the West and Midwest had more males; the latter had the highest male percentage. All five Hill regions had more males out-migrating.

In the case of in-migrants, the Tarai regions had a higher percentage of males. The sex ratio varied from 81.5 for the Mountain zone to 98.0 for the Hill and 109.2 for the Tarai. All Tarai regions had more male than female in-migrants—as high as 121 males for every 100 females in the Far West. In the Hill zone, the East and Midwest had more female in-migrants whereas males and females were equally divided in the West. In the Mountain zone,

Table 20. Net migration streams by census region: 1981

Origin	Destination											
	Mountain						Hill					
	Far West	Mid-west	West	Central	East	Total	Far West	Mid-west	West	Central	East	Total
Mountain	6,280	4,622	34	5,500	-16,436		9,400	17,568	39,293	39,235	-4,665	100,831
Far West		-71	-19	-13	-6,177	-6,280	570	-584	-36	-18	-1,319	-1,387
Midwest	71		-46	-4	-4,643	-4,622	701	294	350	36	-317	1,064
West	19	46		12	-111	-34	96	129	4,878	1,276	38	6,417
Central	13	4	-12		-5,505	-5,500	79	68	276	6,386	3	6,812
East	6,177	4,643	111	5,505		16,436	7,954	17,661	33,825	31,555	-3,070	87,925
Hill	1,387	-1,064	-6,417	-6,812	-87,925	-100,831	-343	4,216	3,737	6,745	-14,355	
Far West	-570	-701	-96	-79	-7,954	-9,400		1,454	-166	-110	-835	343
Midwest	584	-294	-129	-68	-17,661	-17,568	-1,454		-101	-160	-2,501	-4,216
West	36	-350	-4,878	-276	-33,825	-39,293	166	101		1,064	-5,068	-3,737
Central	18	-36	-1,276	-6,386	-31,555	-39,235	110	160	-1,064		-5,951	-6,745
East	1,319	317	-38	-3	3,070	4,665	835	2,501	5,068	5,951		14,355
Tarai	-10,022	-2,140	-30,756	-9,999	-107,719	-160,636	-41,869	-44,812	-130,562	-93,382	-214,917	-525,542
Far West	-9,884	-1,457	-666	-179	-5,721	-17,907	-40,844	-12,388	-4,044	-2,387	-2,303	-61,966
Midwest	-101	-605	-1,172	-225	-6,393	-8,496	-876	-30,096	-6,810	-982	-1,324	-40,088
West	-20	-99	-22,581	-185	-9,544	-32,429	-82	-4,296	-63,154	-3,249	-1,555	-72,336
Central	-140	-25	-5,935	-8,477	-16,831	-31,408	-69	-56	-56,326	-78,167	-14,557	-149,175
East	123	46	-402	-933	-69,230	-70,396	2	2,024	-228	-8,597	-195,178	-201,977
Total	-2,355	1,418	-37,139	-11,311	-212,080		-32,812	23,028	-87,532	-47,402	-233,937	

Table 20. *(continued)*

Origin	Destination					
	Tarai					
	Far West	Mid-west	West	Central	East	Total
Mountain	17,907	8,496	32,429	31,408	70,396	160,636
Far West	9,884	101	20	140	-123	10,022
Midwest	1,457	605	99	25	-46	2,140
West	666	1,172	22,581	5,935	402	30,756
Central	179	225	185	8,477	933	9,999
East	5,721	6,393	9,544	16,831	69,230	107,719
Hill	61,966	40,088	72,336	149,175	201,977	525,542
Far West	40,844	876	82	69	-2	41,869
Midwest	12,388	30,096	4,296	56	-2,024	44,812
West	4,044	6,810	63,154	56,326	228	130,562
Central	2,387	982	3,249	78,167	8,597	93,382
East	2,303	1,324	1,555	14,557	195,178	214,917
Tarai	11,116	-7,458	1,998	4,837	-10,493	
Far West		-9,271	-265	-633	-947	-11,116
Midwest	9,271		-183	-1,147	-483	7,458
West	265	183		-1,808	-638	-1,998
Central	633	1,147	1,808		-8,425	-4,837
East	947	483	638	8,425		10,493
Total	90,989	41,126	106,763	185,420	261,880	

Source: Nepal, CBS (1984: vol. II, table 8).

Table 21. Duration of stay of interregional migrants: 1981

Census region	In-migrants						Out-migrants					
	Less than 1 year	1–5 years	6–11 years	12 years and over	Un-stated	Total	Less than 1 year	1–5 years	6–11 years	12 years and over	Un-stated	Total
Mountain	931	16,902	3,778	14,258	17,759	53,628	7,113	152,652	54,319	86,430	14,581	315,095
	(1.7)	(31.5)	(7.0)	(26.6)	(33.1)	(100.0)	(2.3)	(48.4)	(17.2)	(27.4)	(4.6)	(100.0)
Far West	167	5,142	682	4,895		10,886	193	2,865	3,502	6,619	62	13,241
Midwest	203	4,418	494	2,215		7,330	179	1,721	1,391	2,548	73	5,912
West	35	530	125	390		1,080	902	10,888	10,129	16,169	131	38,219
Central	214	4,883	1,419	3,828	81	10,425	499	5,503	4,928	9,817	989	21,736
East	312	1,929	1,058	2,930	17,678	23,907	5,340	131,675	34,369	51,277	13,326	235,987
Hill	5,855	108,183	26,123	62,279	9,457	211,927	13,684	164,263	165,870	256,855	35,966	636,638
	(2.8)	(51.0)	(12.3)	(29.4)	(4.5)	(100.0)	(2.1)	(25.8)	(26.1)	(40.3)	(5.6)	(100.0)
Far West	404	7,931	1,442	4,781	1	14,559	701	11,425	15,356	19,796	93	47,371
Midwest	799	17,651	3,227	9,822	1	31,500	1,039	11,065	16,876	24,702	846	54,528
West	1,928	33,708	6,076	20,859	1	62,572	3,555	39,299	41,278	65,268	704	150,104
Central	1,640	36,286	10,767	19,408	3,742	71,873	3,504	31,392	30,649	51,311	2,419	119,275
East	1,084	12,607	4,611	7,409	5,712	31,423	4,885	71,082	61,711	95,778	31,904	265,360
Tarai	16,540	218,495	205,445	302,736	30,091	773,307	2,559	26,665	15,157	35,988	6,760	87,129
	(2.1)	(28.3)	(26.6)	(39.1)	(3.9)	(100.0)	(2.9)	(30.6)	(17.4)	(41.3)	(7.8)	(100.0)
Far West	1,550	23,793	27,205	39,650	2	92,200	42	333	231	584	21	1,211
Midwest	1,187	18,120	17,175	17,882		54,364	255	2,629	2,716	6,895	743	13,238
West	2,732	35,969	33,228	39,506		111,435	193	1,677	754	1,868	180	4,672
Central	4,067	56,764	50,713	97,308	5,621	214,473	955	9,449	5,066	12,357	1,226	29,053
East	7,004	83,849	77,124	108,390	24,468	300,835	1,114	12,577	6,390	14,284	4,590	38,955
Total	23,356	343,580	235,346	379,273	57,307	1,038,862	23,356	343,580	235,346	379,273	57,307	1,038,862
Percentage	(2.2)	(33.1)	(22.7)	(36.5)	(5.5)	(100.0)	(2.2)	(33.1)	(22.7)	(36.5)	(5.5)	(100.0)

Source: Nepal, CBS (1984: vol. II, table 8).

Note: Percentages are given in parentheses.

Table 22. Broad age group of interregional migrants: 1981

Region	In-migrants				Out-migrants			
	Below 15 years	15–59 years	Over 59 years	Total	Below 15 years	15–59 years	Over 59 years	Total
Mountain	16,831	33,144	3,653	53,628	100,406	195,109	19,580	315,095
	(31.4)	(61.8)	(6.8)	(100.0)	(31.9)	(61.9)	(6.2)	(100.0)
Far West	3,686	6,443	757	10,886	1,546	10,837	858	13,241
Midwest	2,224	4,708	398	7,330	1,236	4,222	454	5,912
West	211	850	19	1,080	6,549	28,896	2,774	38,219
Central	3,089	6,675	661	10,425	3,214	16,849	1,673	21,736
East	7,621	14,468	1,818	23,907	87,861	134,305	13,821	235,987
Hill	71,553	127,991	12,383	211,927	112,610	474,622	49,406	636,638
	(33.8)	(60.4)	(5.8)	(100.0)	(17.7)	(74.5)	(7.8)	(100.0)
Far West	5,145	8,506	908	14,559	7,091	37,159	3,121	47,371
Midwest	12,476	17,414	1,610	31,500	8,828	41,975	3,725	54,528
West	23,608	35,013	3,951	62,572	23,955	113,941	12,208	150,104
Central	21,288	46,695	3,890	71,873	21,022	88,937	9,316	119,275
East	9,036	20,363	2,024	31,423	51,714	192,610	21,036	265,360
Tarai	146,242	568,537	58,528	773,307	21,610	59,941	5,578	87,129
	(18.9)	(73.5)	(7.6)	(100.0)	(24.8)	(68.8)	(6.4)	(100.0)
Far West	16,109	70,047	6,044	92,200	359	783	69	1,211
Midwest	13,124	38,132	3,108	54,364	2,304	9,823	1,111	13,238
West	25,140	78,055	8,240	111,435	1,155	3,209	308	4,672
Central	37,795	158,848	17,830	214,473	7,863	19,631	1,559	29,053
East	54,074	223,455	23,306	300,835	9,929	26,495	2,531	38,955
Total	234,626	729,672	74,564	1,038,862	234,626	729,672	74,564	1,038,862
	(22.6)	(70.2)	(7.2)	(100.0)	(22.6)	(70.2)	(7.2)	(100.0)

Source: Nepal, CBS (1984: vol. II, table 8).

Note: Percentages are given in parentheses.

Table 23. Sex ratio of interregional migrants: 1981

Census region	In-migrants	Out-migrants	Net migration
Mountain	81.5	107.0	112.8
Far West	83.8	97.2	197.6
Midwest	89.0	92.7	75.0
West	239.6	90.5	88.0
Central	77.6	93.1	109.6
East	76.5	112.3	117.4
Hill	98.0	107.5	112.3
Far West	102.0	104.5	105.3
Midwest	91.2	107.5	134.7
West	100.0	109.6	117.4
Central	112.3	110.5	107.5
East	71.8	104.9	112.3
Tarai	109.2	87.1	112.8
Far West	121.2	90.1	121.7
Midwest	107.9	115.5	114.1
West	106.2	107.9	106.2
Central	105.8	78.9	110.5
East	109.6	82.1	114.6
Total	105.3	105.3	

Source: Nepal, CBS (1984: vol. II, table 8).

all regions except the West had more female in-migrants. The Western Mountain region had 240 male in-migrants for every 100 females.

Males predominated in net migration in most regions (Table 23). The exceptions were the Midwestern and Western Mountain regions. The percentage of male net migration was about the same in all Tarai regions. It varied widely in the Mountain zone—from 42.8 percent in the Midwest to 66.4 percent in the Far West. In the Hill zone, the percentage of males in net migration was highest in the Midwest. The percentage of females among interregional migrants was 48.2 for those with over 11 years of duration of stay, 47.9 for those of six to 11 years, and 45.3 for those with less than six years (Nepal, CBS, 1984: vol. II, table 8). Thus, the longer the duration of stay of interregional migrants, the higher the percentage of females.

Reasons

The Nepal census of 1981 was the first to include data on reasons for migration. Although more than a third of the interregional migrants have been lumped as "others/unstated," the five categories do provide some indication regarding the motives for migration. Agriculture was the principal reason for migration with 29.9 percent of all interregional migrants (Table 24).

Table 24. Reasons for interregional out-migration by census region: 1981

Census region	Agriculture		Trade & commerce		Marital relation		Study/ training		Service		Others/ unstated		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mountain	58,859	18.9	103,736	68.7	22,765	18.8	7,397	24.8	7,041	16.5	115,297	30.1	315,095	30.3
Far West	7,243	2.3	789	0.5	2,193	1.8	200	0.7	331	0.8	2,485	0.6	13,241	1.3
Midwest	1,565	0.5	563	0.4	980	0.8	91	0.3	128	0.3	2,585	0.7	5,912	0.6
West	11,299	3.6	2,519	1.7	6,639	5.5	1,626	5.4	1,944	4.6	14,192	3.7	38,219	3.7
Central	5,771	1.9	1,593	1.1	3,853	3.2	555	1.9	1,992	4.7	7,972	2.1	21,736	2.1
East	32,981	10.6	98,272	65.0	9,100	7.5	4,925	16.5	2,646	6.2	88,063	23.0	235,987	22.7
Hill	237,733	76.5	36,733	24.3	80,065	66.2	20,232	67.7	30,329	71.2	231,546	60.4	636,638	61.3
Far West	24,619	7.9	2,009	1.3	6,660	5.5	1,398	4.7	1,510	3.5	11,175	2.9	47,371	4.6
Midwest	24,434	7.9	3,333	2.2	7,353	6.1	1,086	3.6	1,516	3.6	16,806	4.4	54,528	5.2
West	59,969	19.3	6,546	4.3	16,622	13.7	5,230	17.5	6,861	16.1	54,876	14.3	150,104	14.4
Central	35,968	11.6	7,228	4.8	18,131	15.0	2,927	9.8	7,908	18.6	47,113	12.3	119,275	11.5
East	92,743	29.8	17,617	11.7	31,299	25.9	9,591	32.1	12,534	29.4	101,576	26.5	265,360	25.5
Tarai	14,293	4.6	10,606	7.0	18,085	15.0	2,239	7.5	5,246	12.3	36,660	9.6	87,129	8.4
Far West	177	0.1	95	0.1	188	0.2	53	0.2	56	0.1	642	0.2	1,211	0.1
Midwest	5,584	1.8	590	0.4	1,691	1.4	188	0.6	629	1.5	4,556	1.2	13,238	1.3
West	453	0.1	1,031	0.7	741	0.6	215	0.7	425	1.0	1,807	0.5	4,672	0.4
Central	2,596	0.8	3,286	2.2	6,379	5.3	868	2.9	2,086	4.9	13,838	3.6	29,053	2.8
East	5,483	1.8	5,604	3.7	9,086	7.5	915	3.1	2,050	4.8	15,817	4.1	38,955	3.7
Total	310,885	100.0	151,075	100.0	120,915	100.0	29,868	100.0	42,616	100.0	383,503	100.0	1,038,862	100.0
Row %		29.9		14.5		11.6		2.9		4.1		36.9		100.0

Source: Nepal, CBS (1984: vol. II, table 9).

Trade and commerce came next with 14.5 percent. The other reasons were marital relations (11.6 percent), service (4.1 percent), and study/ training (2.9 percent).

Interesting regional patterns emerge when out-migration and in-migration are compared according to reasons. The principal reason for out-migration was trade and commerce (32.9 percent) in the Mountain region, agriculture (37.3 percent) in the Hill region, and marital relations (20.8 percent) in the Tarai (Table 24 and Figure 5). The next important reason for out-migration was agriculture in the Mountain and the Tarai zones, and marriage in the Hill zone. The least important reason was service in the Mountain region, and education in the Hill and Tarai zones. Agriculture was the principal reason for out-migration in the Far Western Mountain and Hill regions. It was ranked low in the Western and Central Tarai. More than 40 percent of those out-migrating from the Eastern Mountain region migrated for trade. Regions with a low percentage of out-migrants for trade were the Far Western and Western Hill regions and the Midwestern Tarai (Table 24). More than a fifth of out-migrants from the Central and Eastern Tarai migrated for marital reasons. About a tenth of the out-migrants from the Central Mountain region and the Western Tarai migrated for military service.

More than three-fourths of all out-migration for agriculture originated in the Hill region. The Eastern Hill region contributed 29.8 percent and the Western Hill region 19.3 percent (Table 24). Only 4.6 percent of those out-migrating for agriculture were from the Tarai. More than two-thirds of out-migrants for trade were from the Mountain region, a high 65 percent from the Eastern Mountain sector alone. Trade as a reason for out-migration was least significant in the Western regions of the Tarai. More than two-thirds of those out-migrating for marriage, education, and service were from the Hill region. Out-migration for marriage and service was highest in the Eastern Hill region and lowest in the Far Western Tarai. Nearly a third out-migrating for education were also from the Eastern Hill region.

The most important reason for in-migration was agriculture in the Tarai and trade in the Mountain and Hill regions (Table 25 and Figure 5). Education was the least significant reason for in-migration in most regions. Agriculture was a significant reason for in-migration in all Tarai regions, particularly in the Far Western Tarai; it was ranked very low in the Mountain regions. In-migration for trade ranked high in all Hill regions. Trade was the most important reason for in-migration in the Midwestern Mountain region while it was less important in the Eastern Mountain region. In-migration for marriage ranked high in the Eastern Hill and low in the Western Mountain regions. Service as a reason for in-migration was proportionately higher at lower elevations: 2.7 percent in the Mountain zone, 4.3 percent in the Hill, and 5.4 percent in the Tarai.

Among in-migrants for agriculture, the Tarai claimed 95.2 percent (Table 25). The Eastern and Central Tarai together had 62.1 percent of such

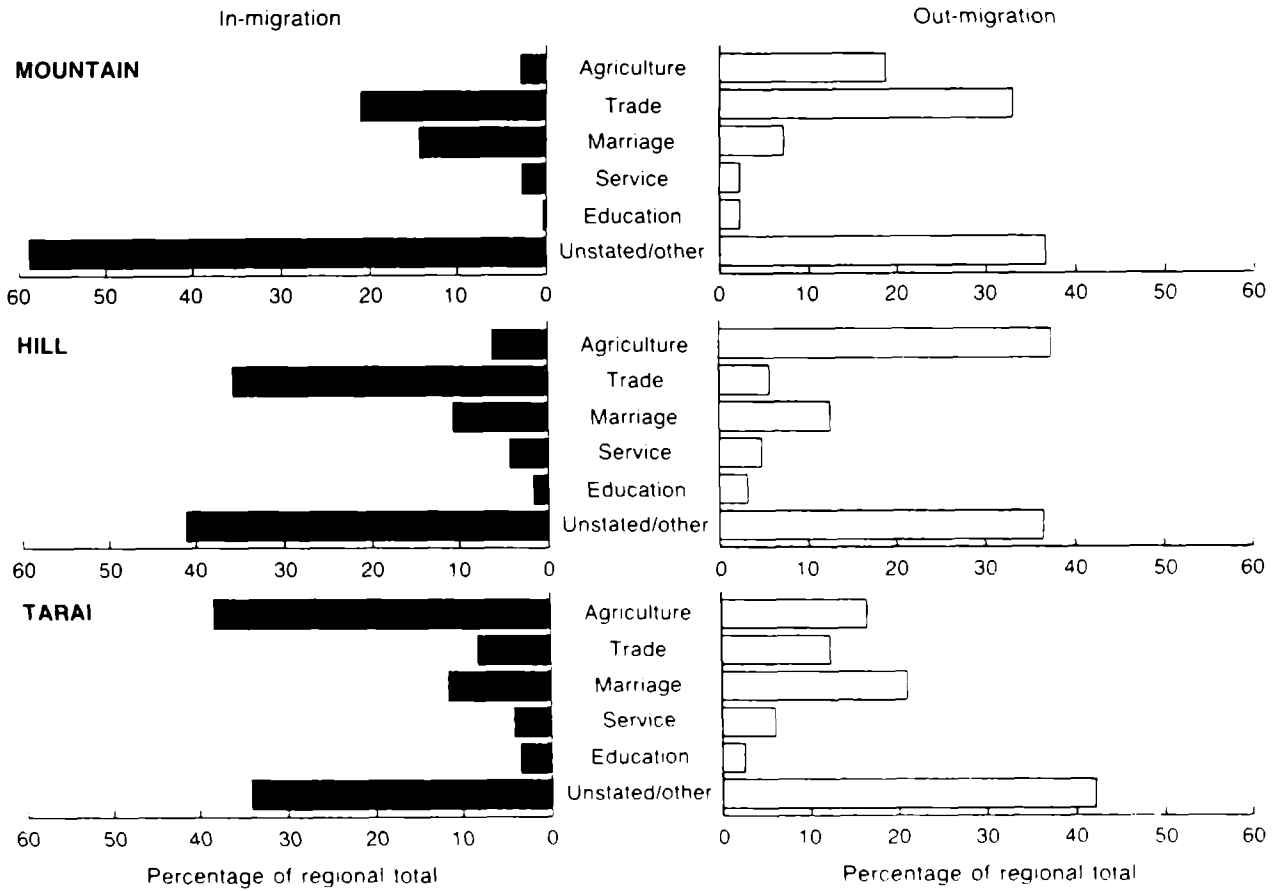


Figure 5. Reasons for interregional migration: 1981

Source: Tables 24 and 25.

Table 25. Reasons for interregional in-migration by census region: 1981

Census region	Agriculture		Trade & commerce		Marital relation		Study/ training		Service		Others/ unstated		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mountain	1,518	0.5	11,326	7.5	7,668	6.3	162	0.5	1,426	3.3	31,528	8.2	53,628	5.2
Far West	183	0.1	3,148	2.1	1,150	1.0	17	0.1	58	0.1	6,330	1.7	10,886	1.1
Midwest	145	0.0	3,538	2.3	978	0.8	18	0.1	233	0.5	2,418	0.6	7,330	0.7
West	69	0.0	161	0.1	30	0.0	4	0.0	269	0.6	547	0.1	1,080	0.1
Central	722	0.2	3,861	2.6	1,699	1.4	35	0.1	175	0.4	3,933	1.0	10,425	1.0
East	399	0.1	618	0.4	3,811	3.2	88	0.3	691	1.6	18,300	4.8	23,907	2.3
Hill	13,453	4.3	75,558	50.0	22,921	19.0	3,377	11.3	9,081	21.3	87,537	22.8	211,927	20.4
Far West	985	0.3	5,773	3.8	1,298	1.1	28	0.1	509	1.2	5,966	1.6	14,559	1.4
Midwest	1,840	0.6	11,225	7.4	2,234	1.8	131	0.4	426	1.0	15,644	4.1	31,500	3.0
West	2,290	0.7	23,834	15.8	5,150	4.3	414	1.4	1,098	2.6	29,786	7.8	62,572	6.0
Central	5,683	1.8	24,672	16.3	7,931	6.7	2,533	8.5	5,975	14.0	25,079	6.5	71,873	6.9
East	2,655	0.9	10,054	6.7	6,308	5.2	271	0.9	1,073	2.5	11,062	2.9	31,423	3.0
Tarai	295,914	95.2	64,191	42.5	90,326	74.7	26,329	88.2	32,109	75.3	264,438	69.0	773,307	74.4
Far West	47,831	15.4	6,853	4.5	9,397	7.8	1,960	6.6	2,906	6.8	23,253	6.1	92,200	8.9
Midwest	20,262	6.5	6,984	4.6	5,660	4.7	1,662	5.6	1,380	3.2	18,416	4.8	54,364	5.2
West	34,844	11.2	9,486	6.3	12,448	10.3	4,031	13.5	4,119	9.7	46,507	12.1	111,435	10.7
Central	76,855	24.7	16,766	11.1	28,299	23.4	5,767	19.3	7,530	17.7	79,256	20.7	214,473	20.6
East	116,122	37.4	24,102	16.0	34,522	28.6	12,909	43.2	16,174	38.0	97,006	25.3	300,835	29.0
Total	310,885	100.0	151,075	100.0	120,915	100.0	29,868	100.0	42,616	100.0	383,503	100.0	1,038,862	100.0

Source: Same as Table 24.

migrants. In the Mountain regions the share was only 0.5 percent. Half of the in-migrants for trade were recorded in the Hill region and another 42.5 percent in the Tarai. The Eastern Tarai and the Central and Western Hill regions had considerable numbers in-migrating for trade, but few in the Eastern and Western Mountain regions. Three-quarters of the in-migrants migrating for marriage were in the Tarai. The percentage of these in-migrants was high in the Eastern and Central Tarai and very low in the Western Mountain region. Among those in-migrating for education, 88.2 percent were in the Tarai. In-migrants for military service were also mostly in the Tarai.

In terms of net migration, the Tarai gained 281,621 persons for agricultural reasons (Table 26). The Eastern Tarai alone had 39.3 percent of this gain. Of the net loss from the highlands for agricultural reasons, 29.9 percent were from the Eastern Hill region. All Hill regions except the East gained in net migration among those with trade and commerce as the main reasons for migration. The Mountain regions had a net loss of 92,140 through out-migration for trade. The Tarai had a net gain of 58 percent from such migration. The Tarai gained in net migration for marriage, military service, and education. Among the highland regions, only the Midwestern Mountain region had a marginal net gain in the service category. That nearly 30 percent of all interregional migrants moved for agricultural reasons means that rural-to-rural migration is a significant factor in population redistribution in Nepal.

FACTORS INFLUENCING MIGRATION

Migration research, including that related to less developed countries (LDCs), has continued to focus on rural–urban movement. Present-day theories emphasize the pull of the urban sector (Lee 1969; Todaro 1976; Goldscheider 1983). For the urban pull to be operative, however, the population in the hinterland must be conducive to dislocation. In fact, the stimulus for migration in the LDCs lies in the rural condition. In other words, the accretion of unemployed migrants in urban areas in the LDCs is indicative less of urban dynamism than of strong repulsive forces operating in rural areas. For a vast majority of the rural population, underemployment and unemployment, indebtedness and landlessness, are stark realities. Outmigration from rural areas is, therefore, primarily due to the growth of the local population beyond the carrying capacity of the land (Zelinsky et al. 1970; Ng 1975). Excessive pressure on land resources and increasing poverty generate a large volume of migration (Kosinski and Prothero 1975; Zelinsky 1983).

In studies relating to intrarural migration, as well, there has been much emphasis on movements stimulated by colonization projects (Farmer 1957, 1974; Wikkramatileke 1965; Dozier 1969; Abeysekera 1984), but the magnitude of migration to new frontier lands through spontaneous movement

Table 26. *Reasons for net migration: 1981*

Census region	Agriculture	Trade & commerce	Marital relation	Study/ training	Service	Others/ unstated	Total
Mountain	-57,341	-92,410	-15,097	-7,235	-5,615	-83,769	-261,467
Far West	-7,060	2,359	-1,043	-183	-273	3,845	-2,355
Midwest	-1,420	2,975	-2	-73	105	-167	1,418
West	-11,230	-2,358	-6,609	-1,622	-1,675	-13,645	-37,139
Central	-5,049	2,268	-2,154	-520	-1,817	-4,039	-11,311
East	-32,582	-97,654	-5,289	-4,837	-1,955	-69,763	-212,080
Hill	-224,280	38,825	-57,144	-16,855	-21,248	-144,009	-424,711
Far West	-23,634	3,764	-5,362	-1,370	-1,001	-5,209	-32,812
Midwest	-22,594	7,892	-5,119	-955	-1,090	-1,162	-23,028
West	-57,679	17,288	-11,472	-4,816	-5,763	-25,090	-87,532
Central	-30,285	17,444	-10,200	-394	-1,933	-22,034	-47,402
East	-90,088	-7,563	-24,991	-9,320	-11,461	-90,514	-233,937
Tarai	281,621	53,585	72,241	24,090	26,863	227,778	686,178
Far West	47,654	6,758	9,209	1,907	2,850	22,611	90,989
Midwest	14,678	6,394	3,969	1,474	751	13,860	41,126
West	34,391	8,455	11,707	3,816	3,694	44,700	106,763
Central	74,259	13,480	21,920	4,899	5,444	65,418	185,420
East	110,639	18,498	25,436	11,994	14,124	81,189	261,880

Source: Tables 24 and 25.

has always been considerably larger than that induced by resettlement schemes (Ng 1975; Martine 1975; Bucksmann 1980). A slow pace of economic development means slow growth of secondary and tertiary activities and increasing pressure on primary resources such as land (Grigg 1980a). Moreover, for the rural population who are mostly illiterate and unskilled, a move to frontier lands rather than to the limited urban space is a logical search for livelihood.

Nepal ranks fourth from the bottom among 39 low-income countries of the world in basic indicators (World Bank 1988:222). Not only does it have one of the lowest per capita GNPs (US $150 for 1986), but the estimate of average annual growth rate of GDP (2.4 percent) was the same as that of the population (2.4 percent) during 1965–80 (World Bank 1988:224, 274). Whatever the reasons for Nepal's economic underdevelopment, rapid population growth has increased the number of those on the move for livelihood.

The Nepalese situation raises another issue about migration that refers to the extent of poverty and migration potential. Similar to Myrdal (1968:2, 140) and Goldstein (1976:433), Goldscheider (1983:64–65) concluded that the poorer the people, the stronger the impediments to moving. This observation may be true for rural–urban movement. In the case of Nepal, however, dominated by rural–rural movement, all surveys indicate a higher mobility among the most deprived. This pattern may be related to the low cost of moving, since the majority are directed to frontier land. The extent of those surveyed who had migrated due to inadequate land and poor livelihood conditions at origin ranged from 39.2 percent (Nepal, TFM, 1983: table 13.9) to 43.6 percent (Nepal, NPC, 1983:76) and 68.2 percent (Conway and Shrestha 1981:156; K. C. 1985). In other words, migrants in Nepal are mainly of the "subsistence" category rather than the "betterment" ones (White and Woods 1980:31). Pushed by poverty, migrants are moving to other regions inside the country as well as abroad.

The forces that influence migration in Nepal may be categorized as follows: economic dislocation, population pressure, malaria control, land settlement, and regional disparity. Economic dislocation as a cause of out-migration is more pronounced in the mountains; population pressure is a significant reason for out-migration from the Hill and Mountain regions; the last three are positive factors that encourage in-migration into Inner Tarai and the Tarai. In the following sections we shall examine these factors one by one.

Economic Dislocation

The Mountain regions have been the source of an increasing number of out-migrants in recent decades. Of the total interregional migrants, those from Mountain regions comprised 9.8 percent in 1971 and 30.3 percent in 1981 (Tables 16 and 19). The mountain economy, dependent primarily on

trade and pastoralism, was affected by various problems in the last three decades. First of all, trade across the border was closed for some years due to political upheaval in Tibet in 1959. When trade was resumed, the mountain traders accustomed to the traditional barter system had trouble adjusting to the new state trading system of cash transactions conducted only at designated localities.

Another reason for the decline in the border trade between Nepal and Tibet was the decline in the foodgrain supply from the hills, which had a premium value in exchange for Tibetan commodities. With an increasing food deficit in the hills, the mountain traders could acquire less foodgrain and their trade leverage suffered. Furthermore, the extension of roads into the hills and the transportation of iodized salt from India by modern means further reduced the market for Tibetan salt, the principal trade item of the mountain traders (Furer-Haimendorf 1975). These developments led to the dislocation of the commodity base and consequently border trade declined.

The mountain economy had another setback. Traditionally, Nepalese herders wintered their animals in Tibetan pastures. The restriction on herd movement for pasture after the Sino-Nepal boundary alignment and agreement in 1961 (Nepal, Foreign Ministry, 1961) led to a decline of pastoralism and further aggravated the economy of the mountain people. Since agriculture is only a marginal activity in this harsh environment, the only alternative to the deteriorating economy was out-migration. Indeed, large-scale out-migration depopulated some of these districts. Thus population growth rates in mountain districts during 1971–81 were not only very low (averaging 1.1 percent) but four districts registered an absolute decline (Appendix Table 2). With increasing economic depression, more and more mountain people were forced to seek their livelihood outside the region (Dahal et al. 1977).

Population Pressure

In-migrants to the southern lowlands (Inner Tarai and Tarai) have two main source areas. One is the highlands (Hill and Mountain) within the country; the other is the high-density area of the Gangetic plain across the border in India. The first contributes to interregional migration and the latter to immigration.

Internal

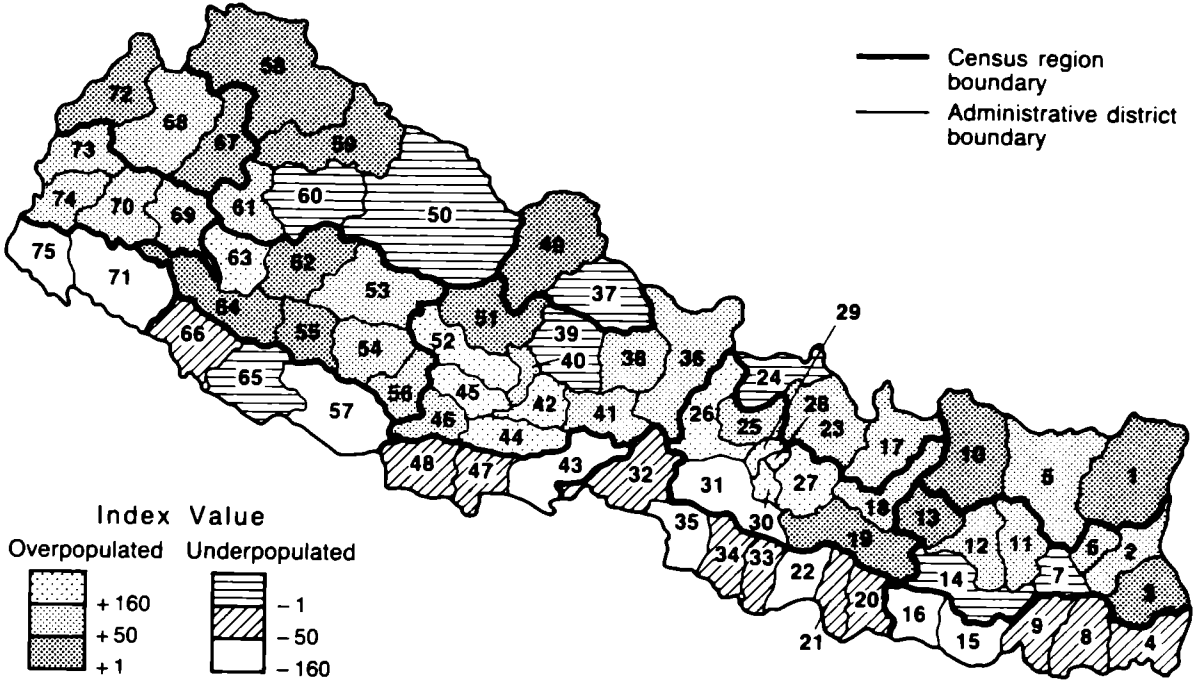
The origins of Nepalese migration lie in the Hill regions that historically were settled first. By the last decade of the eighteenth century, Nepal had enough manpower to support its territorial expansion from the Tista in the east to the Sutlej in the western Himalaya until contained by the East India Company in 1816 (Stiller 1973). Most of the population was concentrated in the hills. One source estimated that Nepal in 1750 had a population of 3 million (Poffenberger 1980:26–28). The growth curve rose sharply by 1940, yielding a population of 8.4 million in 1952/54, an increase of 2.8 times dur-

ing 1750–1954. (According to Davis 1968, the population of undivided India increased fourfold during the period 1750–1950 from 150 million to 600 million.) Another intensive study on population and resources surmised that the population of one Central Hill district (Kaski) increased by 5.2 times during 1820–1961 (Macfarlane 1976). In the Eastern Hill region, where migrants from the west displaced the tribals, available land had begun to disappear as early as the end of the nineteenth century (Caplan 1970:7–8). Thus the hill economy since the mid-nineteenth century has been partly sustained by seasonal, circular, and permanent migration. In the Eastern Hills, seasonal, circular (army service), and permanent migration are all pronounced (Caplan 1970). In the Central Hills, migration for army service is more prominent than seasonal migration (Macfarlane 1976). In the Western Hills, where the mercenary tradition is not strong, a survey showed that almost a third of surveyed households maintained themselves by migrating seasonally (McDougal 1968).

By applying the Sen Gupta model (Sen Gupta 1970:424–41) for deriving a population pressure index based on the relationship between population and available resources at the district level, we can obtain one measure of population pressure in Nepal (Shrestha 1982). The resultant population pressure index (PPI) was categorized into positive values to indicate overpopulation and negative values for underpopulation. According to the PPI derived from the data for the 1961–71 decade, 47 of the country's 75 districts were overpopulated (Map 4). Grouping the districts by geographic region reveals that 11 of 15 Mountain districts and 34 of 36 Hill districts were overpopulated. All 18 Tarai districts and four of six Inner Tarai districts were underpopulated.

When the districts are regrouped according to the 1981 census regions, the PPI value of regions and their rate of out-migration show a close relationship (Table 27). Hill regions rank high both in PPI and out-migration rate, while the converse holds true for the Tarai regions. The Western Mountain region appears as an exception to this basic pattern with negative PPI but with the highest out-migration rate; the discrepancy is due to the boundary adjustment in 1975. Although regions of overpopulation were the primary source of out-migration, there is an inverse relationship between PPI and rate of net migration (Table 27). Mountain and Hill regions with high population pressure have negative rates of net migration. The Mid-western Mountain region is an exception with a positive rate of net migration. The five Tarai regions with negative PPI or underpopulation have the highest rates of net migration.

The population absent from home at the time of census provides another measure of migration. Of all those absent from home for six months or more, 98.4 percent in 1952/54 and 86 percent in 1981 were from the Mountain and Hill regions (Table 17). The number of absentees from the highland regions increased by 78.8 percent during 1952/54–1981. The increase


Census region boundary
Administrative district boundary
Index Value
Overpopulated
+ 160
+ 50
+ 1
Underpopulated
– 1
– 50
– 160
72
68
67
73
74
70
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1	Taplejung	16	Siraha	31	Makwanpur	46	Argha Khanchi	61	Kalikot
2	Panchthar	17	Dolakha	32	Chitawan	47	Rupandehi	62	Jajarkot
3	Ilam	18	Ramechhap	33	Rautahat	48	Kapilvastu	63	Dailekh
4	Jhapa	19	Sindhuli	34	Bara	49	Mustang	64	Surkhet
5	Sankhuwa Sabha	20	Dhanusa	35	Parsa	50	Dolpo	65	Banke
6	Terhathum	21	Mahotari	36	Gorkha	51	Myagdi	66	Bardiya
7	Dhankuta	22	Sarlahi	37	Manang	52	Baglung	67	Bajura
8	Morang	23	Sindhu-palchok	38	Lamjung	53	Rukum	68	Bajhang
9	Sunsari	24	Rasuwa	39	Kaski	54	Rolpa	69	Achham
10	Solu-Khumbu	25	Nuwakot	40	Parbat	55	Salyan	70	Doti
11	Bhojpur	26	Dhading	41	Tanahun	56	Pyuthan	71	Kailali
12	Khotang	27	Kabhre-palanchok	42	Syangja	57	Dang-Deokhuri	72	Darchula
13	Okhaldhunga	28	Bhaktapur	43	Nawal Parasi	58	Humla	73	Baitadi
14	Udayapur	29	Kathmandu	44	Palpa	59	Mugu	74	Dadeldhura
15	Saptari	30	Lalitpur	45	Gulmi	60	Jumla	75	Kanchanpur

Map 4. Population pressure index by district: 1971

Source: Shrestha (1982: table 2).

Note: See Table 27 for population pressure index by census region.

Table 27. Population pressure index and net migration rate by census region

Region	Population pressure index[a]		Rate of outmigration[b]		Rate of net migration[c]	
	1971	Rank	1981	Rank	1981	Rank
Mountain	28	B	241.8	A	-200.7	B
Far West	35	7	45.8	9	-8.2	7
Midwest	15	9	24.4	10	5.8	6
West	-8	10	1,915.6	1	-1,861.5	15
Central	55	5	52.6	8	-27.4	10
East	28	8	697.3	2	-626.6	14
Hill	115	A	88.9	B	-59.3	A
Far West	97	3	78.4	4	-54.3	12
Midwest	84	4	52.3	7	-22.1	8
West	139	2	69.8	5	-40.7	11
Central[d]	190	1	56.6	6	-22.5	9
East	51	6	211.1	3	-186.1	13
Tarai	-212	C	13.3	C	104.7	C
Far West	-119	11	2.8	15	213.2	1
Midwest	-187	12	19.3	11	61.3	5
West	-268	15	4.9	14	111.4	3
Central	-189	13	12.2	13	77.7	4
East	-263	14	18.4	12	123.9	2

a. After Shrestha (1982).

b. $m_O = \frac{O}{P}k$, where O is outmigration, P is population, and k is constant.

c. $m_N = \frac{I-O}{P}k$, where N is net migration and I is in-migration.

d. Including Kathmandu Valley.

was 73.2 percent for absentees within the country and 83.5 percent for absentees outside the country. The 1971 census does not include data on absentee population, but the 1981 census shows that half of the total absentees abroad came from the Central Hill region, which includes four districts with extremely high PPI. There is a close convergence in pattern of PPI for 1971 and percentage of population abroad by districts for 1981 (Maps 1 and 4). Particularly striking is the correspondence of three contiguous districts (Baglung, Gulmi, and Syangja) in the Central Hill region with the highest PPI and highest percentage of absentees. The Tarai and Inner Tarai districts with low PPI have a lower percentage of absentee population out of the district total.

Pressure of population on cultivated land was an important factor influencing migration. All highland regions except the Central Mountain exceeded the national average in persons per net cultivated hectare (Table 5).

All lowland regions except the Central Tarai had lower than national average population pressure on such land. Nine Hill districts had a high density exceeding 7.7 persons per net cultivated hectare (Map 5). Of these, four in the Central Hill region make a compact bloc, corresponding to the area of very high PPI (Map 4) and high percentage of absentees outside the country (Map 1). Western Mountain and Western Tarai districts have very low population pressure on net cultivated land. Kathmandu Valley had a high density of population per net cultivated hectare but a low percentage of absentees outside the country. The discrepancy might be explained by the sizable urban population of the three districts. Of the 24 Tarai and Inner Tarai districts, 18 had fewer persons per net cultivated hectare than the national average. Of the 51 Hill and Mountain districts, 28 exceeded the national average in persons per net cultivated hectare.

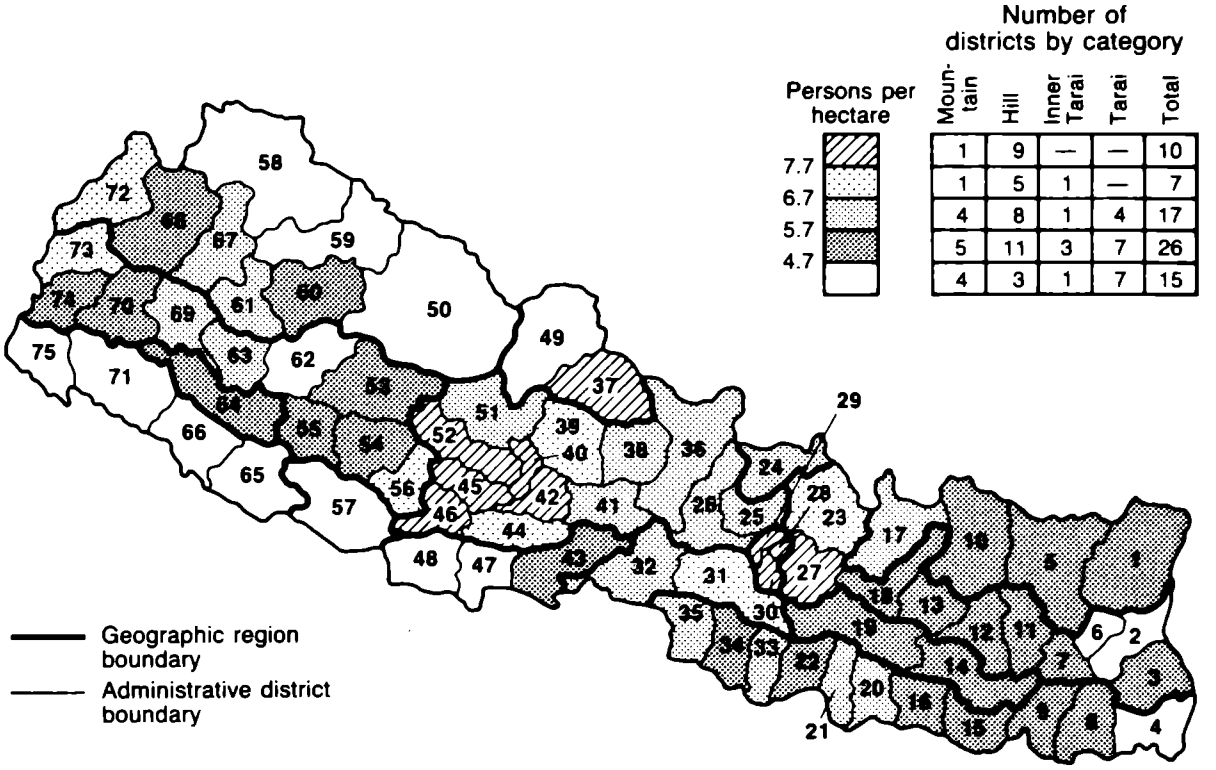
External

The international boundary between Nepal and India is not regulated regarding human movement.[10] Neither is there any physical restriction, as two-thirds of the boundary traverses a level plain. International migration across this boundary is primarily an outward expansion of population into similar ecological niches: Nepalese eastward to subtropical hills and Indians northward into the tropical Tarai. While the Nepalese migration in the eastern Himalaya represents the frontal wave of west-to-east hill migration, the colonization of the Nepal Tarai was based on the northward push of yeoman farmers from across the Indian border.

The Nepalese hills must have been fairly overpopulated even during the last century, as emigration to India was substantial. The number of those speaking languages of Nepalese origin in India increased by 64.6 percent during 1891–1921 (Davis 1968). Of these, 60.4 percent were concentrated in Bengal and Sikkim. Nepalese-language speakers in India in 1921 constituted 13.1 percent of Nepal's total Mountain/Hill population for 1920. Of the 526,526 Nepal-born population in India in 1971, some 42.4 percent were in the northeastern states and another 39.1 percent in the bordering states of Bihar and Uttar Pradesh (Table 8). The increase of absentees reported in India was 91.6 percent during 1952/54–1961 compared to 24.2 percent during 1971–81, indicating increasing internal mobility (Table 7).

Indian immigration into Nepal through expansion is evidenced by the high concentration of people of Indian origin in the adjoining Tarai regions, particularly in the Eastern Tarai (Table 11). The principal reason for the movement seems to be the comparatively low density of population in the Tarai

10. Article VII of the Treaty of Peace and Friendship between Nepal and India signed on 31 July 1950 states: "The Governments of India and Nepal agree to grant, on a reciprocal basis, to the nationals of one country in the territories of the other the same privileges in the matter of residence, ownership of property, participation in trade and commerce movement and privileges of similar nature."


Number of districts by category
Persons per hectare
7.7
6.7
5.7
4.7
Mountain
Hill
Inner Tarai
Tarai
Total
1 9 — — 10
1 5 1 — 7
4 8 1 4 17
5 11 3 7 26
4 3 1 7 15
Geographic region boundary
Administrative district boundary

1	Taplejung (5.4)	20	Dhanusa (5.9)	39	Kaski (7.0)	58	Humla (4.0)
2	Panchthar (4.6)	21	Mahotari (6.0)	40	Parbat (8.4)	59	Mugu (4.5)
3	Ilam (4.9)	22	Sarlahi (5.4)	41	Tanahun (6.6)	60	Jumla (5.4)
4	Jhapa (4.4)	23	Sindhu-palchok (6.9)	42	Syangja (8.7)	61	Kalikot (6.7)
5	Sankhuwa Sabha (5.0)	24	Rasuwa (5.8)	43	Nawal Parasi (5.4)	62	Jajarkot (4.7)
6	Terhathum (4.3)	25	Nuwakot (6.3)	44	Palpa (7.1)	63	Dailekh (5.8)
7	Dhankuta (4.8)	26	Dhading (6.7)	45	Gulmi (9.3)	64	Surkhet (5.3)
8	Morang (5.2)	27	Kabhre-palanchok (10.3)	46	Argha Khanchi (7.9)	65	Banke (4.1)
9	Sunsari (4.8)	28	Bhaktapur (22.1)	47	Rupandehi (4.3)	66	Bardiya (3.7)
10	Solu-Khumbu (5.0)	29	Kathmandu (24.7)	48	Kapilvastu (3.2)	67	Bajura (6.1)
11	Bhojpur (5.6)	30	Lalitpur (16.7)	49	Mustang (3.0)	68	Bajhang (5.5)
12	Khotang (5.6)	31	Makwanpur (6.8)	50	Dolpo (4.4)	69	Achham (5.8)
13	Okhaldhunga (5.7)	32	Chitawan (5.8)	51	Myagdi (6.2)	70	Doti (5.6)
14	Udayapur (5.2)	33	Rautahat (5.9)	52	Baglung (8.0)	71	Kailali (3.9)
15	Saptari (4.9)	34	Bara (5.3)	53	Rukum (5.6)	72	Darchula (6.8)
16	Siraha (4.8)	35	Parsa (5.9)	54	Rolpa (5.7)	73	Baitadi (7.0)
17	Dolakha (6.3)	36	Gorkha (6.7)	55	Salyan (5.4)	74	Dadeldhura (5.4)
18	Ramechhap (5.0)	37	Manang (9.8)	56	Pyuthan (6.8)	75	Kanchanpur (4.1)
19	Sindhuli (5.3)	38	Lamjung (6.4)	57	Dang-Deokhuri (4.1)		

Map 5. Persons per net cultivated hectare by district: 1978/79

Source: Based on Kenting Earth Sciences (1986a: app. 5).

Note: Density values are in parentheses next to the name of each district. See Table 5 for density per net cultivated hectare by geographic region.

compared to the adjoining Indian districts. On average, the density in Bihar districts in 1961 was two to three times higher than in the Eastern Tarai districts of Nepal (Gaige 1975). The disparity was even greater in the west: The density of adjoining Uttar Pradesh districts was three to four times higher than in Central and Western Tarai districts of Nepal. Where two adjoining areas with similar environments have differences in population density with no restriction on mobility, the movement to low-density areas becomes a natural process.

Not only were there disparities in density along the border, but there was overpopulation in the Indian states adjoining Nepal. Measurement of pressure of rural population on land resources in India indicates that Bihar and Uttar Pradesh contiguous to Nepal had the highest level of overpopulation (Sen Gupta 1970:425–26 and fig. 25-1). And categorization of regions based on population density and growth rate, resource potential, and levels of socioeconomic development reveals that eastern Uttar Pradesh and northern Bihar adjoining Nepal are problematic regions of the first order: "They face the problem of bitter poverty due to overcrowding; their density of population [is] almost three-to-fourfold that of the country as a whole" (Sen Gupta 1970:427–33).[11] These regions, therefore, had a high rate of outmigration, mostly (73 percent) rural to rural. Together they recorded a net loss from rural communities of 3 million or 2.7 percent during 1951–61. Given the similarity of natural and cultural environment between the Tarai and parts of these states, it is reasonable to assume that a sizable proportion of this migration was directed to Nepal. Since the international border is no barrier to human movement, the demographic processes operating in the middle Ganges plain have affected the Tarai as their obvious extension. According to a survey in 1983 in the Tarai, 6.9 percent of the householders were immigrants and of these 94.3 percent came from India (Nepal, TFM, 1983). Among these immigrants, 48.9 percent came for work/employment, 19.4 percent for trade/commerce, 12.0 percent because they had relatives at the destination, and 10.6 percent because of poverty at the origin. Of all the immigrants, 97.2 percent found their new situation better than at their place of origin.

The reasons for migration cited by those reported away from home and living in India and those of the India-born population reported in Nepal suggest the factors of mobility across the border. Although reporting by place of birth and reporting by absentees abroad are not strictly comparable, Nepalese reported in India were 1.7 times more than Indians reported in Nepal (Table 28). Of the 375,196 Nepalese in India, 82.1 percent were male; of the 222,278 India-born in Nepal, 70.6 percent were female. Among India-born females reported in Nepal, marital relation was given as the

11. Uttar Pradesh and Bihar adjoining Nepal recorded the lowest annual income per person for 1983–84 (less than Rs. 1,600) among all Indian states and territories. See *The Economist* (London), 9 May 1987.

Table 28. Reasons for Indo-Nepal migration: 1981

Reasons	Nepalese absentees in India						India-born reported in Nepal					
	Male		Female		Total		Male		Female		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture	11,378	3.7	2,292	3.4	13,670	3.6	14,977	22.9	6,711	4.3	21,688	9.7
Marital relations	345	0.1	3,174	4.7	3,519	0.9	2,645	4.1	97,722	62.2	100,367	45.2
Military service	241,189	78.3	8,248	12.3	249,437	66.5	9,830	15.1	1,188	0.8	11,018	5.0
Study/training	7,528	2.4	1,976	2.9	9,504	2.5	1,455	2.2	843	0.5	2,298	1.0
Trade/commerce	2,043	0.7	330	0.5	2,373	0.6	12,135	18.6	9,623	6.1	21,758	9.8
Others/unstated	45,463	14.8	51,230	76.2	96,693	25.8	24,243	37.1	40,906	26.1	65,149	29.3
Total	307,946	100.0	67,250	100.0	375,196	100.0	65,285	100.0	156,993	100.0	222,278	100.0
Percentage	82.1		17.9		100.0		29.4		70.6		100.0	

a. From Nepal, CBS (1984: vol. IV, table 2).

b. From Nepal, CBS (1984: vol. I, pt. II, table 10).

reason for migration by 62.2 percent; of the Nepalese women reported in India, by contrast, only 4.7 percent were there for marital reasons. Two-thirds of the Nepalese reported in India were there for service and of these 67.3 percent were male. Of the India-born reported in Nepal, only 5 percent gave service as the reason. Other important reasons for India-born being in Nepal were for trade and agriculture; both of these reasons were less important for Nepalese reported in India.

Food scarcity

Population pressure on available land is also evidenced by increasing food scarcity, particularly in the highlands. One of the early estimates of the country's food balance was made for the fiscal year 1970-71 based on rough calculations of cultivated area, cereal grain output, and population (Nepal, FAM, 1972:78-79). Analysts assumed a 10 percent loss of gross production due to pests, birds, and animals, a 4 percent loss in dehusking, and a 3 percent loss in milling. The requirement of edible foodgrain per head per annum was assumed to be 140 kilograms in the Mountain region, 160 kilograms in the Hill region, and 190 kilograms in the Tarai. According to the estimate, the Hill and Mountain regions had a foodgrain deficit of 127,753 metric tons and 15,473 metric tons respectively. The Tarai had a surplus of 345,223 metric tons and the Inner Tarai a surplus of 72,872 metric tons. The country had a food surplus of 274,869 metric tons even though 34 of the 75 districts had a deficit. Among the foodgrain deficit districts, 26 were Hill, seven Mountain, and one Inner Tarai (Gurung 1984c: fig. 11). Of the 36 Hill districts, only 10 had a surplus. On the other hand, all Tarai districts had a surplus.

The problem was further aggravated by a decline in foodgrain production in the highlands. During 1970/71-1980/81, estimated foodgrain production declined by 11.3 percent in the Mountain region and by 5.7 percent in the Hill region (Table 29). For the country, the increase in foodgrain production was 9.9 percent compared to 14.6 percent in cropland expansion (Table 29). In the lowlands, there was an 18.3 percent increase in foodgrain production compared to a cropland increase of 16 percent. Thus the per capita foodgrain availability of the total population declined from 302 to 255 kilograms. Declines in per capita food availability ranged from 180 to 147 kilograms for the highlands and from 466 to 371 kilograms for the lowlands (Table 29).

The balance between food production and population has deteriorated in the highlands as indicated by estimates based on cropped area, physical output, and population. In 1974-75, the country had a foodgrain surplus of 540,000 metric tons (Table 30). The Mountain and Hill regions had a deficit of 69,000 metric tons while the Tarai had a surplus of 609,000 metric tons. All the Tarai districts were in the food surplus category whereas a majority of Hill districts had a chronic food deficit. By 1983-84, the surplus for the

Table 29. Changes in estimated area under crops and foodgrain production

A. Area under crops[a]

Macro region	1970–71		1980–81		Change		Persons/hectare	
	Hectares	%	Hectares	%	Hectares	%	1970–71	1980–81
Nepal	2,161,159	100.0	2,447,548	100.0	316,389	14.6	5.3	6.1
Highlands	683,719	31.6	763,488	31.2	79,769	11.7	9.7	10.1
Mountain	104,505	4.8	101,000	4.1	-3,505	-3.4	9.2	10.6
Hill	579,214	26.8	662,488	27.1	83,274	14.4	9.8	10.1
Lowlands	1,477,440	68.4	1,714,060	70.0	236,620	16.0	3.3	4.3
Inner Tarai	232,080	10.7	290,220	11.9	58,140	25.1	3.9	4.4
Tarai	1,245,360	57.6	1,423,840	58.1	178,480	14.3	3.3	4.2

B. Foodgrain production[b]

Macro region	1970–71		1980–81		Change		Foodgrain availability (kg/person)	
	Metric tons	%	Metric tons	%	Metric tons	%	1970–71	1980–81
Nepal	3,486,157	100.0	3,829,886	100.0	343,729	9.9	302	255
Highlands	1,191,241	34.2	1,115,808	29.1	-75,433	-6.3	180	147
Mountain	144,764	4.2	128,588	3.4	-16,176	-11.3	151	120
Hill	1,046,477	30.0	987,220	25.8	-59,257	-5.7	184	149
Lowlands	2,294,916	65.8	2,714,078	70.9	419,162	18.3	466	371
Inner Tarai	352,817	10.1	418,188	10.9	65,371	18.5	388	327
Tarai	1,942,099	55.7	2,295,890	59.9	353,791	18.2	496	381

Source: Nepal, FAM (1983:97-246).

a. Crops include six food crops (paddy, maize, wheat, millet, barley, potato) and three cash crops (sugarcane, oilseeds, tobacco).

b. Foodgrain includes paddy, maize, wheat, millet, and barley.

Table 30. Change in food balance by elevation zone: 1974-75 to 1983-84

Zone	1974-75[a] (1,000 MT)	1983-84[b] (1,000 MT)
Mountain	-15	-74
Production	131	110
Requirement	146	184
Hill	-54	-211
Production	870	910
Requirement	924	1,121
Tarai	609	530
Production	1,410	1,724
Requirement	801	1,194
Total	540	245
Production	2,411	2,744
Requirement	1,871	2,499

a. Nepal, FAM (1983: table 11.2).

b. Joshi and Khatiwada (1986: table 32).

country had been reduced to 245,000 metric tons (Joshi and Khatiwada 1986:159). The surplus in the Tarai decreased to 530,000 metric tons while the deficit in the highlands increased to 285,000 metric tons or four times that of 1974-75.

The Tarai and Inner Tarai regions rank high in per capita foodgrain availability (Table 29). They are also the very regions with a low percentage of absentee population and low rates of out-migration. On the other hand, Mountain and Hill regions have a low level of foodgrain availability and a high rate of out-migration. The production and availability of foodgrain, therefore, appears to be an important influence on interregional migration: People from food-deficit highlands are moving to the source of food production in the lowlands. In other words, the highlands with their excess population and limited agricultural land are the source while the lowlands with more land are the destination of most migrants in Nepal.

Survey findings and econometric exercises all indicate that land availability is the primary determinant of migration in Nepal. A multiple-regression analysis using land at origin and destination (including other independent variables) showed that the effect of land available at destination was always positive and highly significant (Dixon 1977:137-47). Another set of regressions led to three conclusions: The more people in an area, the more the movements; the more land available, the less out-migration; and the more land available, the more in-migration (Dixon 1977:154-58). Another econometric modeling to explain the determinants of internal

migration found that the level of agricultural income per household in a district and net migration were positively correlated (Conway and Shrestha 1981:102–07).

Malaria Control

Until the middle of the twentieth century, the lowland regions of Nepal constituted a hyperendemic malarial zone. The traditional Nepalese term for malaria, known as *awal*, conformed closely to its Latin *mala aria* meaning "bad night air." Although the hill people traversed the lowlands during the winter season when the *Anopheles fluviatilis* vector was dormant, they generally avoided the region. Even within the hills, the fear of malaria imposed a commuting work schedule whereby the people retreated to upland settlements at dusk after working in the valley fields. Some of the earlier settlements of hill people in the lowlands were penal colonies and resettled by emancipated slaves (Regmi 1971).

The program of malaria control was first introduced in Nepal in 1955. This foreign-aided program was associated with a modern scheme of resettlement in Chitawan in the Central Inner Tarai. As in the dry zone of Sri Lanka where DDT spraying was started in 1945 (Farmer 1957:21), the campaign against malaria in Chitawan met with success and a large number of hill settlers began to pour in. The initial target was to resettle a population of 30,000 by reclaiming 20,240 hectares of grassland and forest land. The district subsequently recorded an average population growth rate of 6.8 percent per annum for the period 1952/54–1961, the highest for any district.

The success of the pilot project in Chitawan led to the establishment of the Nepal Malaria Eradication Organization (NMEO), and the program was expanded to cover other lowland regions. The first phase (1955–58) included Chitawan and Makwanpur districts of the Central Inner Tarai. The second phase began in 1959 and included six Eastern Tarai districts west of the Kamala River and three districts of Central Tarai (Map 1). The five Tarai districts east of the Kamala were covered in 1962, and the last phase in 1964 included Western Tarai and Inner Tarai (Table 31). Subsequently the NMEO extended its activities to other hill areas below 1,200 meters considered malarious.

The control and eradication of malaria in the lowlands provided new impetus to a large-scale spontaneous migration, particularly from the hills. According to the records of the NMEO, the population covered by the program in 13 Tarai districts increased by 48.3 percent during 1970–80 (Table 31). Districts with a later introduction of malaria control had a comparatively higher growth rate during this decade. The three districts between the Bagmati and Kamala rivers in Eastern Tarai, where the program was introduced in 1959, had only a 1.90 percent growth rate compared to the 4.02 percent average growth rate of all 13 Tarai districts. The Central Tarai, where the program was introduced in the same year, registered a growth

Table 31. Growth of population in the Tarai: 1970–80

Region	1970	1980	Change 1970–80 Number	%	Growth rate	Malaria eradication started
Western Tarai[a]	385,704	725,565	339,861	88.1	6.52	1964
Central Tarai[b]	605,171	908,874	303,703	50.2	4.15	1959
Eastern Tarai	1,525,853	2,097,092	571,239	37.4	3.23	1959 and 1962
Bagmati to Kamala rivers[c]	860,260	1,038,850	178,590	20.8	1.90	1959
East of Kosi river[d]	665,593	1,058,242	392,649	59.0	4.75	1962
Total	2,516,728	3,731,531	1,214,803	48.3	4.02	

Source: Nepal Malaria Eradication Organization, unpublished annual records.

Note: Malaria-related data for Parsa, Bara, Rautahat, Siraha, and Saptari districts are not available after 1974 where integrated health programs were introduced. See Map 1 for river boundary.

a. Includes Banke, Bardiya, Kailali, and Kanchanpur.

b. Includes Kapilvastu, Rupandehi, and Nawal Parasi.

c. Includes Sarlahi, Mahotari, and Dhanusa.

d. Includes Sunsari, Morang, and Jhapa.

rate of 4.15 percent. The growth rate was much higher in districts where the program was introduced later. It was 4.75 percent east of the Kosi River in Eastern Tarai (where eradication started in 1962) and 6.52 percent in Western Tarai (where the program was not launched until 1964).

Land Settlement

The control of malaria in the lowlands greatly facilitated government schemes for resettlement on new land. The first settlement scheme, in the Chitawan Valley, was initiated during the First Five Year Plan (1956–61), and its success led to the expansion of the resettlement program. A resettlement company was established in 1964 to carry out land development and implement resettlement projects (Elder et al. 1976; Kansakar 1979, 1983). The company operated five projects between 1964 and 1970 and settled 6,740 families on 14,268 hectares of new land cleared from the forest (Ojha 1983:30). During the decade 1970–80, five more projects were started that settled 11,746 families on 19,015 hectares (Nepal, NPC, 1975, 1980).

In 1969, a full-fledged Department of Resettlement was created to organize land settlement activities on a more extensive scale. During the period 1970–83, the number of households so settled was 50,859 on 33,733 hectares of land that were mostly reclaimed from the forest. The pattern of resettlement operation during the decade 1974–75 to 1982–83 shows three

features (Table 32). First, there was a decline in the volume of land for settlement from 4,322 hectares of land resettled in 1974-75 to 1,011 hectares in 1982-83. Second, increasing demand for such land led to the decline of plot size allotted to settler households from 1 hectare in 1974-75 to 0.34 hectare per household in 1982-83. Third, the depletion of forest land for resettlement in the densely populated Eastern Tarai meant a shift in program emphasis to the Western Tarai.

The scale of official resettlement was modest considering the volume in neighboring countries,[12] planning targets, and the number of migrants moving to the lowlands. The progress achieved by the Department of Resettlement during 1964-80 was 22.4 percent for land distributed and 38.3 percent for families settled (targeted at 102,890 hectares and 35,500 families respectively). Resettlement schemes indeed seem to have acted as a catalyst to spontaneous migration. Official estimates indicate that from 1960-61 to 1970-71, some 78,160 hectares of new Tarai land had been settled by 32,175 legal as well as illegal settler families (Nepal, Department of Resettlement, 1973). Of the total land cleared during 1963-72, only 20,300 hectares were legally settled whereas three times more land had been illegally cleared (Ojha 1983:32). The Forest Resources Survey estimates a total loss of approximately 120,000 hectares of forest land during 1964-72; of this, 56,000 hectares were said to be encroached upon by illegal settlers through spontaneous migration. According to another estimate, annual flows of Hill migrants to the Tarai were on the order of 36,000 persons in 1974-75 and 48,000 in 1975-76 (World Bank 1979:21). The number legally settled in those years comes to about 64,000 or three-quarters of all settlers. Thus the volume of spontaneous migration to the lowlands was much greater than those handled by the resettlement schemes. In a recent survey taken in 10 Tarai districts, one-third of the migrants had been attracted by the presence of relatives and acquaintances—evidence of a migration chain (Nepal, TFM, 1983: table 13.13). Other significant reasons given for migrating to the Tarai were land distribution by the government (10.9 percent), more productive land (7.8 percent), cheaper land (7.1 percent), and scope for forest clearance (3.7 percent).

Regional Disparity

One of the basic factors inducing interregional migration in Nepal is the regional disparity in population and resources. The highlands have 51.4 percent of the total population while the lowlands have 56.4 percent of the total net cultivated land (Table 5). A national sample survey conducted in 1977 showed an average annual per capita income of Rs. 782 in the

12. According to Farmer (1974), India resettled about 93,000 colonists on 344,633 hectares of land during 1947-63; of these, 15,862 colonists on 47,455 hectares were settled in Bihar and Uttar Pradesh (Farmer 1974: tables 5.1 and 5.11). In Sri Lanka, 68,525 colonists had been settled on 128,823 hectares of land by 1966.

Table 32. Land and households resettled in the Inner Tarai and Tarai: 1974–75 to 1982–83

Fiscal year	West	%	Central	%	East	%	Total	%	Average households per hectare
1974–75									1.00
Land	514	2.9	46	2.5	3,762	20.4	4,322	11.3	
Households	534	2.2	123	4.4	3,642	17.2	4,299	8.9	
1975–76									0.93
Land	1,217	6.8	22	1.2	4,893	26.6	6,132	16.1	
Households	1,389	5.7	23	0.8	5,129	24.2	6,541	13.6	
1976–77									0.79
Land	3,496	19.6	505	27.2	2,158	11.7	6,159	16.2	
Households	4,304	17.7	199	21.7	2,816	13.3	7,319	16.0	
1977–78									1.00
Land	1,169	6.6	342	18.4	3,170	17.2	4,681	12.3	
Households	1,772	7.3	295	10.7	2,635	12.4	4,702	9.8	
1978–79									0.94
Land	4,560	25.6	399	21.5	2,099	11.4	7,058	18.5	
Households	5,405	22.3	647	23.4	1,429	6.8	7,481	15.5	
1979–80									0.65
Land	1,603	14.6	421	22.7	886	4.8	2,910	10.3	
Households	4,078	16.8	510	18.4	1,418	6.7	6,006	12.5	

1980–81									0.54
Land	1,443	13.7	80	4.3	730	4.0	2,253	8.5	
Households	3,889	14.0	157	5.7	2,458	11.6	6,504	12.5	
1981–82									
Land	1,269	7.1			292	1.6	1,561	4.1	
Households	2,124	8.7			403	1.9	2,527	5.2	
1982–83									0.34
Land	557	3.1	42	2.3	412	2.2	1,011	2.7	
Households	1,287	5.3	412	14.9	1,237	5.8	2,936	6.1	
Total									0.79
Land	15,828	100.0	1,857	100.0	18,402	100.0	36,087	100.0	
Percentage	46.8		4.9		48.3		100.0		
Households	24,782	100.0	2,366	100.0	21,167	100.0	48,315	100.0	
Percentage	50.4		5.7		43.9		100.0		

Source: Nepal, Department of Resettlement, unpublished records.

Mountain regions, Rs. 932 in the Hill region, and Rs. 1,005 in the Tarai (Nepal, NPC, 1983:106). The Mountain and Hill regions excluding Kathmandu Valley experience high demographic stress and extreme poverty. The symptoms of overpopulation in agrarian communities (Grigg 1980b: 20–28)—fragmentation of farms, small size of holdings, high land values, landlessness, and food scarcity—are all apparent.

Although the imbalance between the highlands and lowlands in agricultural resources is inherent in their geographic makeup, development activities of the last three decades have further widened the disparity between the two macro regions. The introduction of development planning in Nepal in 1956 coincided with the early years of malaria eradication and resettlement in the lowlands. The emphasis of various development plans on agriculture and road development hinged on the locational advantage of the fertile Tarai plain. On the other hand, the highlands, excluding metropolitan Kathmandu, remained an area of minimal development except for some road construction (Gurung 1969).

At the beginning of the Fourth Plan (1970–75), the Mountain and Hill regions, excluding Kathmandu Valley, were comparatively backward. They covered 69.9 percent of the country's total area but had 31.8 percent of the cultivated area, 34.2 percent of the estimated foodgrain production, and 45.4 percent of all-weather road mileage (Table 33). There were no large or medium-scale industries in the highlands except in Kathmandu Valley. The capital region was indeed an island of development in the highlands with 20.2 percent of the total mileage of roads, 37.5 percent of large and medium-scale industries, and 35.0 percent of its labor force in nonagricultural occupations. The lowlands, by contrast, had 65.3 percent of the cultivated area, 61.7 percent of the estimated foodgrain production, 34.4 percent of the road mileage, and 62.5 percent of the industries. Of the total labor force in the lowlands, 8.2 percent were engaged in nonagricultural occupations. The proportion of this labor force was only 5.9 percent in the highlands excluding Kathmandu Valley.

Regional disparity has continued to widen despite adoption of a balanced development policy since 1972. The Mountain/Hill (excluding Kathmandu) share in road mileage has remained the same as in the late 1960s, while that of the lowlands increased to 50.6 percent with the extension of the east-west highway (Table 33). The distribution of all industrial establishments employing 10 or more workers in 1982–83 was 14.3 percent in Mountain/Hill regions, 17 percent in Kathmandu Valley, and 68.7 percent in the lowlands (Nepal, CBS, 1985a). Labor force participation in nonagricultural occupations in 1981 for the Mountain/Hill regions was 6.2 percent compared to 13 percent in the lowlands and 30.5 percent in Kathmandu Valley out of their respective regional labor force.

Consequently, the economic importance of the lowlands has increased. During the mid-1960s, the lowlands contributed 59 percent of Nepal's gross

domestic product (Table 33). Its contribution was estimated as 72 percent in industry, 65 percent in services, and 55 percent in agriculture (Gaige 1975:26-27). By the end of the 1970s, the lowland share in GDP had increased to 63 percent. Its contribution in all sectors was much higher than that of the Mountain/Hill regions including Kathmandu Valley: 1.9 times in agriculture and 2.6 times in industry. The lowlands showed a substantial increase in the agricultural contribution to GDP, while it declined from 45 to 34 percent in the highlands (Table 33).

The regional imbalance in development is well reflected in a study using 44 economic and sociocultural variables to determine the development level of 75 districts of Nepal (Shrestha and Sharma 1980). Of the 40 districts below the national level, 23 were Hill and 13 Mountain districts. The aggregation of districts into 15 census regions provides a basis for comparing regional levels of development and rates of net migration. Except for one deviation there is a close correlation between the level of development and the rate of net migration (Table 34). The exception is the Central Hill region, which ranks third with the inclusion of Kathmandu Valley in development. Excluding Kathmandu, the region would have the same rank (ninth) as its rate of net migration. Tarai regions rank high both in the level of development and in the rate of net migration. The Eastern Tarai, with the highest development level, is also the prime region of net migration. The Mountain regions have low levels of development and negative rates of net migration. Regions with lagging development also happen to be regions with high rates of out-migration (Table 34). The rank correlation between level of development and rate of net migration comes to 0.46. The lowland regions, endowed with more land resources as well as a higher level of development, are the main destination of migrants.

In a survey of 5,621 households in 10 Tarai districts, it was found that 31.6 percent were internal migrants (born in Nepal) and 6.9 percent were immigrants (Nepal, TFM, 1983). Among the internal migrants, a quarter were intraregional (from the Tarai) and three-quarters were from the Hill and Mountain regions. Among the migrants' reasons for choosing their destination were the presence of friends and relatives, land availability, and development facilities in the Tarai. Land-related reasons such as high productivity, low cost, and ease of forest clearance accounted for 18.6 percent of the migrant householders. Another 16.3 percent had been attracted by the presence of transport, market, education, and health facilities. About 11 percent had migrated due to resettlement schemes. Thus an overwhelming majority were spontaneous migrants lured by various advantages in the Tarai. Most migrants were better off at their destination than in their place of origin, primarily the hills. More than 80 percent of the migrants were in a better economic situation than at their place of origin. Another marked improvement was reported in their housing situation—in all areas whether urban, rural south, or rural north. Improvement of education and

Table 33. Indicators of change in regional economy: Late 1960s to early 1980s

A. Percentage distribution of selected indicators

Region	Cultivated area		Estimated foodgrain production		All-weather road		Industry		Nonagricultural workers	
							Large-scale	All		
	1969[a]	1981[b]	1967-68[c]	1982-83[c]	1969[a]	1983[d]	1969[a]	1982-83[e]	1952-54[f]	1981[f]
Nepal	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6.9	8.9
Mountain/Hill*	31.8	42.2	34.1	36.5	45.4	45.6	14.3	5.9	6.2	
Kathmandu Valley	2.9	1.3	4.2	4.3	20.2	3.8	37.5	17.0	35.0	30.5
Tarai/Inner Tarai	65.3	56.4	61.7	59.3	34.4	50.6	62.5	68.7	8.2	13.0

a. Gurung (1969:4).

b. Kenting Earth Sciences (1986b).

c. Nepal, FAM (1983:97-246).

d. Route map of Nepal, Vista Maps, 1983, edited by Harka Gurung.

e. Nepal, CBS (1985a).

f. Nepal, CBS (1985b).

* Excluding Kathmandu Valley.

B. Change in composition of gross domestic product

Region	Agriculture[a]		Industry[b]		Services[c]		Total	
	1960s[d]	1970s	1960s[d]	1970s	1960s[d]	1970s	1960s[d]	1970s
Nepal[e]	100	100	100	100	100	100	100	100
	(65)	(57)	(11)	(13)	(24)	(30)	(100)	(100)
Mountain/Hill*	45	34	28	28	35	48	41	37
Tarai/Inner Tarai	55	66	72	72	65	52	59	63

a. Asian Development Bank (1982: vol. II, pp 233–261); share of agricultural production is based on the total production of cereal grains for 1980–81.

b. Nepal, CBS (1981); share of industrial contribution is calculated on the basis of value added by industries in 1976–77.

c. Based on the index of development level; see Shrestha and Sharma (1980).

d. Gaige (1975:26–27).

e. Naya (1982).

* Including Kathmandu Valley.

Table 34. Level of development and migration by census region

Census region	Level of development[a]		In-migrants		Out-migrants		Net migration	
	Value	Rank	1981	Rank	1981	Rank	Rate	Rank
Mountain	935		53,628		315,095		-200.7	
Far West	715	14.5	10,886	11	13,241	11	-8.1	7
Midwest	715	14.5	7,330	14	5,912	14	+5.9	6
West	1,167	9	1,080	15	38,219	8	-1,861.5	15
Central	1,160	10	10,425	12	21,736	10	-27.4	10
East	1,142	11	23,907	10	235,987	2	-626.6	14
Hill	1,365		211,927		636,638		-59.3	
Far West	1,082	12	14,559	13	47,371	6	-54.3	12
Midwest	801	13	31,500	8	54,528	5	-22.1	8
West	1,522	7	62,572	6	150,104	3	-40.7	11
Central[b]	1,730	3	71,873	5	119,275	4	-22.5	9
East	1,375	8	31,423	9	265,360	1	-186.1	13
Tarai	1,811		773,307		86,151		+104.6	
Far West	1,710	5	92,200	4	1,211	15	+213.1	1
Midwest	1,603	6	54,364	7	12,238	12	+61.3	5
West	1,724	4	111,435	3	4,672	13	+111.5	3
Central	1,830	2	214,473	2	29,035	9	+77.7	4
East	2,002	1	300,835	1	38,995	7	+123.9	2

a. From Shrestha and Sharma (1980).

b. Including Kathmandu Valley.

health facilities was most marked in urban areas. Access to fuelwood, drinking water, and pasture land had also improved but at a comparatively lower level. Fuelwood and pasture access had improved most in the northern rural areas; improvement in drinking water was greatest in the urban areas. Overall the developed Tarai offered diverse livelihood and economic opportunities to the migrants.

CONSEQUENCES OF MIGRATION

The dominant pattern of highland–lowland migration in Nepal is an indicator of regional imbalance. Increasing population pressure in the highlands and polarization of development in the lowlands have contributed to larger volumes of this migration trajectory in recent decades. Most of the migrants are moving from resource-poor regions to regions with more land resources and employment opportunities. Interregional migration in Nepal has had a positive impact on the total economy in both the origin and destination regions. Large-scale out-migration from the highlands aids

in relieving the pressure of population in depressed areas by providing alternative areas and avenues for livelihood. Transfer of population through migration to resource-rich regions has various advantageous impacts on the destination area. The migration of economically active people to low-density areas leads to fuller utilization of available resources. Expansion of cultivated land in the lowlands has directly contributed to an increase in overall food production. The growth of population in such high-potential regions also contributes to an increase in economic activity, more production, and economic development. The consequences of migration are most apparent at the destination, for the lowlands are undergoing significant changes in demographic character, social composition, land use, and level of development.

Demographic Shift

An obvious consequence of large-scale interregional migration has been the change in the size of regional population. Since the mid-1950s, population growth rates have been consistently higher in the lowlands. They have also had higher rates of net migration. The average annual population growth rate for the country during 1952/54–1981 was 2.16 percent, varying from 1.22 percent in Mountain/Hill regions to 3.34 percent in the Tarai to 3.46 percent in the Inner Tarai (Table 2). Of the total population increase of 6.5 million during 1952/54–1981, the Inner Tarai and the Tarai accounted for 66.7 percent. The increase in density in terms of additional persons per square kilometer in the lowlands was four times that in the highlands. Thus the lowland share in total population increased from 34.7 percent in 1952/54 to 48.7 percent in 1981.

Migration was an important factor in the increase of the Tarai population. During 1961–81, the Tarai experienced a 2.5-times increase in population and a 6.4-times increase in net migration. The last decade (1971–81) recorded the largest increases in population in regions of high in-migration (Tables 3 and 19). Mountain and Hill regions with negative net migration had a lower population growth. Growth rate and net migration were highest in the Far Western Tarai. In the Tarai, net migration volume was 10.5 percent of its 1981 population and 31 percent of its population increase during 1971–81. In the Far Western Tarai, the volume of net migration was 39.7 percent of the regional population increase and 21.3 percent of its total population. The Eastern Tarai came next with a high percentage of net migration volume compared to its total population and decennial increase.

During 1952/54–1981, the number of households in the country increased by 69.6 percent compared to a population increase of 81.9 percent (Table 35). Household increase was 39.9 percent in the highlands and 120.8 percent in the lowlands. The share of the lowlands in total households rose from 36.7 percent in 1952/54 to 48 percent in 1981. In 1952/54, the highlands had a larger average household size (5.8) than the national average

(5.6) and that of the lowlands (5.0). Three decades later, the average household size in the highlands declined while that of the lowlands increased (Table 35). The lowland average household size (5.9) in 1981 was higher than that of both the national average (5.8) and that of the highlands (5.7).

In 1981, some 51.3 percent of interregional migrants were males. Regions with high net migration gained more in male population. The change in sex ratio during 1952/54–1981 was 100.4 to 117.8 for the lowlands and 100.7 to 112.5 in the highlands (Table 35). The Eastern Tarai, Eastern Inner Tarai, and Eastern Mountain/Hill regions all changed from female to male preponderance. On the other hand, the number of males to females declined in the Central and Western Mountain/Hill regions. Male predominance was most marked in the Tarai. By elevation zone, the percentage of males in 1981 was 51.2 in the Mountain, 50.5 in the Hill zone, and 52 percent in the Tarai.

The increase in male population was more prominent in the Tarai, the primary destination of interregional migrants and immigrants. The increase of males vis-à-vis females was high in the Eastern Tarai, which also had the highest volume of net migration and immigration. In the hills, Kathmandu Valley with considerable in-migration had a very high increase in males. The overall rise in sex ratio in favor of males may also be attributed to a decrease in the rate of emigration and an increase in immigration, both of which are male dominated.

The broad age group of interregional migrants in 1981 was distributed as 70.2 percent aged 15–59 years, 22.6 percent below 14 years, and 7.2 percent over 59 years (Table 22). Migration seems to have contributed to the relative youthfulness of population in the destination regions. In 1952/54, the Tarai had a higher median age (23.3) than the Mountain/Hill regions (19.9). Three decades later, the median age for the Tarai declined while that of the Mountain/Hill regions increased. The proportion of youthful population increased markedly in the Tarai. The median age for the Tarai became lower than that of the Mountain/Hill region, thus reversing the previous situation.

The increase in population of ages 0–14 during 1952/54–1981 was 52.7 percent in the Mountain/Hill regions and 202.3 percent in the Tarai (Table 36). The proportion of this age group in the Tarai population rose from 36.3 percent in 1952/54 to 42.5 percent in 1981. Their increase in the Mountain/Hill regions was marginal (39.3 to 40.5 percent). Thus, there was a shift in dependency ratio at the macro-regional level.[13] In 1952/54, the Tarai had a lower dependency ratio than that of the Mountain/Hill regions: 0.62 against 0.74 (Table 36). By 1981, the Tarai had a high dependency ratio of 0.83 compared to 0.79 for the Mountain/Hill regions. Estimates of the total fertility rate (TFR), on the other hand, were higher for the Mountain/Hill regions (Table 36). The large increase in dependency ratio despite a lower TFR in the Tarai, therefore, indicates a sizable volume of households migrating with their dependents.

Other demographic variables that signify greater change in the lowlands are occupational pattern and urbanization. The increase in economically active population during 1952/54–1981 was 30.6 percent in the highlands and 94.3 percent in the lowlands (Table 37). In 1952/54, the proportion of the labor force in agricultural occupations out of the regional population was 96 percent in the Mountain/Hill regions (excluding Kathmandu Valley), 65.2 percent in Kathmandu Valley, 94.9 percent in the Inner Tarai, and 92 percent in the Tarai. Three decades later, the proportion of the Mountain/Hill labor force engaged in agriculture had declined only marginally (by 0.8 percent). It increased to 72.4 percent in Kathmandu Valley and declined to 89.3 percent in the Inner Tarai and to 85.6 percent in the Tarai. The proportion of the nonagricultural labor force in the Tarai increased from 8 percent in 1952/54 to 14.4 percent in 1981. The Tarai accounted for 68.9 percent of the total labor force increase in nonagricultural occupations.

The increase in the nonagricultural labor force is related to the availability of nonfarm employment. During the period under review, (1952/54–1981), the lowlands had a sizable growth in urban population (Table 4). The lowland share of the urban population increased from 17.4 to 53.3 percent while the proportion of population living in urban areas rose from 1.4 to 7 percent. The growth of the urban population can be traced to the increase in number of urban localities and to migration to urban areas. Of the 61,748 migrants to urban areas in 1971, some 58 percent were directed to lowland urban localities (Nepal, CBS, 1975: vol. V, table 40). The 1981 census does not provide data on migration for urban localities except to categorize the population as native or foreign-born. However, a 1983 survey of 10 Tarai districts indicated that 41.5 percent of the internal migrants and 55 percent of the immigrants were living in urbanized localities (Nepal, TFM, 1983: tables 11.7 and 11.25). Thus migration seems to have contributed to the growth of the urban population and to the increase of the nonfarm labor force in the lowlands.

Sociocultural Dispersal

Migration has brought about significant changes in the sociocultural composition of the regional population. This change is most apparent in the destination regions: the lowlands. There are also variations in extent of dispersal among the various sociocultural groups. Census data on religion and

13. Dependency ratio is defined as the ratio of children under 15 years of age plus persons aged 60 years and above to the population 15–59 years of age times 100. That is:

$$DR = \frac{0\text{–}14 + 60+}{15\text{–}59} \times 100$$

where DR = dependency ratio
0–14 = children under 15 years of age
60+ = persons aged 60 and above
15–59 = persons aged 15–59 years

Table 35. Number of households, average size of household, and sex ratio by geographic region: 1952–54 and 1981

Region	Number of households			Average household size		Sex ratio	
	Percentage distribution		Percentage increase				
	1952/54	1981	1952/54–1981	1952/54	1981	1952/54	1981
Nepal	100.0	100.0	69.6	5.6	5.8	100.6	105.0
Highlands	63.3	52.0	39.9	6.8	5.7	100.7	112.5
Mountain/Hill	58.4	47.2	37.9	5.8	5.7	101.0	101.3
West	16.3	13.2	39.0	6.1	5.8	102.5	101.0
Central	22.0	18.4	41.4	5.5	5.6	101.0	100.9
East	20.1	15.6	33.0	5.8	5.6	98.5	102.0
Kathmandu Valley	4.9	4.8	63.7	5.5	6.2	102.2	113.5
Lowlands	36.7	48.0	120.8	5.2	5.9	100.4	117.8
Inner Tarai	5.4	8.0	141.7	6.1	6.2	99.6	103.9
West	1.3	2.6	229.3	6.5	6.5	100.0	102.8
Central	1.9	3.2	181.5	6.1	6.1	102.0	106.0
East	2.1	2.2	76.8	5.9	6.0	96.8	102.4
Tarai	31.3	40.0	115.5	5.0	5.9	100.6	108.6
West	2.5	4.8	222.9	6.2	6.8	109.7	112.6
Central	5.1	6.1	101.2	4.7	6.1	103.1	108.9
East	23.7	29.0	107.3	5.0	5.7	99.0	107.8

Source: Nepal, DOS (1957: pt. I, sec. 1, table 7, and sec. 2, table 1); Nepal, CBS (1984: vol. I, pt. I, tables 1 and 3).

Table 36. Dependency ratio and fertility rate by macro region

A. Change in broad age groups and dependency ratio

Age group	Nepal			Mountain and Hill			Tarai		
	1952/54	1981	Change %	1952/54	1981	Change %	1952/54	1981	Change %
0–14	38.4	41.4	+96.2	39.3	40.5	+52.7	36.3	42.5	+202.3
15–64	58.9	55.4	+71.6	57.7	56.0	+44.5	61.8	55.4	+128.4
Over 64	2.7	3.2	+121.9	3.0	3.5	+71.2	1.9	2.1	+310.2
Dependency ratio	0.70	0.81		0.74	0.79		0.62	0.83	

Source: Nepal, DOS (1957: pt. I, sec. 2, table 2); Nepal, CBS (1984: vol. II, table 5, pp. 61, 64, 67).

B. Estimated total fertility rate

Year	Mountain	Hill	Tarai
1971[a]	5.99	6.08	5.34
1981[b]	5.78	6.03	5.79

a. From Karki (1984).

b. From Nepal, CBS (1985b: table 7.8).

Table 37. Change in occupation of population above 14 years of age and economically active: 1952/54–81

Region	1952/54	%	1981	%	Change	%
Highlands	2,585,323		3,376,483		791,160	30.6
Mountain/Hill[a]	2,410,653	100.0	3,087,848	100.0	677,195	28.1
Agriculture	2,313,823	96.0	2,938,273	95.2	624,450	27.0
Nonagriculture	96,830	4.0	149,575	4.8	52,745	54.5
Kathmandu Valley	174,670	100.0	288,635	100.0	113,965	65.2
Agriculture	113,929	65.2	208,970	72.4	95,041	83.4
Nonagriculture	60,741	34.7	79,665	27.6	18,924	31.2
Lowlands	1,287,716		2,501,705		1,213,989	94.3
Inner Tarai	245,925	100.0	386,349	100.0	140,424	57.1
Agriculture	233,383	94.9	345,166	89.3	111,783	47.9
Nonagriculture	12,542	5.1	41,183	10.7	28,641	228.4
Tarai	1,041,791	100.0	2,115,356	100.0	1,073,565	103.0
Agriculture	958,268	92.0	1,809,724	85.6	851,456	88.9
Nonagriculture	83,523	8.0	305,632	14.4	222,109	265.9
Total	3,873,039	100.0	5,878,188	100.0	2,005,149	51.8
Agriculture	3,619,403	93.5	5,302,133	90.2	1,682,730	46.5
Nonagriculture	253,636	6.5	576,055	9.8	322,419	127.1

Source: Nepal, DOS (1957: pt. I, sec. 2, table 12a); Nepal, CBS (1984: vol. I, pt. V, table 24).
a. Excluding Kathmandu Valley.

mother tongue available since 1952/54 can be used as indicators of such dispersal. A high proportion of the total population claims adherence to Hinduism (the state religion) and Nepali (the national language). The large increase in their number, therefore, includes natural increase as well as those who have opted for these state-patronized cultural norms. Adoption of the Hindu religion and Nepali language is quite pronounced among hill tribals and more so at migration destinations outside their native area. Thus changes in the population of minority religious and linguistic groups provide a better measure of sociocultural dispersal than the spread of the Hindu religion and Nepali language, both pan-Nepalese aspects.

The 1981 census reported nearly 90 percent of the total population as Hindus. The rest were categorized as follows: 5.3 percent Buddhist, 2.6 percent Muslim, and 2.5 percent as others and unstated (Table 38). The Hindu population increased from 7.3 million in 1952/54 to 13.4 million in 1981. This large increase was due to natural increase, adoption of the Hindu religion by tribals, and immigration of Hindu caste groups from India. The increase of the Hindu population in the lowlands was more than three times that in the highlands.

Table 38. Distribution and change in population by religion: 1952/54–1981

A. Percentage distribution of population by religion

Region	Hindu		Buddhist		Muslim		Other/unstated		Total
	1952/54	1981	1952/54	1981	1952/54	1981	1952/54	1981	
Nepal	88.9	89.5	8.9	5.3	2.5	2.6	0.0	2.5	100.0
Mountain/Hill	90.5	90.0	9.3	7.1	0.1	0.1	0.0	2.8	100.0
Kathmandu Valley	75.7	87.4	23.9	10.0	0.3	0.5	0.1	2.1	100.0
Inner Tarai	74.1	89.4	25.7	8.9	0.2	0.4	0.0	1.3	100.0
Tarai	90.8	89.4	0.8	1.8	8.4	6.3	0.0	2.5	100.0

B. Change in Buddhist and Muslim population

Region	Buddhist				Muslim			
	1952/54	1981	Change	%	1952/54	1981	Change	%
Nepal	707,104	799,081	91,977	13.0	208,899	399,197	190,298	91.1
Highlands	558,122	575,072	16,950	3.0	6,137	12,457	6,320	103.0
Mountain/Hill[a]	459,731	498,129	38,398	8.4	5,103	8,416	3,313	64.9
Kathmandu Valley	98,391	76,943	-21,448	-21.8	1,034	4,041	3,007	290.8
Lowlands	148,982	224,009	75,027	50.4	202,762	386,740	183,978	90.7
Inner Tarai	128,829	113,405	-15,424	-12.0	964	4,798	3,834	397.7
Tarai	20,153	110,604	90,451	448.8	201,798	381,942	180,144	89.3

Source: Nepal, DOS (1957: pt. I, sec. 2, table 5); Nepal, CBS (1984: vol. I, pt. III, table 13).

a. Excluding Kathmandu Valley.

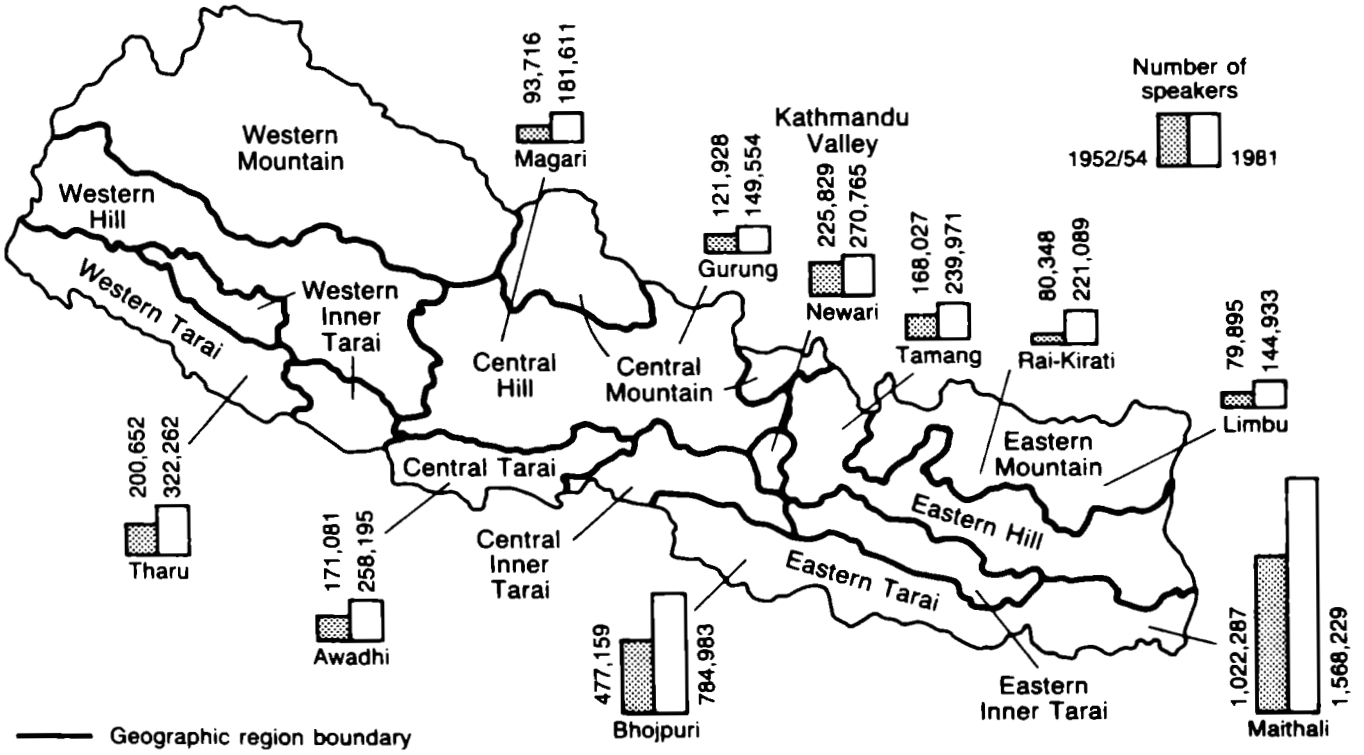
The minority religions, Buddhism and Islam, are more location-specific. In 1952/54, some 78.9 percent of the Buddhists were in the highlands and 97.1 percent of the Muslims were concentrated in the lowlands (Table 38). In 1981 also, 72 percent of the Buddhists were in the highlands and 96.9 percent of the Muslims were in the lowlands. Unlike Hinduism, which incorporates diverse adherents, these two religious groups represent separate ethnic entities. Nepalese Buddhists are drawn basically from Mongoloid groups from the highlands while the Muslims are a Caucasoid people from the plains.

Of the three main religious groups in Nepal, the Buddhist population showed the least increase (Table 38). The slow growth of the Buddhist population as a whole may be attributed to attrition through Hinduization. Buddhists declined in absolute numbers in Kathmandu Valley and the Inner Tarai. Their increase in the Mountain/Hill regions (excluding Kathmandu Valley) was only 8.4 percent. Even in 1952/54, some 18.2 percent of the Buddhists were recorded in the Inner Tarai. In subsequent decades, many of them seem to have moved to the Tarai. By 1981, their number had grown substantially in the lowlands.

The increase of the Muslim population during 1952/54–1981 was 91.1 percent (Table 38). Part of this increase was due to immigration from India as well as Bangladesh. The Tarai remains their area of concentration: 96.6 percent in 1952/54 and 95.7 percent in 1981. There was also some regional dispersal. Their number in the Inner Tarai increased fivefold and in Kathmandu Valley nearly fourfold. The increase in the Muslim population was 103 percent in the highlands compared to 90.7 percent in the lowlands.

The 1952/54 census provides the earliest data on the linguistic composition of the population (Nepal, DOS, 1957: pt. I, sec. 2, table 9). The various languages and dialects can be classified as 18 Tibeto-Burman, 15 Indo-Aryan, three Dravidian, and two of the Munda family. The distribution of total population by linguistic families as mother tongue was 77.3 percent Indo-Aryan, 22.1 percent Tibeto-Burman, 0.2 percent Munda, 0.1 percent Dravidian, and 0.3 percent others and unstated. By geographic category, 70.6 percent of the total population had Mountain/Hill languages, 28.9 percent had Tarai languages, and 0.5 percent had Inner Tarai languages as their mother tongue. Of the total population, 48.7 percent had Indo-Aryan Nepali (hill language) as their mother tongue.

During 1952/54–1981, those with a Mountain/Hill mother tongue increased by 82.1 percent—mainly through doubling of those reporting Nepali as their mother tongue. The large growth in Nepali-speakers was due to natural increase and to the adoption of Nepali as the first language mainly by Tibeto-Burman speakers. Thus four hill tribal languages recorded an absolute decline during 1952/54–1981 (Map 6). Speakers of Tibeto-Burman languages increased by only 0.6 percent. Those having Tarai languages as their mother tongue increased by 64 percent. All Tarai languages, except Awadhi,



Map 6. Change in number of speakers of main languages* in native area: 1952/54–1981

Source: Nepal, DOS (1957: vol. I, pt. II, table 9); Nepal, CBS (1984: vol. I, pt. III, table 12).

*Excluding Nepali, the national language.

had large gains in the number of speakers. The annual growth rate for Bhojpuri was 4.98 percent and that of Maithili was 2.24 percent (Table 39). It is obvious that such high growth rates were due less to natural increase than to immigration from India, the source area of these languages.

There have been significant changes in the number and proportion of population by mother tongue and geographic region. In 1952/54, the Tarai had 138,237 persons or 6.1 percent of its total population with Mountain/Hill languages as their mother tongue. By 1981, the Mountain/Hill language group in the Tarai had increased to 2,154,139 and constituted 38.5 percent of the Tarai population. On the other hand, the proportion of Tarai-language speakers in the highland population increased from 0.5 percent in 1952/54 to 1.1 percent in 1981. The largest increase in the Tarai was among Nepali speakers. The proportion of Nepali speakers in the Tarai rose from 2.3 percent in 1952/54 to 21.6 percent in 1981 (Table 39). The increase of Tibeto-Burman speakers (Mountain/Hill origin) was from 2.5 percent to 14.4 percent. All Mountain/Hill languages had proportionately higher increases in the lowlands than in their native area. The increase in the number and proportion of those with a Mountain/Hill mother tongue in the lowlands was due mainly to migration.

Each language or mother tongue can be ascribed to a native area where the majority of speakers reside. The proportion of those living outside the native area may be taken as a measure of dispersal. In 1952/54, nine of the 16 classified languages had more than 90 percent speakers within their native area (Table 39). Five of the seven Tarai languages had the least dispersal. No Rajbansi, Satar, and Santhal speakers were recorded outside the Eastern Tarai. Conversely no Bhote-Sherpa and Sunuwar were recorded in the Inner Tarai and Tarai. Tharu and Tamang were the only groups that had a majority of their speakers outside their native area. The next linguistic group with high dispersal was Newari. A third of Nepali and Magari speakers were also outside their native area. Dispersal of Nepali was due to migration and to adoption of Nepali by Tibeto-Burman tribal groups. Of the nine Hill languages, four had more than 90 percent speakers in their native area.

By 1981, only three Tarai languages had more than 90 percent speakers in their native area (Table 39). Four language groups had more people outside the native area. Dispersal among Tamang speakers increased from 51.5 to 60.7 percent, while for Nepali it increased from 33.9 to 53.1 percent. Despite high dispersal, Newari and Tharu were the only groups that increased their proportion in their native area. Dispersal of Magari speakers was also quite high. Hill languages had a higher degree of dispersal in the lowlands than those of Tarai languages in the highlands—evidence of a predominantly highland-lowland migration.

Thus the two macro-regions show divergent patterns in the change of speakers by native area. Of the 10 languages (other than Nepali) with more than 1 percent speakers out of the total population, six are of the Hill group

and four of the Tarai group (Map 6). During 1952/54–1981, all such Hill languages, except Newari, recorded absolute declines in their native area. The decline was due to increasing adoption of the Nepali language and to dispersal by migration to other regions. In the Tarai, however, all languages but Awadhi recorded an increase in their native area. The increase for Maithali and Bhojpuri was significantly high and can be attributed to a high rate of immigration.

Land-Use Change in the Lowlands

One of the visible consequences of migration in the lowlands has been the change in land use. Since most movement is rural-to-rural, it has involved large-scale forest encroachment for agricultural settlement. Estimates of deforestation in the lowlands diverge widely. For the period 1964–72, the figures for deforestation range from 120,000 hectares (Nepal, Forest Ministry, 1976:5) to 340,000 hectares (World Bank 1974: annex 1). Another source states that during 1964–74 land cleared from forest for official settlement was 77,700 hectares but an additional 237,600 hectares of forest area was lost by encroachment (Nepal, NPC, 1974:10). One source using these diverse estimates concluded that up to 10,000 families (50–60,000 people) were migrating each year and encroaching on an average of 20,000 hectares of forest land (Dixon 1977:103).

The first inventory of forest resources made in 1963–64 for the Tarai and adjacent regions covering 3 million hectares indicated that 51.1 percent of the area was under forest (Table 40). The 11 Tarai forest divisions, excluding the Inner Tarai divisions of Dang and Chitawan, had 1.5 million hectares under forest of which 23,728 hectares were encroached upon (Nepal, FRS, 1967). The area under forest was distributed as 42.9 percent in the Eastern Tarai, 41.4 percent in the Western Tarai, and 15.7 percent in the Central Tarai. Forest land covered 72 percent of the west, 48.8 percent of the central, and 40.5 percent of the east in terms of their respective regional areas. In 1974–75, the Tarai forest divisions had 1.4 million hectares of forest land (Table 41). This indicates a depletion of 156,198 hectares or 10.2 percent since 1963–64. Of the total forest land cleared, 54.4 percent was in the east, 29.4 percent in the west, and 16.2 percent in the Central Tarai.

The 1963–64 forest data by forest division were based on aerial photographs (scale 1:21,120). The Land Resources Mapping Project data based on aerial photographs (scale 1:50,000) provide another set of estimates on Tarai forest by administrative district (Kenting Earth Sciences 1986b). Although the areal extent of the two data sources varies by 3.7 percent, comparison of land-use proportions within each forest division indicates further depletion in forest area. Compared to 51.1 percent of the Tarai area under forest in 1963–64, forest area declined to 43.7 percent in 1978–79 (Table 40). During the 15-year interval, forest area declined from 40.5 percent to 28.1 in the east and from 72 percent to 67.5 in the west. In the Central Tarai, it declined from 48.8 percent to 44.7. In 1963–64 the east led with 42.9

Table 39. Linguistic dispersal by geographic region (1952/54 and 1981) and growth rate (1952/54–1981)

Mother tongue	Native area	In native area		Outside native area								Average annual growth rate (%)
				Mountain-Hill		Kathmandu Valley		Inner Tarai		Tarai		
		1952/54	1981	1952/54	1981	1952/54	1981	1952/54	1981	1952/54	1981	1952/54–1981
Mountain/Hill												
Indo-Aryan												
Nepali	West/Central Hill	66.1	46.9	21.8	18.6	4.0	4.7	5.7	8.2	2.3	21.6	4.23
Tibeto-Burman												
Tamang	Eastern Hill	48.5	39.3	22.7	20.1	3.9	6.6	21.6	19.9	3.3	14.1	0.20
Newari	Kathmandu Valley	58.9	60.3	34.1	22.5	58.9	60.3	4.2	5.8	2.8	11.4	0.61
Rai-Kiranti	Eastern Hill	93.7	59.4	0.0	12.7	0.0	1.8	5.1	10.5	1.2	16.4	-0.28
Magari	Central Hill	66.3	50.4	18.6	12.3	0.3	0.5	9.8	14.6	5.0	22.4	-0.80
Gurung	Central Hill	92.2	76.4	5.6	4.7	0.3	1.9	1.6	5.7	0.3	11.3	0.27
Limbu	Eastern Hill	99.6	80.7	0.0	0.2	0.0	0.2	0.0	0.4	0.3	18.5	-0.40
Bhote-Sherpa	Eastern Mountain	74.5	46.9	25.1	35.4	0.4	2.6		1.7		7.8	0.18
Sunuwar	Eastern Hill	94.0	70.8		4.8	0.0	0.5		1.7		7.4	-1.37

Tarai												
Indo-Aryan												
Maithali	Eastern Tarai	99.8	94.0	0.0	4.2	0.0	0.5	0.2	1.3	0.0	1.1	2.24
Bhojpuri	Eastern Tarai	99.9	68.7	0.0	0.8	0.0	0.1	0.0	0.1	30.3	4.98	
Tharu	Western Tarai	41.7	42.9	7.7	0.7	0.0	0.0	24.8	23.2	25.8	33.1	1.85
Awadhi	Central Tarai	78.6	73.0	0.1	0.4		0.1	1.5	0.2	19.9	26.3	-1.02
Rajbansi	Eastern Tarai	99.9	93.6		3.0		1.4		0.4	0.0	1.5	2.40
Munda												
Satar	Eastern Tarai	99.9	96.8		2.1		0.7	0.0	0.3		0.4	1.21
Santhal	Eastern Tarai	100.0	77.9		17.5		0.5		3.1		1.0	37.03

Source: Nepal, DOS (1957: vol. I, pt. II, table 9); Nepal, CBS (1984: vol. I, pt. III. table 12).

Note: See Map 6.

Table 40. Change in proportion of land use in the Tarai: 1963–64 and 1978–79

Land use	1963–64[a]		1978–79[b]	
	Hectares	%	Hectares	%
West	878,016	100.0	928,004	100.0
Forest land	631,800	72.0	626,037	67.5
Cropland/agricultural	112,845	12.8	249,062	26.8
Other	133,371	15.2	52,905	5.7
Central	492,006	100.0	518,631	100.0
Forest land	240,293	48.8	232,070	44.7
Cropland/agricultural	211,323	43.0	261,903	50.4
Other	40,390	8.2	24,658	4.8
East	1,617,452	100.0	1,443,349	100.0
Forest land	654,298	40.5	404,883	28.1
Cropland/agricultural	826,028	51.1	927,392	64.3
Other	137,126	8.5	111,074	7.7
Total	2,987,474	100.0	2,889,984	100.0
Forest land	1,526,391	51.1	1,262,990	43.7
Cropland/agricultural	1,150,196	38.5	1,438,357	49.8
Other	310,887	10.4	188,637	6.5

a. From Nepal, FRS (1967:17).

b. From Kenting Earth Sciences (1986a: app. 5).

percent of the Tarai forest. By 1978–79, its share had fallen to 32 percent. Nearly half of all Tarai forest area left in 1978–79 was in the west.

The depletion in forest area was associated with expansion of cultivated area. During 1963–64 to 1978–79, the proportion of cropland in the Tarai increased from 38.5 percent to 49.8 (Table 40). In 1963–64, the Tarai forest divisions included 1,150,196 hectares of cultivated land. The percentage of such land was 51.1 in the east, 43.0 in the Central Tarai, and 12.8 in the west. By 1978–79, the proportion of cultivated land increased in all regions, particularly in the west, from 12.8 percent to 26.8 percent of its regional area. It increased from 43 to 50.4 percent in the Central Tarai and from 51.1 to 64.3 percent in the Eastern Tarai.

Changes in forest area (1963–64 to 1974–75) and their regional proportion (1963–64 to 1978–79) show a greater extent of deforestation from west to east. The Eastern Tarai had the largest magnitude of population increase and greatest loss in forest land. The number of additional persons per hectare of forest land lost was 8.6 in the east, 8.4 in the Central Tarai, and 2.5 in the west. The number of additional migrants per hectare of forest cleared was the same in all regions, however. The Tarai experienced a 38.2 percent increase in population and a 233.6 percent increase in net migration during 1961–71 (Table 41) compared to a 10.2 percent decrease in forest land

Table 41. Depletion of forest land and population increase in the Tarai

A. Depletion of forest land: 1963–64 to 1974–75

Region	1963–64[a]		1974–75[b]		Decrease	
	Hectares	%	Hectares	%	Hectares	%
West	631,800	41.4	585,923	42.8	45,877	7.3
Central	240,293	15.7	214,936	15.7	25,357	10.6
East	654,298	42.9	569,334	41.5	84,964	13.0
Total	1,526,391	100.0	1,370,193	100.0	156,198	10.2

a. From Nepal, FRS (1967:17).

b. From Forest Dept. Land Use Survey, 1974/75; cited in Asian Development Bank (1982: vol. II, app. 2.26).

B. Increase in population and net migration: 1961–71

Region	1961		1971		Change	
	Number	%	Number	%	Number	%
Population[a]	2,903,014	100.0	4,012,385	100.0	1,109,371	38.2
West	271,551	9.4	438,041	10.9	166,490	61.3
Central	418,181	14.4	632,401	15.8	214,220	51.2
East	2,213,282	76.2	2,941,943	73.3	728,661	32.9
Net migration[b]	119,895	100.0	399,925	100.0	280,030	233.6
West	20,625	17.2	69,146	17.3	48,521	235.3
Central[c]	31,088	25.9	155,247	38.8	124,159	399.4
East	68,182	56.9	175,532	43.9	107,350	157.4

a. See Appendix Table 1.

b. See Tables 15 and 16.

c. For valid comparison, net migration in Central Tarai for 1961 includes Inner Central Tarai. Net migration in Central Tarai for 1971 also includes Parsa, Bara, and Rautahat districts, which were in Eastern Tarai in 1961.

during 1963–64 to 1974–75. Roughly speaking, an increase of 1.8 persons in net migration means the depletion of 1 hectare of forest land.

The estimates of area under various crops provide another indication of expansion in cultivated area. It is to be noted, however, that the cultivated area and cropped area vary due to double and multiple cropping.[14] During the decade 1970–71 to 1980–81, Nepal's total area under various crops is estimated to have increased by 14.6 percent (Nepal, FAM, 1972, 1983).

14. During 1980–81, for example, the Tarai had 1,401,426 hectares as cultivated area (Nepal, CBS, 1985b:19) and 1,570,800 hectares under various crops (Nepal, FAM, 1983)—thus yielding an excess of 14 percent in gross cropped area to cultivated area.

Of this increase, 236,600 hectares or 74.8 percent was registered in the lowlands. The Tarai had a 14.3 percent and the Inner Tarai a 25.1 percent increase in cropland (Table 42). The Eastern Tarai registered a 13 percent decrease in forest land during 1963–64 to 1974–75 and a cropland increase of the same extent during 1970–71 to 1980–81. In the Central Tarai the percentage of increase in cropland was twice the percentage of depletion in forest land.

During the decade 1970–71 to 1980–81, the lowlands had 236,220 hectares or a 16 percent increase in cropland as against a population increase of 2,532,593 or 51.5 percent (Table 42)—that is, an increase of 11 persons for each additional cropped hectare. Population increase vis-à-vis cropland increase was high in Western Tarai (16 persons/hectare) and low in Central Tarai (7 persons/hectare). The total volume of net migration to the Tarai recorded in the 1981 census was 686,178—an increase of 3.8 more migrants on each additional hectare of land. In other words, the Tarai regions are the prime destination of most migrants and have therefore experienced a rapid change in land use. Essentially the process involves converting forest and other land into cropland.

The Making of a Dynamic Region

Nepal has been experiencing a large-scale redistribution of population through spontaneous migration. Two-thirds of the interregional migrants and most immigrants were directed to the lowlands, which experienced a rapid population growth of 2.5 times in less than three decades. Despite the predominance of rural-to-rural migration, urban growth was high as well. The average annual rate of urban population growth in the lowlands was 7.8 percent compared to 3.5 percent in the highlands. Overall the lowlands had an average annual growth rate twice that of the highlands. Levels of development, too, are higher in the lowland regions (Table 43). In economic development (agriculture, industry, transport, banking), the Tarai led all other elevation zones. Among geographic regions, Kathmandu ranked first and Central Inner Tarai second. Most lowland regions except Eastern Inner Tarai had a higher economic development level than the highland regions except Kathmandu Valley. In sociocultural development (education, health, communication), the Tarai and Inner Tarai ranked higher than the Hill and Mountain zones. Kathmandu Valley ranked highest in sociocultural development; Eastern and Central Inner Tarai and the Central Hill region came next; the Western Mountain and Hill regions had very low levels of sociocultural development.

Kathmandu Valley, Central Inner Tarai, and all three Tarai regions ranked high in regional development. Of the 18 Tarai districts, 17 had regional development values higher than the national average (Shrestha and Sharma 1980:140–45). In the Inner Tarai, three districts were above and three were below the national level. In the Hill region, 10 districts had higher and 23

Table 42. Change in area under crops and population increase in the Inner Tarai and Tarai: 1971–81

Region	1970-71		1980-81		Change		Population increase (1971-81)	
	1,000 ha.	%	1,000 ha.	%	1,000 ha.	%	Persons	%
Inner Tarai	232,080	15.7	290,220	16.9	58,140	25.1	370,197	40.7
West	75,900	5.1	120,230	7.0	44,330	58.4	141,292	48.5
Central	107,600	7.3	111,870	6.5	4,270	4.0	149,675	42.4
East	48,580	3.3	58,120	3.4	9,540	19.6	79,230	30.0
Tarai	1,245,360	84.3	1,423,840	83.1	178,480	14.3	2,018,479	50.3
West	199,800	13.5	223,690	13.1	23,890	12.0	393,202	89.8
Central	236,250	16.0	285,620	16.7	49,370	20.9	325,568	51.5
East	809,310	54.8	914,530	53.4	105,220	13.0	1,299,709	44.2
Total	1,477,440	100.0	1,714,060	100.0	236,620	16.0	2,388,676	48.5

Source: Nepal, FAM (1983:97-246).

Note: See Appendix Table 2.

ha.—hectares

Table 43. Levels of development by geographic region: 1977

Region	Economic		Sociocultural		Regional	
	Value	Rank	Value	Rank	Value	Rank
Mountain	362.9	D	552.6	D	915.5	D
West	247.6	13	467.1	13	714.8	12
Central	458.3	11	707.2	7	1,165.3	10
East	521.8	9	607.8	11	1,129.5	11
Hill	568.0	C	704.3	C	1,272.3	C
West	368.8	12	497.3	12	865.6	13
Central	683.0	7	818.9	4	1,502.1	6
Kathmandu Valley	1,154.7	1	1,172.7	1	2,327.5	1
East	618.0	8	762.3	5	1,380.3	8
Inner Tarai	781.3	B	733.8	B	1,515.1	B
West	776.3	6	643.0	10	1,419.3	7
Central	1,065.3	2	863.0	3	1,928.3	2
East	502.3	10	695.5	8	1,197.8	9
Tarai	1,010.3	A	803.3	A	1,812.9	A
West	948.6	5	718.8	6	1,666.5	5
Central	1,038.5	3	685.7	9	1,724.2	4
East	1,025.1	4	866.2	2	1,890.4	3

Source: Shrestha and Sharma (1980:140–45).

lower values. Of the 15 Mountain districts, only two had values higher than the national average. Thus 20 of the 24 lowland districts had levels of development higher than the national average. The aggregate values of development for the Tarai and Inner Tarai were much higher than those of Mountain and Hill districts. Kathmandu Valley appeared as an island of high-level development in the generally backward highland area. In macroregional terms, one could say that the higher the elevation of a geographic region, the lower the level of regional development.

Development indicators of recent years show the comparative advantage of the Tarai regions. In terms of the road length/area ratio, for example, the Tarai leads with 11.0 followed by the Hill region with 22.9; the road length/area ratio for the Mountain region is 245.8 (Nepal, NPC, 1987:22–23). Three mountain regions (Midwest, West, and East) have no road (Table 44). All five Tarai regions rank high in road length/area ratio. An exception to this pattern of underdevelopment in the hills is the Central Hill region (including Kathmandu Valley), which ranks second. The physical quality of life index (calculated on the basis of average life expectancy at birth, infant mortality, and literacy rate) also places three Tarai regions at the top followed by two Hill regions. The Far Western and Midwestern regions in the

Table 44. Rank order of census regions by selected indicators

Region	Road mileage (1985)	Physical quality of life	Development expenditure (1985–86)	Estimated GDP (1984–85)	Level of development (based on 25 variables)
Mountain					
Far West	12	14	12	13	14
Midwest	15	14	14	15	
West	11	15	15	9	
Central	10	10	11	12	13
East	9	13	11	12	
Hill					
Far West	9	12	10	10	10
Midwest	11	13	8	9	11
West	7	7	3	5	6
Central[a]	2	5	1	2	1
East	8	4	7	7	8
Tarai					
Far West	6	6	9	8	7
Midwest	5	8	6	6	5
West	3	2	5	4	3
Central	4	3	2	1	4
East	1	1	4	3	2

Source: Nepal, NPC (1987).

a. Including Kathmandu Valley.

Mountain and Hill zones rank very low in physical quality of life (Nepal, NPC, 1987:32–34). Of the total development expenditure of Rs. 3,297 million during fiscal year 1985–86, the Hill region claimed 59.8 percent as against 33.9 percent for the Tarai and 6.2 percent for the Mountain (Nepal, NPC, 1987:14–15). Central Hill (including the capital region) ranked first in development expenditure followed by Central Tarai. But most Tarai regions were placed higher than other Hill and Mountain regions except Western Hill (Table 44). The five Mountain regions ranked very low in development expenditure.

The total estimated GDP of Nepal was valued at Rs. 4,174 million at 1984–85 current prices; of this amount, 56.5 percent was contributed by the Tarai regions. The share of Hill regions was 39.2 percent and that of Mountain regions only 4.3 percent (Nepal, NPC, 1987:11–12). Central Tarai ranked first and Central Hill second; Eastern and Western Tarai ranked third and fourth in GDP contribution. The level of development based on 25 varia-

bles placed Central Hill (including the capital region) in the first rank. The next four places were taken by Tarai regions (Nepal, NPC, 1987:35–39). The last four in level of development were Mountain regions (Table 44). As a general pattern, the Tarai regions had a comparatively higher level of development except for Central Hill, which includes the capital region.

The lowlands with its concentration of infrastructural and production factors has emerged as a dominant region of demographic and economic transformation. Once it was a region associated with large estates of absentee landlords; today, however, increasing numbers of landless households encroaching and squatting on forest and common land have generated political tension (Kaplan and Shrestha 1982). The problem of squatters, a new expression of increasing poverty and economic inequality, is basically the outcome of increasing migration from the resource-poor highlands. Interregional migrants are directed to the lowlands for agricultural settlement. The lowlands, particularly the Tarai, is also the prime destination of immigrants. Unlike internal migrants, the immigrants are moving to lowland areas that were settled earlier and to urban areas. The dynamism of the lowlands economy has attracted immigrants, many of whom intend to stay permanently (Nepal, TFM, 1983). With a few exceptions, Tarai districts with a high percentage of foreign-born and foreign citizens have a comparatively low percentage of internal migrants. Thus interregional migrants and immigrants are moving into different ecological niches: the former to frontier lands and the latter to settled areas and generally in secondary and tertiary occupations.

The traditional Nepalese term for the Inner Tarai and the Tarai lowlands is *madhesh*—a geographical extension of the *madhya-desha* (heartland) referring to the Gangetic plain. Until the late 1950s, the prevalence of endemic malaria made it a peripheral region. In the last three decades, however, large-scale migration and development activities have transformed it. Indeed, recent demographic and economic processes have all the potential of transforming the lowlands into a dynamic region.

POLICY IMPLICATIONS

Pattern and Determinant

Nepal has been experiencing rapid population growth in recent years. In less than three decades (1952/54–1981), the total population increased from 8.5 to 15 million. Projections of population for the year 2001 range from 21 to 26 million under low and high variants respectively—an increase of 1.4 to 1.7 times in another two decades (Nepal, CBS, 1986b). Another significant feature is the increasing magnitude of population redistribution through migration. During the period 1952/54–1981, the increase in total population was 1.8 times as against a 2.7 times increase in absentee population (reported away from home for six months or more). The increase

in the number of such absentees was 10 times for those inside the country compared to two times for those outside the country, indicating increasing internal mobility. The last two decades (1961–81) recorded a 6.7-times increase in out-migrants from the highlands and a 5.6-times increase in in-migrants to the lowlands. The principal migration trajectory was from the hills to contiguous Tarai regions. Given the fertility, mortality, and migration trend of the last intercensal period (1971–81), the total population of the Tarai is projected to exceed 10 million (low variant) to 13 million (high variant) by the year 2001 from the present 6.6 million (Nepal, CBS, 1986b: table 50). This increment needs to be directed in a planned manner.

The principal reason for out-migration, particularly from the hills, has been increasing pressure of population on limited land resources. Considering the sizable volume of emigration in the last century, population pressure in the Nepal hills is not a new phenomenon. In the past, despite the government's inducements to settle in the lowlands, out-migration was primarily directed outside the country to new frontier lands in the eastern Himalaya and for military service in India. Since the late 1950s, however, there has been a major shift in the migrants' destination. The increase in number of absentees abroad during 1952/54–1961 was 65.8 percent; in the following two decades (1961–81), it increased by only 22.7 percent. Absentees abroad as a percentage of total absentees declined from 84.9 in 1961 to 68.2 in 1981. That only 3.5 percent of the total absentees abroad were there for agricultural reasons indicates the limited scope of land colonization outside the country.

The main reason for the shift of migratory trajectory with the Tarai and Inner Tarai as new destinations was the control of malaria, which led to the transformation of the lowlands from a marginal region to a viable settlement area. The opening of the lowlands through malaria eradication and resettlement programs since the mid-1950s has provided a new frontier for large-scale rural-to-rural migration within the country (Nepal, NCP, 1984). To the increasing number of land-hungry peasants from the overpopulated highlands, the virgin forest and grassland of the lowlands has become a new resource for conversion to farmland. That most interregional migrants as well as in-migrants to the lowlands moved for agricultural reasons is clear evidence that land availability is the primary motive for internal migration. Moreover, the concentration of infrastructural and other developmental activities in the lowlands has provided new opportunities for further in-migration.

The lowlands has now emerged as the area of migrant convergence from both within and outside the country. The impelling forces have, however, a subtle distinction. The influx of internal migrants to the Tarai and Inner Tarai is basically a man/resource adjustment with cultivated land as the resource base. On the other hand, immigration represents both a population movement from a high-density to a low-density area and new economic

opportunities across the open border. Established migration streams of internal migration as well as immigrants to the lowlands indicate further increases in their number with serious implications for the country's demographic, developmental, and political future.

Population Redistribution

Economic development plans, even without spatial considerations, may induce population distribution with major consequences (Mabogunje 1981). This is what happened in the case of Nepal. The earlier periodic plans had no explicit policies regarding regional development and population redistribution. The initiation of development planning in 1956, in fact, coincided with the opening of the Central Inner Tarai for resettlement with malaria control. The main objective of the program was rehabilitation of the hill population adversely affected by natural disasters. This was followed by extension of malaria eradication and resettlement programs to cover other lowland areas in the subsequent plans for agricultural development through cropland expansion. This in turn led to expansion of cultivated area at the cost of forest land and also resulted in a sizable redistribution of the population.

A comprehensive population policy was first formulated in the Fifth Plan (1975–80). Of the five stated policy instruments, one dealt with fertility control and the remaining four focused on population redistribution (Nepal, NPC, 1975:42): regulation of internal migration, population shift to the low-density Tarai (particularly to Western Tarai), deliberate urbanization in backward regions, and immigration control (Table 45). However, the plan did not include any concrete programs to support these policies except in resettlement. Even in the case of the resettlement program, targets were modest compared to the volume of spontaneous migrants that overwhelmed government efforts. And the efforts to settle land and resettle families fell rather short of the target—42 percent in the first case and 62 percent in the second.

The Sixth Plan (1980–85) included seven policy measures with reference to population, but only one of these dealt with redistribution (Nepal, NPC, 1980:716). It referred to regulation of internal migration and development of small towns (Table 45), but again there was a lack of implementation programs. Despite increasing illegal encroachment in lowland forests, targets for resettlement were considerably reduced and the achievement in land settled was 62.2 percent and families resettled 82.2 percent. Subsequently, a national population strategy with five major thrusts was formulated; four measures were related to mechanisms of fertility control and one to immigration control (Nepal, NCP, 1983a:4). The references to comprehensive migration and urbanization policies were not supported with specific programs.

Table 45. Regional development and population redistribution policies in recent plans

Fifth Plan (1975-80)	Sixth Plan (1980-85)	Seventh Plan (1985-90)
I. Regional development		
1. Product specialization by elevation zone	1. Product specialization by elevation zone	1. Reduction of regional disparity
2. Intensification of activities along major roads	2. Intensification of activities along major roads	2. Rationalization of regional resource allocation
3. Growth center and area development	3. Development of small towns	3. Development of growth and service centers
	4. Integrated rural development	4. Integrated rural development
II. Population redistribution		
1. Regulate migration from the Hill to the Tarai and from rural to urban areas	1. Regulate migration from the Hill to the Tarai	1. Immigration control
2. Increase density of population in the Tarai, particularly in Western Tarai	2. Encourage urbanization	
3. Encourage urbanization in backward regions		
4. Immigration control		
III. Resettlement target		
1. Land: 93,016 hectares	1. Land: 35,586 hectares	
2. Families: 64,300	2. Families: 32,180	
IV. Resettlement policy		
		1. No provision for land-based resettlement except completion of program on 13,442 hectares as carryover from the Sixth Plan

Source: Nepal, NPC (1975:28-43); Nepal, NPC (1980:182-92, 714-16); Nepal, NPC (1985: 143-55, 229-37).

The Seventh Plan (1985–90) evidences the traditional pattern of adopting policy goals that are "currently fashionable" (Fuchs 1983:22). The plan has adopted the five major strategic thrusts enunciated by the National Commission on Population as the basic population policy with no consideration given to spatial distribution of population (Nepal, NPC, 1985:153). Furthermore, the plan has no provision for land-based settlement (Table 45). The rationale given for this new policy is conservation of existing forest areas to maintain ecological balance (Nepal, NPC, 1985:488–89). Thus the current policies on population in Nepal emphasize fertility control and neglect the distribution aspect. Even where there have been policy pronouncements regarding population redistribution (as in the Fifth Plan), there has been a singular lack of concrete programs and instruments. A comprehensive population policy must encompass migration along with fertility and mortality. In a country with immense regional diversity (both natural and developmental), population redistribution through migration has even more relevance.

Spatial Development

Population redistribution programs are often a subsidiary component of general spatial programs dealing with modernization and economic development (United Nations 1981). Thus the goals of development strategy in a country ultimately determine the spatial distribution of the population and changes in that distribution (Simmons 1983:30). In the case of Nepal, the first attempt to visualize national development in spatial terms was made in the Fourth Plan (Nepal, NPC, 1970: app. III). It proposed concentration of development activities along four north–south growth axes with roads in order to integrate the economies of the highlands and lowlands (Gurung 1969, 1984a:246–56). However, the various sectoral programs included in the plan were not tied to this spatial development strategy.

Subsequent periodic plans (Nepal, NPC, 1975:28–33; Nepal, NPC, 1980:182–92, Nepal, NPC, 1985:229–37) all included policy statements on regional development. These may be listed as specialization according to elevation zone (cereal production in the Tarai, horticulture in the Hill region, livestock raising in the Mountain region), developmental intensification along major roads, development of growth and service centers, and integrated rural development (Table 45). But as in the case of population policy, regional development policies within national development plans were not integrated with programs and projects. Thus, with the exception of integrated rural development (IRD) projects, based on external assistance, there were no specific implementation programs to support the policies adopted. The process of resource allocation persisted among the traditional activity sectors (agriculture and forest, transport and communication, industry and power, and social services) despite the policy goal of reducing disparity among the regions.

The increasing volume of out-migration from the highlands suggests the continuing morbidity of the highland economy despite three decades of development effort. Integrated rural development projects (covering 18 highland and 5 lowland districts) were designed to provide coordinated provision of infrastructure and service in rural areas and reduce rural-to-urban migration. The available document on IRD projects (Pradhan 1985), however, is only a comparative progress review of programs rather than an impact evaluation. Even in the case of specific IRD projects for which some evaluation data are available, the rate of net migration was unaffected (Banskota 1984:118–20).

Spatial planning is a long-term strategy that is closely linked with infrastructure development. In Nepal, the pattern of arterial routes has changed considerably over the last two decades. The series of north–south roads has now been superseded by the east–west highway (Mahendra Rajmarg). In spatial planning terms, the east–west highway should be the spine of national development with the connecting north–south roads as its lateral extension. Concentration of development activities along the east–west highway will also help to resolve the conflict in resource allocation between the Hill and Tarai regions. Since the highway traverses parts of the Tarai and Inner Tarai with sparse population and extensive forest land, the convergence of population from the highlands and lowlands there through planned migration would contribute to economic and social integration.

Recognition of the east–west highway as the pivotal axis of national development will also entail reconsideration of other policy areas such as land use, resettlement, and urbanization. The forests in the lowlands have a bleak future because of their increasing accessibility and the immense population pressure evidenced by large-scale encroachment (Kaplan and Shrestha 1982). Conservation of forests for environmental purposes would be more meaningful in the highlands with its steep, erosion-prone slopes. Therefore lowland forest areas with agricultural potential need to be resettled in order to ensure optimum utilization of the limited land resource. Such a land-use policy would yield considerable land for resettlement and agricultural expansion, particularly in Western Tarai (Appendix Table 3). Again, selected points where the east–west highway intersects with north–south roads would be the most appropriate sites for urban development. Locating administrative, commercial, and industrial activities at these major road junctions would maximize benefits from the significant investment in infrastructure and create new employment opportunities.

Political Dimension

The volume of internal migration indicates the extent of regional economic disparity; if properly channeled, it can be an effective mechanism for adjusting population and resources as well as affecting national integration. In contrast, international migration involving unrestricted emigration and immigration, as in the case of Nepal, can be detrimental to the national

interest (Weiner 1985). While emigration weakens the state's leverage for an independent policy on immigration control, large-scale immigration renders the government's protectionist policies in labor and employment ineffective.

The Tarai, the prime destination of immigrants, has been an area of controversy over citizenship (Gaige 1975:82–107). Indeed, there has been increasing pressure for citizenship in recent years. Of the total 1.5 million citizenship certificates distributed during 1972–82, the Tarai districts claimed 63.2 percent. In terms of the total population in 1981, those receiving citizenship certificates constituted 10 percent. In terms of the 1981 population by region, those receiving citizenship certificates for the Tarai constituted 15.7 percent and those for the Hill and Mountain regions 5.5 percent each. It is significant that 94.4 percent of those acquiring Nepalese citizenship in the Tarai did so on the basis of descent. A survey of 5,651 households in 10 Tarai districts indicated that of the total sampled household heads, 6.9 percent were immigrants (Nepal, TFM, 1983). Of all immigrant household heads, 94.3 percent were from India; of these, 42.3 percent had acquired Nepalese citizenship.

Another dimension to the politics of citizenship is the deteriorating situation of emigrants from Nepal to India. The armed conflict for "Gorkha land" by Nepali-language speakers in the hill areas (Darjeeling and Kalimpong) of West Bengal since 1986 and the recent wholesale expulsion of settlers of Nepalese origin from Assam and Meghalaya have generated a stream of return migrants into Nepal. Recent events in north-eastern India also prove that nativist policies which are weak in immigration control but restrictive in naturalization have all the makings of a larger sociopolitical conflict. The main cause of Indo-Nepal migration is the unrestricted entry and exit rules between the two countries. Illegal trade associated with the free movement of people across the border has been a matter of concern for both countries. Similarly, policies and programs aimed at restricting Nepal's population problem and the planning of population redistribution will have limited impact until the Indo-Nepal border is regulated in terms of human movement.

APPENDIX TABLES

Appendix Table 1. Change in population by geographic region: 1952/54–1981

Geographic region	1952/54[a]		1961		Change 1952/54–61		1971[b]	
	Number	%	Number	%	Number	%	Number	%
Mountain and Hill	5,356,873	64.9	5,991,297	63.6	634,424	11.8	6,634,714	57.4
West	1,483,946[c]	18.0	1,698,083[d]	18.0	214,137	14.4	1,735,004	15.0
Central	1,753,116	21.2	1,946,502	20.7	193,386	11.0	2,224,290	19.2
Kathmandu Valley	410,995	5.0	459,990	4.9	48,995	11.9	607,377	5.3
East	1,708,816	20.7	1,886,722	20.0	177,906	10.4	2,068,043	17.9
Inner Tarai	493,936	6.0	518,685	5.5	24,749	5.0	908,884	7.9
West	123,150[e]	1.5	98,607[f]	1.0	nc		291,297	2.5
Central	181,558	2.2	226,412[g]	2.4	44,854	24.7	353,307	3.1
East	189,228	2.3	193,666	2.1	4,438	2.3	264,280	2.3
Tarai	2,405,816	29.1	2,903,014	30.8	497,198	20.7	4,012,385	34.7
West	235,189	2.8	271,551	2.9	36,362	15.5	438,041	3.8
Central	364,578	4.4	418,181[h]	4.4	53,603	14.7	632,401	5.5
East	1,806,049	21.9	2,213,282	23.5	407,233	22.5	2,941,943	25.4
Nepal	8,256,625	100.0	9,412,996	100.0	1,156,371	14.0	11,555,983	100.0

Sources: Nepal, DOS (1957); Nepal, CBS (1967, 1975, 1984).

Note: See Figure 2.

nc—not comparable.

a. Population present. The 1952/54 census does not give population present for Surkhet (total population 34,939). Population present of six districts for 1952/54 census was revised in 1961 census.

b. District boundaries adjusted according to the changes in 1975.

c. Including Charkabhot subunit of Baglung, now named Dolpo.

Appendix Table 1 *(continued)*

Geographic region	Change 1961-71		1981		Change 1971-81		Change 1952/54-1981	
	Number	%	Number	%	Number	%	Number	%
Mountain and Hill	643,417	10.7	7,712,894	51.3	1,078,180	16.3	2,356,021	44.0
West	36,921	2.2	2,011,868	13.4	276,864	16.0	527,922	35.6
Central	277,788	14.3	2,647,508	17.6	423,218	19.0	894,392	51.0
Kathmandu Valley	147,387	32.0	766,345	5.1	158,968	26.2	355,350	86.5
East	181,321	9.6	2,287,173	15.2	219,130	10.6	578,357	33.8
Inner Tarai	390,199	75.2	1,279,081	8.5	370,197	40.7	785,145	159.0
West	nc		432,589	2.9	141,292	48.5	309,439	251.3
Central	126,895	56.0	502,982	3.3	149,675	42.4	321,424	177.0
East	70,614	36.5	343,510	2.3	79,230	30.0	154,282	81.5
Tarai	1,109,371	38.2	6,030,864	40.1	2,018,479	50.3	3,625,048	150.7
West	166,490	61.3	831,243	5.5	393,202	89.8	596,054	253.4
Central	214,220	51.2	957,969	6.4	325,568	51.5	593,391	162.8
East	728,661	32.9	4,241,652	28.2	1,299,709	44.2	2,435,603	134.9
Nepal	2,142,987	22.8	15,022,839	100.0	3,466,856	30.0	6,766,214	81.9

d. Including Surkhet aggregated with Dailekh.

e. Including Surkhet.

f. Dang only, excluding Surkhet.

g. Excluding Nawalpur.

h. Including Nawalpur.

Appendix Table 2. Area, population, growth rate and density by district: 1981

Region/district	Area[a] (km²)	Population[b] 1971	Population[b] 1981	Annual growth rate, 1971-81 (%)	Density 1981 (persons/km²)
Mountain	49,275	955,980	1,070,570	1.14	21.7
West	29,283	452,050	531,363	1.67	18.1
Darchula	2,322	75,077	90,218	1.85	38.9
Bajhang	3,422	108,590	124,010	1.34	36.2
Bajura	2,188	61,323	74,649	1.99	34.1
Humla	5,655	26,750	20,303	-2.72	3.6
Mugu	3,535	28,476	43,705	4.37	12.4
Kalikot	1,741	73,110	87,638	1.83	50.3
Jumla	2,531	59,620	68,797	1.44	27.2
Dolpo	7,889	19,104	22,043	1.44	2.8
Central	7,363	56,606	50,192	-1.20	6.8
Mustang	3,573	13,567	12,930	-0.48	3.6
Manang	2,246	7,434	7,021	-0.57	3.1
Rasuwa	1,544	35,605	30,241	-1.62	19.6
East	12,629	447,324	489,015	0.90	38.7
Dolakha	2,192	133,861	150,576	1.18	68.7
Solu-Khumbu	3,481	81,547	88,245	0.79	25.4
Sankhuwa Sabha	3,646	118,928	129,414	0.85	35.5
Taplejung	3,312	112,988	120,780	0.67	36.5
Hill	54,456	5,678,734	6,642,324	1.43	122.0
West	18,021	1,282,954	1,480,505	1.44	82.2
Dadeldhura	1,538	60,517	86,853	3.68	56.5
Baitadi	1,519	156,608	179,136	1.35	117.9
Doti	2,025	127,460	153,135	1.85	75.6
Achham	1,680	163,547	185,212	1.25	110.2
Dailekh	1,502	150,351	166,527	1.03	110.9
Jajarkot	2,230	86,538	99,312	1.39	44.5
Salyan	1,462	105,210	132,432	2.33	90.6
Rukum	2,877	123,490	152,063	2.10	52.9
Rolpa	1,879	162,906	168,166	0.32	89.5
Pyuthan	1,309	146,327	157,669	0.75	120.4
Central	21,366	2,167,684	2,597,316	1.82	121.6
Myagdi	2,297	83,917	96,904	1.45	42.2
Baglung	1,784	164,100	215,228	2.75	120.6
Parbat	494	114,454	128,400	1.16	259.9
Gulmi	1,149	220,874	238,113	0.75	207.2
Argha Khanchi	1,193	130,174	157,304	1.91	131.9

Appendix Table 2 *(continued)*

Region/district	Area[a] (km²)	Population[b] 1971	Population[b] 1981	Annual growth rate, 1971–81 (%)	Density 1981 (persons/km²)
Palpa	1,373	178,868	214,442	1.83	156.2
Syangja	1,164	249,513	271,824	0.86	233.5
Kaski	2,017	164,540	221,272	3.01	109.7
Tanahun	1,546	166,806	223,438	2.97	144.5
Lamjung	1,692	125,451	152,720	1.98	90.3
Gorkha	3,610	188,164	231,294	2.09	64.1
Dhading	1,926	213,016	243,401	1.34	126.4
Nuwakot	1,121	167,807	202,976	1.92	181.1
Kathmandu Valley	899	607,377	766,345	2.35	852.4
Kathmandu	395	342,302	422,237	2.12	1,069.0
Lalitpur	385	142,792	184,341	2.59	478.8
Bhaktapur	119	122,283	159,767	2.71	1,342.6
East	14,170	1,620,719	1,798,158	1.04	126.9
Sindhu-palchok	2,542	208,534	232,326	1.09	91.4
Kabhre-palanchok	1,396	242,754	307,150	2.38	222.0
Ramechhap	1,546	155,172	161,445	0.40	104.4
Okhaldhunga	1,074	123,887	137,640	1.06	128.2
Khotang	1,591	200,023	212,571	0.61	133.6
Bhojpur	1,507	177,833	192,689	0.80	127.9
Dhankuta	891	110,395	129,781	1.63	145.6
Terhathum	679	90,972	92,454	0.16	136.2
Panchthar	1,241	145,765	153,746	0.53	123.9
Ilam	1,703	165,384	178,356	0.76	104.7
Inner Tarai	14,604	908,884	1,279,081	3.48	87.6
West	5,406	291,297	432,589	4.03	80.0
Surkhet	2,451	104,790	166,196	4.72	67.8
Dang-Deokhuri	2,955	186,507	266,393	3.63	90.1
Central	4,644	353,307	502,982	3.60	108.3
Chitawan	2,218	183,588	259,571	3.52	117.0
Makwanpur	2,426	169,719	243,411	3.67	100.3
East	4,554	264,280	343,510	2.66	75.4
Sindhuli	2,491	148,954	183,705	2.12	73.7
Udayapur	2,063	115,326	159,805	3.32	77.5
Tarai	28,846	4,012,385	6,030,864	4.16	209.1
West	9,207	438,041	831,243	6.62	90.3
Kanchanpur	1,610	68,842	168,971	9.39	105.0

Appendix Table 2 *(continued)*

Region/district	Area[a] (km²)	Population[b] 1971	Population[b] 1981	Annual growth rate, 1971-81 (%)	Density 1981 (persons/km²)
Kailali	3,235	135,982	257,905	6.61	79.7
Bardiya	2,025	102,741	199,044	6.84	98.3
Banke	2,337	130,476	205,323	4.64	87.9
Central	5,260	632,401	957,969	4.24	182.1
Kapilvastu	1,738	205,154	270,045	2.79	155.4
Rupandehi	1,360	243,272	379,096	4.54	278.7
Nawal Parasi	2,162	183,975	308,828	5.32	142.8
East	14,379	2,941,943	4,241,652	3.73	295.0
Parsa	1,353	202,062	284,338	3.47	210.2
Bara	1,190	233,330	318,957	3.18	268.0
Rautahat	1,126	256,238	332,526	2.64	295.3
Sarlahi	1,259	265,634	398,766	4.15	316.7
Mahotari	1,002	298,346	361,054	1.93	360.3
Dhanusa	1,180	330,501	432,569	2.73	366.6
Siraha	1,188	302,212	375,358	2.19	316.0
Saptari	1,363	292,108	379,055	2.64	278.1
Sunsari	1,257	238,312	344,594	3.76	274.1
Morang	1,855	293,639	534,692	6.18	288.2
Jhapa	1,606	229,561	479,743	7.65	298.7
Nepal	147,181	11,555,983	15,022,839	2.66	102.1

Note: The district population for 1971 has been adjusted according to the boundary changes effected by the second amendment of the Constitution of Nepal in December 1975.

a. Nepal, Survey Department, Topographical Survey Branch.

b. Nepal, CBS (1975, 1984).

Appendix Table 3. Basic land-use categories by geographic region: 1978–79

Region	Agricultural land: Cultivated (ha.)	(%)	Agricultural land: Noncultivated (ha.)	(%)	Grazing land (ha.)	(%)	Forest land (ha.)	(%)	Other land (ha.)	(%)	Total (ha.)	(%)
Mountain	234,363	7.9	126,811	12.8	1,118,061	63 6	1,361,248	21.6	2,097,640	76.8	4,938,123	33.5
West	111,979	3.8	63,281	6.4	743,643	42.3	751,748	11.9	1,276,673	46.8	2,947,324	20.0
Central	11,839	0.4	5,086	0.5	220,734	12.6	89,944	1.4	399,152	14.6	726,755	4.9
East	110,545	3.7	58,444	5.9	153,684	8.7	519,556	8.2	421,815	15.5	1,264,044	8.6
Hill	1,167,979	39.3	628,246	63.7	543,216	30.9	2,680,172	42.5	441,736	16.2	5,461,349	37.0
West	312,250	10.5	166,258	16.8	211,877	12.1	1,024,002	16.2	88,427	3.2	1,802,814	12.2
Central	431,288	14.5	251,998	25.5	255,152	14.5	933,824	14.8	281,154	10.3	2,153,416	14.6
Kathmandu Valley	40,072	1.4	11,872	1.2	479	0.0	36,426	0.6	3,636	0.1	92,485	0.6
East	384,369	13.0	198,118	20.1	75,708	4.3	685,920	10.9	68,519	2.5	1,412,634	9.6
Inner Tarai	266,727	9.0	92,432	9.4	41,162	2.3	1,002,050	15.9	53,392	2.0	1,455,763	9.9
West	104,521	3.5	28,463	2.9	23,303	1.3	375,128	5.9	14,940	0.5	546,355	3.7
Central	87,656	3.0	27,280	2.8	13,553	0.8	309,875	4.9	20,166	0.7	458,530	3.1
East	74,550	2.5	36,689	3.7	4,306	0.2	317,047	5.0	18,286	0.7	450,878	3.1
Tarai	1,298,948	43.8	139,409	14.1	54,906	3.1	1,262,990	20.0	136,816	5.0	2,893,069	19.6
West	218,348	7.4	30,714	3.1	20,107	1.1	626,037	9.9	32,798	1.2	928,004	6.3
Central	238,305	8.0	23,598	2.4	6,244	0.4	232,070	3.7	18,441	0.7	518,658	3.5
East	842,295	28.4	85,097	8.6	28,555	1.6	404,883	6.4	85,577	3.1	1,446,407	9.8
Nepal	2,968,017	100.0	986,898	100.0	1,757,345	100.0	6,306,460	100.0	2,729,584	100.0	14,748,304	100.0
Row %	20.1		6.7		11.9		42.8		18.5		100.0	

Source: Kenting Earth Sciences (1986a: app. 5).

ha.—hectares

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