Report on the Basic Survey of Population and Development in Southeast Asian Countries

– Nepal –

FEBRUARY 1990

The Asian Population and Development Association

THE ASIAN POPULATION AND DEVELOPMENT ASSOCIATION, 1990
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◀ Courtesy call to Embassy of Japan
From right : Ambassador Kazuaki Arichi
Toshio Kuroda, Chief of Survey Team
Yuiko Nishikawa

Courtesy call to Rashtriya Panchayat Fourm on Population and Development
From right : Hon. Tika Jung Thapa
Toshio Kuroda, Chief of Survey Team
Yuiko Nishikawa ▶

◀ At National Commission on Population
From right : M.S. Dhakal, Secretary

◄ At Ramkot Village, Kathmandu District with the survey staff

At Bhaktapur Hospital ►

◄ At Water Supply and Sewerage Corporation

Foreword

This report presents the findings of a basic survey of population and development in the Kingdom of Nepal. In 1989, the Asian Population and Development Association (APDA) was entrusted with the survey project, "Basic Survey of Population and Development in Southeast Asian Countries" by the Ministry of Health and Welfare and Japan International Corporation of Welfare Services. APDA selected Nepal as the country in which its field survey would be conducted. The actual survey and analysis of the resultant findings were conducted by APDA's survey committee (Chairperson, Dr. Toshio Kuroda, Director Emeritus, Population Research Institute, Nihon University).

For effective application of population policies in the Southeast Asia and other countries, population dynamics as population growth, diseases, mortality, reproduction, population distribution and internal migration, as well as static data of the population including family structure and population structure by age must be closely defined. In addition, effects of these factors on living and welfare standards, and medical care must be reviewed.

The objective of this survey was to contribute to resolving the problems related to population and development in Asian nations, by conducting a detailed survey of population dynamics, living and welfare standards and health and medical care and other aspects in the Southeast Asian countries.

The field survey was conducted with the guidance and cooperation of Ambassador Kazuaki Arichi and Mr. Takashi Muromoto, Second Secretary, both of the Embassy of Japan in Nepal, and Hon. Tika Jung Thapa, Chairman of Rashtriya Panchayat Forum on Population and Development. Also, the secretariat of the Government of the Kingdom of Nepal provided assistance and escorts while conducting our survey. In Japan, members of Policy Planning & Evaluation Division, Minister's Secretariat, Ministry of Welfare and Department of Policies, Economic Cooperation Bureau, Ministry of Foreign Affairs, cooperated in the planning and arrangements of the field survey. I would like to express my heart-felt gratitude to all of them.

In conclusion, I sincerely hope that this report would contribute to the further advancement of the population and development program in the Kingdom of Nepal as well as the Japanese Government's effective cooperation with China.

Furthermore, I would like to add that this report is the responsibility of APDA and does not necessarily reflect the views nor policies of the Ministry of Health and Welfare or the Japanese Government.

February, 1990

Tatsuo Tanaka
Chairman
The Asian Population and
Development Association

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Chapter 1

Introduction

Nepal's total land area is 147,000 square kilometers, approximately 40% of Japan's 378,000 square kilometers. Its size is roughly equivalent to that of Hokkaido and Tohoku combined, but its population of 18 million is greater than the 15.4 million found in those two regions of Japan.

Nepal's noteworthy characteristic is that it is one of the poorest, least developed country of all the developing countries in the world. As a result, it is in really initial stage of demographic transition. It is characterized by a high birth rate and a relatively high death rate. The crude birth rate is 40 per mill and the substantially high total fertility rate (TFR) stands at 6.0. The infant mortality rate is also quite high, with approximately 130 deaths per 1,000 live births born. The crude death rate presently stands at 15 per mill. As a result, the average life expectancy is 49.0 years for men, 47.5 years for women, and 48 years for both sexes, roughly the same level found in pre-war Japan. However, one important different factor that should be noticed in this average longevity is that men in Nepal live longer than the women, a fact that runs contrary to the general tendency in the world for women to outlive men. This inconsistent tendency is also observed in Pakistan and Bangladesh, and this signifies that the female social status in these countries is extremely low. The same used to be true of India too, but nowadays this disparity has disappeared and female longevity is becoming somewhat longer. The fact that women have a longer life expectancy is one indicator of socio-economic development.

Nevertheless, there is no reason to argue that Nepal's death rate is not improving. The crude death rate in the 1960s was at a high level of 25, but at present, this figure has declined to 15, indicating that an improvement in the death rate is beginning.

However, in terms of the demographic transition index, which indicates the degree of demographic transition according to the birth rate (current total fertility rate) and the death rate (current average longevity), Nepal (0.31), Pakistan (0.31), and Bangladesh (0.33) are almost at the same low level. These figures, when compared with the figure of 1.0, which represents the completion of demographic transition, show that these countries have only progressed 30% of the way, leaving 70% of the transition process yet to be completed.[1)]

A serious political problem confronting Nepal stems from the fact that its "trade and passage" agreement with India was suspended in March, 1989. Nepal, whose economy is heavily dependent on India, is facing a grave crisis due to extreme shortages of everything from essential consumer goods to petroleum fuel.

The SAARC (South Asian Association for Regional Cooperation), with India at the center, has a worsening relationship not only with Nepal, but also with the other member countries of Pakistan, Bangladesh, and

Sri Lanka. And so it is not functioning at all as an association for regional cooperation. During the time our research group was in the field, virtually not a day passed in which India was not criticized by a local paper, "The Rising Nepal," indicating the antipathy and opposition of the people of Nepal toward India.

In the midst of this national crisis, Nepal's traditional Panchayat spirit has resulted in the impression that they are mobilizing toward a stronger ethnic solidarity..

Nevertheless, in terms of regional development and demographic fields, not only the Japanese government, but also UN organizations such as UNFPA, UNDP, and UNICEF, as well as developed countries including the United States, have been actively providing cooperative aid. It is certain that positive concern and action are beginning in areas including the improvement of demographic statistics, public welfare, health, and hygiene in this least developed country.

Demographic statistics have already achieved a reasonable legal status. In Ramkot village, a rural area which was investigated by our study team, the mayor has an unusual administrative zeal, and during a period extending over 10 years starting from 1977, he has performed an extremely detailed records of birth, death, marriage, and migration registrations based on the Demographic Statistics Act. For births, the number and parity of children according to the age and occupation of both parents have been recorded, and if this data were compiled and analyzed, it would be possible to perform an excellent fertility analysis. However, even in this case, there are only records; not even the simplest data compilation has been attempted. If this interest in vital statistics on the part of a few local autonomous governments were to become a general rule all over the country, it is thought that vital statistics could very well contribute to the formulation of national development policy.

In the field of national health and welfare also, a new attractive system called the CHV (community health volunteer) was recently started. It seems to be similar to the successful "barefoot doctor" system in China. Just how good the results of this program will prove to be is not yet known, since development of the policy based on the new idea will probably take some time.

(The statistical figures listed in this report do not necessarily coincide with those published elsewhere.)

Note

1) The Asian Population and Development Association (APDA). Asian Demographic Transition and Development. Population and Development Series No.10, February, 1989, (p.12, Table 1)

Chapter 2

The Population of Nepal

1. Population Trends

According to the National Commission on Population, the population of Nepal is estimated at 18 million in 1988. The annual inter-censal growth rate between 1971 and 1981 is 2.66%, which is the highest population growth rate ever recorded in Nepal.

Since 1911, a census has been taken in Nepal almost every ten years. Table 1 shows the population in each census and the annual inter-censal growth rate. Censuses taken before 1941, were confined to limited areas and, moreover, the results were presented in aggregate counts of the head of household only. The first scientific census taken in the modern sense of the term started with the 1952/54 census. As shown in Table 1, population is increasing at a fast rate since 1961. The downward population trend between 1911 and 1931 may be attributed to wide spread epidemics and the casualty suffered by Nepalese men serving with the armies, but the main reason is due to the under-enumeration during surveys that was raising with each census taken. The rapid population increase between 1941 and 1952/54 census is attributed to the return of males serving with foreign armies after the World War II, improvement in the management of census-taking and better coverage.

Though the population statistics are not accurate enough to discuss the time series trend of population change, the rapid population increase in recent years deserves attention. The population of Nepal took 60 years to double from 5.6 million to 11.6 million between 1911 and 1971. However, after 1961, the population growth rate accelerated, and if the present growth rate of 2.66% maintains, the population will double in approximately 26 years. The reasons for this high rate of growth are attributed to decline in mortality and continued stable fertility at high rate. Therefore, this difference is manifested in the high rate of population increase. According to the United Nations estimation, this high rate of increase is expected to continue by the year 2000.

2. Changes in Age Distribution of Population

As indicated earlier the accelerated increase of Nepal's population after 1961 is due to a drop in the death rate without any substantial decrease in the birth rate. This change in vital statistics may also exert an influence on age distribution. Table 2 compares the population distribution by age between 1971 and 1981. As a result of an improved infant mortality rate, the percentage distribution of population under 1 year old and 0-4 years old is increasing in both male and female. The death rate of the elderly is also decreasing, so that, increase in the proportion of population beyond their late forties is observed.

Another point to be shown in Table 2 is that 5 year age distribution of population represents that of typical developing country - an extremely broad base and consistently diminishing proportions. However, it also indicates that the percentage of the population aged (x + 4) is a lower than that of the next age group above it aged x years. This is one point that almost all the age groups have in common. That is, the single year age distribution reveals heapings at ages ending at 0 and 5.

3. Population Distribution

Nepal can be divided into the three geographical regions running east to west, referred to as Mountain, Hill, and Terai (plain). Furthermore, for appropriate balanced economic growth and proper attention to regional planning the country is divided into five development regions: the eastern development region, the central development region, the western development region, the mid-western development region, and the far-western development region. However, compared with the high agricultural productivity of the Terai region, the land productivity in the Hill and Mountain regions is stagnant.

The regional distribution of the population relates to economic conditions in the three zones. Table 3 shows population distribution and inter-censal population growth rate by geographic region and development region in census years 1971-1981. In the 1971 census, Population of the Hill, accounted for roughly half the population (52.5%) followed by the Terai, and the Mountain. The ranking order of populaiton size in the 1981 census is same as in the 1971 census, but the ratio is different. The population of the Terai has been increasing faster than that of the population of the Hill and Mountains. The population of Terai grew at the rate of 4.11 per annum as against 2.66% per annum for the country as a whole.

In terms of the different development regions, the most developed one is the central development region that includes the capital city Kathmandu. This is followed by the eastern and western development regions of the Terai region. The far-western development region is the least developed. The population distribution corresponds to this almost exactly, with the highest percentage of the population living in the central and western development regions of the Hill, as well as in the eastern and central development regions of the Terai.

With respect to Nepal's population distribution by geographic region, it has been pointed out that the population is concentrated in the Hill and Terai, and that the population in the Terai has been increasing rapidly. Table 4 represents a comparison concerning population density. It shows the population density with respect to

total land and cultivated land. When density is measured in terms of population per square kilometer of land, it is found to be highest in the Terai. However density is measured in terms of population per square kilometer of cultivable land, it turns out to be lowest in the Terai.

The major portion of farming in the hill and mountain regions is done in terrace fields due to the scarcity of cultivable land. On the other hand, the jungle in the Terai region had been infested with malaria, but in 1950s anti-malaria countermeasures were initiated and reclamation of the jungle was progressing rapidly. Therefore, the high population growth rate in the Terai indicates net inflow of migrants into this region.

4. Urbanization

Data on urbanization are available since 1952/54. However, these data are not strictly comparable due, particularly to, changes in definitions over time. Table 5 shows percentage distribution of urban population since 1952/54. The urban population is growing faster then that of the rural population. Even though the county still remains essentially rural in character and over 90% of the population still resides in rural areas.

The population size criteria of an urban area is reduced to 9,000 and above in 1976. (it was 10,000 in 1962). An urban area in Nepal is called a "Town Panchayat." According to the revised criterion of population size, there were 23 Town Panchayats in 1981 census. As for the previously mentioned population distribution, the population is concentrated in the Hill and Terai regions, and the Town Panchayat are concentrated in these two regions, not in the Mountains. Table 6 shows the percentage distribution of urban population and the number of Town Panchayat by region in each census. By region, the number of Town Panchayat corresponds to the previously mentioned standard for regional development, in which concentrations appear in the central development region of the Hill, and in the eastern and central development regions of the Terai.

5. Vital Statistics

(1) Mortality

1) Crude Death Rate

Since the vital registration system in Nepal is not well

established, it is difficult to obtain accurate data on vital statistics. Data relating to mortality were collected in census since 1952/54, but it would appear that there was considerable discrepancy of death in earlier censuses. Therefore, the estimation of mortality levels largely depends on indirect techniques of estimation based on census age sex data. Table 7 indicates estimates of crude death rates based on sample surveys and censuses. As shown in the table, fluctuations are seen within the same year or period due to the difference of estimation methods or various sources. The estimated crude death rates also indicates that there was a substantial decline in these rates during the 1950s and 1960s. Furthermore, the decrease in the death rate steadily continued in the 1970s, as shown by the death rate of 13.5 per mill between the 1971 and 1981 census.

The rapid decline in the death rate in the 1960s has been due to the progress and expansion of the preventive health programs including malarian control. Table 7 also shows the crude death rate by sex. With the exception of the years from 1953 to 1961 and from 1977-1978, female death rate exceeded male death rate. The crude death rate by urban and rural residence is shown in Table 8. The proportion of urban population in Nepal does not even reach 10%, but medical facilities are concentrated in the urban areas. Therefore, the urban death rate is lower than the rural one. Table 8 indicates that there appears to have been a considerable narrowing in the gap between urban and rural death rates. The time series fluctuations in death rate may be due to problems in data quality in the surveys.

2) Infant Mortality Rate

In the absence of vital registration data, infant mortality is also estimated by indirect techniques using sample surveys and census.

Table 9 shows the estimated infant mortality rate by sex. Infant mortality has been declining over past twenty years. The infant mortality rate of males is higher than that of females, excluding the data obtained in 1976. The sex ratio at birth is ordinarily in favor of males, but since the infant mortality rate of males is higher than that of female, the end result is a balance between the sexes. If only Table 9 is examined, this result seems to hold true for Nepal in general. However, the results of the previously indicated crude death rate according to sex contradict those of Table 9. The estimates obtained from the National Commission on Population concerning the infant mortality rate in 1981 (males: 117.8; females: 128.3) and in 1988 (males: 96.8; females: 108.3) contradict the estimates shown in Table 9. In light of this disparity, the figures from the National Commission on Population were adopted as the latest estimates.

Table 10 represents estimated infant mortality by region by employing Trussell method. Any geographic regions, infant mortality is

highest in the Mountain, followed by the Hill and Terai. This differential infant mortality rates by regions may be explained by different access to medical services. The medical services can be easily provided to the people in Terai because of better road communications: while medical services are not only scarce in the mountains, but also difficult to reach people due to poor communications. Table 10 also shows the infant mortality by development region. It indicates that the infant mortality rate is high in the less developed western region, and low in the relatively developed central and eastern regions. Concerning the differentials of infant mortality rate, Table 11 shows that the urban rate were less than half the corresponding rural rates.

It also indicates that the differentials in urban-rural infant mortality rates considerably narrowed same as the tendency of the crude death rate.

3) Age-specific Death Rate

Table 12 represents the age-specific death rates. The analysis of changes in the age-specific death rates in Nepal over time is handicapped by the absence of relevant data. However, it should be noted that in terms of the death rate by sex for the age group between 25 and 34 years old, the female death rate is higher than the male death rate at any point in time. This same tendency can be found in the surveyed year 1977-1978, when the crude death rate of males is higher than that of female. This age-group corresponds to the female reproductive period and women are exposed to unusually high mortality conditions during conception and delivery.

(2) Fertility

The birth rate in Nepal is also at a high level like the death rate. Table 13 shows the changes in the crude birth rate since 1952. Although a small declining trend has shown over the years, it continues to remain at the high rate of over 40%. As previously mentioned, improvement in health conditions have resulted in a substantial decline in mortality, while birth rates have continued to remain stable. This difference results in a high rate of population growth.

Table 14 shows the trend in age-specific marital fertility rates and marital total fertility rates. In Nepal, universal marriage is common, so there should be not so much difference between age-specific marital fertility and age. A high fertility is indicated at every sampling period. Age specific fertility rate portrays a broad peak fertility pattern with high fertility in the age group of 20s and 30s. The total fertility rate has been persistently high in these sampling results. However, downward trend of fertility can be seen in the latter half of 30s. This is considered to be a result of the decline of the

infant mortality rate.

The fertility level also varies from one region to the next. Table 15 shows age specific fertility rate, the total fertility rate, and the crude birth rate by geographic region. The total fertility rate was highest in the Hill, and the levels observed in the Mountain and Terai were almost the same. Table 15 also shows the estimated crude birth rate as well, based on the Brass method and the Trussel method. The estimated results by these two methods is inconsistent, but these results show higher crude birth rate in the Hill, followed by the Terai and Mountain. Concerning age-specific fertility rate, the birth rates at the younger ages (age 15 to 19) in the Terai are higher than those of the rates at corresponding ages in the two other regions. According to the 1981 census, the mean age at marrying among women aged 10 years and over is 18.5 years old in the Mountain, 18 years old in the Hill, and 15.8 years old in the Terai[1)]. Therefore, the fact that women marry at a very young age in the Terai is considered to be one reason there is a high birth rate among women in the younger age group in that particular zone.

The fertility rate in Nepal varies according to geographic region, but fertility level themselves are very high standard, that is, the crude birth rates exceed 40 per mill and the total fertility rates are over 6.0 in each of the three regions. The previously mentioned high infant mortality rate is closely related with the high fertility rate. Table 16 represents the mean number of children ever born, surviving children to women in the reproductive ages (15 to 49 years old). For women in the age group 45-49 who for the most part have completed child bearing, the mean number of children ever born is 5.93, and the mean number of surviving is 4.25, that is, the proportion dead becomes 28.3%. In the country which has high infant mortality like Nepal, married couples attempt to bear more children than their desired number of children as a form of insurance to subsequent infant deaths. This can be considered as one of the reason to raise high fertility. Another point that can be raised to explain the high fertility is that there is a strong desire to have sons. According to the Nepal Contraceptive Prevalence Survey Report in 1981, 67% of the women had a preference for their child's sex and 89% of those desired to have sons.[2)]

The number of additional children desired by these women shown in Table 17 made clear such preference to have sons. Table 16 indicates the number of additional children desired by number of living children and living sons. The mean number of additional children desired decreases within the categories of living children when the number of surviving sons increases. For example, the average number of additional children desired is 1.2 among mothers with four or more living children but no sons, but this number decreases to 0.09 among mothers with four or more sons. This strong desire for sons in Nepal is brought about by several factors such as the fact that men inherit property, perform

the main part of all religious activities, have the strength necessary for laboring in the main industry of agriculture, and can provide security for their elderly parents.

Notes

1) His Majesty's Gov. of Nepal, Inter-Censal Changes of Some Key Census Variables Nepal 1952/54-81, 1985.

2) His Majesty's Gov. of Nepal, Nepal Contraceptive Prevalence Survey Report 1981, 1983, p. 67

Table 1 Population and Population Growth Rate in Nepal, 1911-1981

Year	Population	Annual Rate of Growth (%)
1911	5,638,749	-
1920	5,573,788	-0.13
1930	5,532,574	-0.07
1941	6,283,649	1.16
1952/54	8,256,625	2.30
1961	9,412,996	1.65
1971	11,555,983	2.07
1981	15,002,839	2.66

Source: Central Bureau of Statistics, His Majesty's Government of Nepal, Intercensal Changes of Some Key Census Variables Nepal 1952/54 - 81, 1985

Table 2 Population Distribution by Age and Sex (1971, 1981)

(%)

Age x	Year	Male (x)-(x+4)	Male x	Male x+1	Male x+2	Male x+3	Male x+4	Female (x)-(x+4)	Female x	Female x+1	Female x+2	Female x+3	Female x+4
0-4	1971	13.59	2.48	2.26	2.87	3.12	2.86	14.70	2.55	2.39	3.17	3.56	3.03
	1981	15.47	2.70	3.42	3.21	3.06	3.08	15.34	2.67	3.06	3.30	3.24	3.07
5-9	1971	15.23	4.04	2.73	2.77	3.03	2.66	14.95	4.06	2.74	2.88	2.73	2.54
	1981	14.52	3.53	2.93	2.72	3.02	2.32	14.65	3.51	3.04	2.87	2.88	2.35
10-14	1971	12.09	3.26	1.87	3.12	1.82	2.02	10.35	2.69	1.70	2.48	1.63	1.85
	1981	11.95	3.20	1.83	3.00	1.83	2.09	10.75	2.85	1.69	2.61	1.70	1.90
15-19	1971	9.41	2.41	2.06	1.32	2.44	1.18	8.71	2.06	1.86	1.32	2.33	1.14
	1981	9.04	2.03	2.12	1.36	2.28	1.25	8.63	1.84	1.95	1.34	2.26	1.24
20-24	1971	8.01	1.98	1.57	2.23	0.97	1.26	8.78	2.32	1.60	2.36	1.07	1.43
	1981	8.28	2.13	1.54	2.25	1.09	1.27	9.54	2.69	1.62	2.50	1.25	1.48
25-29	1971	7.84	2.92	1.13	1.10	2.00	0.69	8.26	3.09	1.24	1.10	2.18	0.65
	1981	7.41	2.85	1.22	1.01	1.70	0.63	8.07	3.13	1.29	1.02	2.00	0.63
30-34	1971	6.63	3.05	0.65	1.67	0.62	0.64	7.42	3.76	0.66	1.69	0.61	0.70
	1981	6.09	2.95	0.61	1.41	0.55	0.57	6.92	3.59	0.59	1.53	0.58	0.63
35-39	1971	6.64	3.16	1.23	0.57	1.17	0.51	6.25	3.08	1.02	0.48	1.17	0.50
	1981	6.00	2.94	0.93	0.57	1.10	0.46	5.89	2.98	0.84	0.49	1.14	0.44
40-44	1971	5.19	3.06	0.53	0.84	0.37	0.39	5.36	3.43	0.46	0.78	0.33	0.36
	1981	4.90	2.99	0.43	0.76	0.36	0.36	5.13	3.31	0.39	0.74	0.35	0.34
45-49	1971	4.22	2.36	0.47	0.35	0.75	0.29	3.76	2.14	0.37	0.27	0.72	0.26
	1981	4.28	2.38	0.49	0.37	0.76	0.28	3.95	2.25	0.40	0.31	0.74	0.25
50-54	1971	3.51	2.15	0.34	0.58	0.23	0.21	3.42	2.29	0.27	0.49	0.18	0.19
	1981	3.77	2.33	0.32	0.61	0.27	0.24	3.44	2.29	0.25	0.49	0.21	0.20
55-59	1971	2.29	1.24	0.33	0.22	0.34	0.16	2.17	1.27	0.26	0.17	0.32	0.15
	1981	2.44	1.35	0.34	0.23	0.36	0.16	2.15	1.27	0.25	0.17	0.33	0.13
60-64	1971	2.38	1.58	0.22	0.28	0.16	0.14	2.71	1.98	0.21	0.27	0.13	0.12
	1981	2.49	1.79	0.18	0.25	0.15	0.12	2.40	1.81	0.15	0.23	0.11	0.10
65-69	1971	1.23	0.71	0.16	0.12	0.17	0.07	1.24	0.80	0.12	0.10	0.15	0.07
	1981	1.31	0.79	0.15	0.11	0.17	0.09	1.19	0.76	0.11	0.09	0.15	0.08
70-74	1971	0.96	0.62	0.08	0.15	0.06	0.05	1.06	0.77	0.07	0.13	0.05	0.04
	1981	1.08	0.71	0.08	0.15	0.08	0.06	1.00	0.73	0.06	0.12	0.05	0.04
75+	1971	0.78	-	-	-	-	-	0.86	-	-	-	-	-
	1981	0.97	-	-	-	-	-	0.95	-	-	-	-	-
Total No.	1971	5,817,203						5,738,780					
	1981	7,695,336						7,327,503					

Source: Same as in Table 1.

Table 3 Population Distribution and Population Growth Rate by Region (1971, 1981)

Geographic region and development region	1971 population	(%) percentage	1981 population	(%) percentage	Average annual growth rate (1971-1981)
Mountain Region	1,138,610	(9.9)	1,302,896	(8.7)	1.35
-Eastern development region	304,352	(2.6)	338,439	(2.3)	1.06
-Central development region	353,923	(3.1)	413,143	(2.8)	1.55
-Western development region	34,380	(0.3)	19,951	(0.1)	-5.44
-Mid-western development region	207,122	(1.8)	242,486	(1.6)	1.58
-Far-western development region	238,833	(2.1)	288,877	(1.9)	1.90
Hill Region	6,071,407	(52.5)	7,163,115	(47.7)	1.65
-Eastern development region	1,105,590	(9.6)	1,257,042	(8.4)	1.28
-Central development region	1,741,594	(15.1)	2,108,433	(14.0)	1.91
-Western development region	1,816,940	(15.7)	2,150,939	(14.3)	1.69
-Mid-western development region	885,562	(7.6)	1,042,365	(6.9)	1.63
-Far-western development region	521,721	(4.5)	604,336	(4.0)	1.47
Terai Region	4,345,966	(37.6)	6,556,828	(43.6)	4.11
-Eastern development region	1,387,558	(12.0)	2,113,422	(14.1)	4.21
-Central development region	1,770,236	(15.3)	2,387,781	(15.9)	2.99
-Western development region	595,110	(5.2)	957,969	(6.4)	4.76
-Mid-western development region	395,322	(3.4)	670,760	(4.4)	5.29
-Far-western development region	197,740	(1.7)	426,876	(2.8)	7.70

Source: Central Bureau of Statistics, His Majesty's Government of Nepal, Population Monograph of Nepal, 1987

Table 4 Total Area and Population Density According to Geographic Zone

Characteristic	Mountain Zone	Hill Zone	Terai	Nationwide
Area(km^2)	51,817	61,345	34,019	147,181
Cultivable land area(ha)	122,587	939,704	1,401,426	2,463,717
Population density				
a)Total area (person/km^2)				
1971	22	99	128	79
1981	25	117	193	102
b)Cultivated land area (person/ha)				
1971	9.3	6.5	3.1	4.7
1981	10.6	7.6	4.7	6.1

Source: Same as in Table 1.

Table 5 Urban Population, Percentage Distribution of Urban Population, Rate of Growth of Urban Population, 1952/54 - 1981

Year	Urban Population (Population above 10,000)	Percentage Distribution of Urban Population (%)	Rate of Growth of Urban Population (%)		
			Urban	Rural	Total
1952/54	199,549	2.4	-	-	-
1961	278,548	2.9	4.25	1.58	1.65
1971	432,874	3.7	4.51	1.98	2.07
1981	937,187	6.2	8.03	2.39	2.66

Source: Same as in Table 1.

Table 6 Percentage Distribution of Urban Population by Region 1952/54 - 1981

(%)

Geographic Regions	1952/54		1961		1971		1981	
Eastern Hill	-	-	-	-	1.58	(1)	2.47	(2)
Central Hill	82.41	(5)	66.56	(6)	57.53	(4)	41.63	(4)
Western Hill	-	-	3.14	(2)	5.85	(2)	6.23	(2)
Mid-western Hill	-	-	-	-	-	-	1.45	(1)
Far-western Hill	-	-	-	-	-	-	-	-
Eastern Terai	3.42	(1)	16.23	(3)	17.52	(4)	18.36	(5)
Central Terai	9.59	(3)	9.37	(4)	5.91	(2)	11.09	(3)
Western Terai	-	-	-	-	6.51	(2)	7.77	(3)
Mid-western Terai	4.58	(1)	4.70	(1)	5.09	(1)	3.55	(1)
Far-western Terai	-	-	-	-	-	-	7.43	(2)
Total Hill	82.41	(5)	67.70	(8)	64.97	(7)	51.78	(9)
Total Terai	17.59	(5)	30.30	(8)	35.03	(9)	48.22	(14)
All Total								
- Urban population	235,892		336,222		461,938		956,721	
- Number of town panchayat		(10)		(16)		(16)		(23)
- Percentage	(100.00)		(100.00)		(100.00)		(100.00)	

Note: Number of town panchayat in parentheses.

Source: Same as in Table 1.

Table 7 Estimated Change in the Crude Death Rate from 1954 to 1984

Source	Period of estimation	Crude death rate		
		Both sexes	Males	Females
Vaidyanathan and Gaige, 1973a	1954	36.7		
Central Bureau of Statistics, 1977b	1953-1961	27.0	28.0	24.8
Gubhaju, 1975c	1961	22.0		
Central Bureau of Statistics, 1977b	1961-1971	21.4	21.3	22.6
Demographic Sample Survey, 1976d	1974-1975	19.5	18.6	20.4
Demographic Sample Survey, 1977e	1976	22.2	21.5	22.8
Demographic Sample Survey, 1978f	1977-1978	17.1	17.9	16.2
Central Bureau of Statistics, 1985g	1971-81	13.5	12.2	14.9
New Era. 1986h	1984	11.9	10.8	11.0

Original sources:

(a) Vaidyanathan, K. E. and Gaige, F. H., 1973. Estimates of Abridged Life Tables. Corrected Sex-age Distribution and Birth and Death Rates for Nepal 1954, Demography India, 2 (2): 278-290.

(b) Central Bureau of Statistics, 1977. The Analysis of Population Statistics of Nepal, His Majesty's Government, National Planning Commission Secretariat, Kathmandu.

(c) Gubhaju, B. B., 1975. "Fertility and Mortality in Nepal", Journal of Nepal Medical Association, 13 (5 & 6): 115-128.

(d) Central Bureau of Statistics, 1976. The Demographic Sample Survey of Nepal, 1974-75, Survey Methods and Findings, Kathmandu.

(e) Central Bureau of Statistics, 1977. The Demographic Sample Survey of Nepal, Second Year Survey, 1976, Kathmandu.

(f) Central Bureau of Statistics, 1978. The Demographic Sample Survey of Nepal Third Year Survey, 1977-78, Kathmandu.

(g) Central Bureau of Statistics, 1985. Intercensal Changes of Some Key Census Variables, Nepal: 1952/54-81, Kathmandu.

(h) New Era, 1986. Nepal Fertility and Mortality Survey -- A Preliminary Report, submitted to National Commission on Population, Kathmandu.

Source: Same as in Table 3.

Table 8 Crude Death Rate by Urban-Rural Residence

(per mill)

Year	CDR		
	Urban	Rural	Nepal
1974-75	9.0	19.8	19.5
1976	8.9	22.6	22.2
1977-78	12.0	18.6	17.1

Source: Same as in Table 3.

Table 9 Infant Mortality Rate by Sex (1954-1981)

Source		Period of estimation	Infant mortality rates		
			Males	Females	Both sexes
Vaidyanathan and Gaige	1973a	1954	260	250	-
Worth and Shah	1969b	1965-66	-	-	152
Gubhaju	1974c	1961-71	200	186	-
Central Bureau of Statistics	1974d	1971	-	-	172
Demographic Sample Survey	1976e	1974-75	141	123	133
Demographic Sample Survey	1977f	1976	128	138	134
Demographic Sample Survey	1978g	1977-78	110	98	104
Nepal Fertility Survey	1977h	1976	-	-	152
Gubhaju	1984i	1973-74	-	-	171
Central Bureau of Statistics	1985j	1978	147	142	144
New Era	1986k	1981	136	111	117

Source: Same as in Table 3.

Table 10 Infant Mortality by Geographic and Development Regions in 1981

(per mill)

Geographical zones and development regions	IMR	Period of estimation
Geographic zone		
Mountain	186.2	1978.6
Hill	163.5	1978.5
Terai	122.3	1978.1
Development region		
Eastern	129.7	1978.5
Central	136.8	1978.3
Western	147.0	1978.4
Mid-western	178.0	1978.4
Far-western	164.5	1978.0

Source: Same as in Table 1.

Table 11 Infant Mortality Rate by Urban-Rural Residence, 1976-1978

(per mill)

Source	Period of estimation	IMR	
		Urban	Rural
Demographic Sample Survey, 1976a	1974-75	57.1	134.8
Demographic Sample Survey, 1977b	1976	52.8	136.1
Demographic Sample Survey, 1978c	1977-78	67.2	105.1

Source: Same as in Table 3.

Table 12 Age-specific Death Rates by Sex, 1974-1978

(per mill)

Age group	Males			Females			Both sexes		
	1974-75	1976	1977-78	1974-75	1976	1977-78	1974-75	1976	1977-78
0	141.2	128.4	109.9	123.0	137.9	97.9	132.5	133.6	104.0
1- 4	33.2	32.6	23.4	35.9	37.2	22.1	34.6	34.6	22.8
5-14	4.8	5.2	4.7	5.6	6.1	5.2	5.2	5.6	4.9
15-24	5.0	6.0	4.4	7.9	6.0	4.3	6.4	6.0	4.3
25-34	4.7	7.3	6.0	7.7	10.7	6.5	6.2	9.1	6.2
35-44	6.7	8.0	11.9	12.6	14.8	10.2	9.6	12.4	11.0
45-54	11.4	20.9	20.3	17.6	16.8	16.6	14.4	18.9	18.4
55-64	36.2	45.1	33.0	38.2	48.1	39.2	37.1	45.6	36.0
65-74	67.6	76.3	87.8	71.8	76.5	71.5	69.6	76.4	79.6
75+	129.0	192.8	145.7	169.9	139.7	129.0	150.0	165.9	136.8
All ages	18.6	21.5	17.9	20.4	22.8	16.2	19.5	22.2	17.1

Original sources: Central Bureau of Statistics, 1976. The Demographic Sample Survey of Nepal, 1974-75, Survey Methods and Findings, Kathmandu;
Central Bureau of Statistics, 1977. The Demographic Sample Survey of Nepal, Second Year Survey, 1976, Kathmandu and
Central Bureau of Statistics, 1978. The Demographic Sample Survey of Nepal, Third Year Survey, 1977-78, Kathmandu.

Source: Same as in Table 3.

Table 13 Estimated Crude Birth Rate, 1951-1981

Period	Birth per 1000 population	Source
1951-61	48.0	U.S. Dept. of Commerce (1979)a
1961	47.0	Krotki and Thakur (1971)b
1961-66	44.6	U.S. Dept. of Commerce (1979)a
1966-71	43.4	U.S. Dept. of Commerce (1979)a
1971	42.8	Karki, Y. B. (1984)c
1974-75	44.7	C.B.S.(1982)d
1976	46.8	C.B.S.(1982)d
1977-78	42.6	C.B.S.(1982)d
1981	44.9	Karki, Y. B. (1984)c
1981	44.0	C.B.S.(1985)e

Original sources:

a. U.S. Department of Commerce , Bureau of the Census 1979. Nepal Country Demographic Profile: Washington. D. C.

b. Krotki, K. J. and Thakur, H. N. 1971. "Estimates of Population Size and Growth from the 1952/54 and 1961 Censuses of the Kingdom of Nepal", Population Studies, 25 (1) pp. 81-103.

c. Karki, Y. B. 1984. "Estimates of Total Fertility Rates for Nepal and its Geographical Sub-divisions and Administrative Zones 1971 and 1981", Occasional Monograph, National Commission on Population: Kathmandu.

d. Central Bureau of Statistics, His Majesty's Government of Nepal. Demographic Sample Surveys of 1974-75, 1976 and 1977-78. Statistical Pocket Book of Nepal, 1982, p. 29: Kathmandu.

e. Central Bureau of Statistics, His Majesty's Government of Nepal, 1985. Intercensal Changes of Some Key Census Variables, Nepal 1952/54-1981. Kathmandu.

Source: Same as in Table 3.

Table 14 Age-specific marital fertility rates per 1000 ever-married women, Nepal, 1976-1984

Age group	1976a	1981b	1984c
15-19	138	150	204
20-24	306	271	385
25-29	314	260	302
30-34	261	202	236
35-39	226	169	161
40-44	93	73	84
45-49	33	43	27
Marital total fertility rate	6,855	5,865	6,860

Original sources:
a. Family Planning/Maternal and Child Health Project 1977. Nepal Fertility Survey, 1976, First Report, World Fertility Survey, Nepal Project: Kathmandu.
b. Same as in 'c' of Table 12.3.
c. New Era, 1985. Fertility and Mortality Rates in Nepal, Kathmandu, Nepal

Source: Same as in Table 3.

Table 15 Age-specific Fertility Rate, Total Fertility Rate, and Crude Birth Rate by Geographic Regions, 1981

Age group	Adjusted age scheduled fertility (Brass)			Adjusted age-scheduled fertility (Trussell Method)		
	Mountain	Hill	Terai	Mountain	Hill	Terai
15-19	0.0553	0.0703	0.1108	0.0544	0.0689	0.1092
20-24	0.1931	0.2193	0.2348	0.1898	0.2150	0.2315
25-29	0.2468	0.2585	0.2476	0.2426	0.2535	0.2441
30-34	0.2395	0.2452	0.2141	0.2355	0.2405	0.2111
35-39	0.2037	0.2057	0.1725	0.2002	0.2018	0.1701
40-44	0.1462	0.1410	0.1181	0.1437	0.1383	0.1165
45-49	0.0921	0.0901	0.0780	0.0906	0.0884	0.0769
Total fertility rate	5.8838	6.1509	5.8795	5.7836	6.0323	5.7974
Adjusted birth rate	40.39	42.78	41.97	39.71	41.96	41.38

Source: Same as in Table 1.

Table 16 Mean Numbers of Children Ever Born, Surviving Children And Dead Children by Age for Currently Married Women, 1981

Age	Mean Numbers of Children Ever Born	Mean Numbers of Surviving Children	Mean Numbers of Dead Children
15-19	0.39	0.34	0.05
20-24	1.54	1.20	0.34
25-29	2.79	2.28	0.51
30-34	4.02	3.16	0.86
35-39	4.66	3.58	1.08
40-44	5.51	4.06	1.45
45-49	5.93	4.25	1.68

Source: His Majesty's Government of Nepal
Nepal Contraceptive Prevalence Survey Report 1981. 1983

Table 17 Mean Number of Additional Children Desired for currently Married Women 15-49 Years by Number of Living Children and Living Sons, 1981

Living Children	Living Sons	Mean Number of Additional Children Desired
0	0	3.18
1	0	2.23
	1	1.98
	All	2.08
2	0	1.61
	1	1.04
	2	1.02
	All	1.16
3	0	1.61
	1	0.69
	2	0.47
	3	0.60
	All	0.64
4+	0	1.18
	1	0.33
	2	0.17
	3	0.13
	4+	0.09
	All	0.20
Total		1.33

Source: Same as in Table 15.

Chapter 3

Overview of Health and Medical Care in Nepal

1. Vital Statistics

In order to fully understand the condition of the health of a nation's citizens and implement measures to prevent disease, it is important to be aware of the situation with respect to childbirth, diseases, death, and the causes of death. These conditions have been investigated based upon information obtained during this survey.

(1) Crude Birth Rates

Nationally, the crude birth rates per 1,000 population (Table 1) has only fallen a little since 1961, and varies regionally (Table 2). In 1981, the birth rate in Japan was 13.0 per 1,000 population, and in 1988 it was 10.8. The birth rate in Nepal is still extremely high.

(2) Crude Death Rates

Nationally, the crude death rates per 1,000 population (Table 3) has improved substantially in recent years but there are disparities as great as 1.5 times between regions (Table 4). The death rate in Japan in 1961 was 7.4 per 1,000 population. Since then it has fallen every year to reach 6.5 in 1988. Nepal's present death rate of 14.85 is close to Japan's death rate in 1947.

(3) Sex and Age Adjusted Death Rate (1977/1978)

Although these figures are a little old, they are presented for a reference purpose (Table 5). The death rate is lowest among people between ages 15 and 24. Considering the fact that in Japan, it is lowest for the group of people between 10 and 14 of age, the group with the lowest death rate is a little older in Nepal.

(4) Urban and Rural Age Adjusted Death Rate

The rural death rate is 1.6 times the urban death rate for children under 1 year of age, 2.3 times as great for children between 1 and 4 years, and 2.1 times as large for children between 5 and 14 years of age. (Table 6)

(5) Infant Mortality Rate

The infant mortality rate is an extremely important index in drawing up health care measures for mothers and children as well as in determing the level of hygiene in a region. There is some question about the reliability of the data which has been obtained on this occasion, but they indicate that in recent years the infant mortality rate has improved (Table 7). There are regional disparities (Table 8), and differences by race (Table 9). The death rate of the Tamang people

is 2.9 times that of the Brahmin. A comparison of the death rates for rural and urban populations for 1977/1978 and for 1983, indicates that both are deteriorating (Table 10). But a marked improvement has taken place in the mountains, hills, and the Terai area. In contrast, Japan's infant mortality rate was 106.7 in 1935, but fell to 6.2 in 1983.

(6) Maternal Death Rates

It was not possible to obtain figures for Nepal as a whole, but in 1986 Dr. Dibya S. Malla compiled statistics on 50,807 expectant mothers who were admitted to Kathmandu's maternity hospitals (from April 1979 to April 1985) and carried out an analysis of 42,845 births and 81 cases of maternal deaths (per 1,000 population). The maternal death rate varied widely from year to year (Table 11). The maternal death rate was highest among women between 20 and 24 years of age (29.63%). The second highest rate was recorded for those 30 to 34 years of age (19.75%), followed by the 25 to 29 and the 35 to 39 year-old women (18.52%). The group with the fourth largest maternal death rate consisted of women from 40 to 44 years of age (8.64%), and the lowest rate was found among those between 15 and 19 years old (4.94%). The births took place in maternity hospitals (76.5%), at home (22.22%), and health centers (1.23%). The persons assisting at the births included physicians (48.15%), friends or relatives (20.99%), nurses (27.16%), assistant physicians (2.47%), and health workers (1.23%).

Oftentimes, the women gave birth to many children. The 81 women had gone through an average of 4.3 pregnancies. Five of the women between 40 and 44 years of age had experienced more than 10 pregnancies (one patient had been pregnant 12 times) while 4 of the women between 35 and 39 years of age had been pregnant 8 or more times. One member of the 30 to 34 year-old women group had been pregnant more than 11 times.

Regardless of where the birth took place, 55.55% of those brought to a maternity hospital died within 24 hours after admission. During the first two hours, 22.2% of all women admitted died, and 17.28% died between 5 and 8 hours after arriving at the hospital. On the other hand, 41.97% survived more than one day, and of these, 16.5% died 1 to 2 days in the hospital. Also, there was wide variation by race. The racial group with the highest maternal death rate was the Newar (40.7%) followed by the Chhetri (22.2%), Tamang (11.1%), Brahmin (8.6%), and Rai (1.2%). The rate for other groups was 16.0%.

(7) Live Birth, Still Birth, and Perinatal Mortality Number (Rate)

This is based on the same material used in 6) above. The frequency of still births has been tending to drop a little. Japan's stillbirth rate is relatively high at 21.2 (1987). The early infant mortality rate (less than 7 days after birth) is 10 times as high as Japan's rate of

2.3 in 1987, and its perinatal mortality rate is also high, 7.7 times as much as it is in Japan. However, a falling trend has been noted recently (Table 12).

(8) Life Expectancy

Life expectancy is steadily increasing for both men and women (Table 13). It is highest in the central part of the country (54.40), and lowest in the west (46.29). In the cities, it is 57.9-58.2 in 1982, and in agricultural areas it is 51.1-51.4 in 1983. There are also variations between geographical areas. In the mountains the life expectancy is 51.8-52.4 in 1984, in hilly country it is 53.4-53.8 in 1984, and in the Terai Plain it is 50.2-50.3 in 1983. But unlike almost all advanced countries where life expectancy is longer for women than it is for men, in Nepal, men are expected to live longer.

2. Morbidity and Mortality Statistics

(1) Ten Major Causes of Death

No data is available for Nepal as a whole, but information about the ten major causes of death in the eastern part of the country has been studied. It is impossible to make generalizations about the whole country based on these causes of death because there are many other factors involved; differences between hospitals, diagnosis techniques, and treatment levels for example (Table 14). In addition, the major causes of death vary among regions. For example, tuberculosis is not among the top ten in the eastern and central parts of the country, but in the west, mid west, and far west of Nepal, it is among the top ten major causes of death. Malignant neoplasm is one of the top ten only in the east.

(2) Maternal Mortality and Ten Major Causes of Death

Table 15 indicates the causes of death in 81 cases in maternity hospitals. The rate of direct obstetric causes of death was 1.73 (74/81 cases) and it was 0.16 (7/81 cases) for indirect obstetric causes.

(3) Morbidity (8 Major Illnesses)

Various regions have been tabulated so it is difficult to make comparisons at the same level, but it is possible to look at the situation throughout Nepal (Table 16).

(4) Other Infectious Diseases

1) Situation in Kathmandu Infectious Diseases Hospital (1987).

Among 6,644 patients, the commonest disease was gastroenteritis (64.3%) followed by infectious hepatitis (7.1%) and typhoid fever (4.8%). There were 135 deaths among these patients. Most died of infectious hepatitis (41.5%). The next three commonest causes were meningitis (14.8%), gastroenteritis (10.4%), and typhoid fever (5.2%).

2) Tuberculosis

Tuberculosis is a serious health problem in all developing countries. Despite a steady increase in the number of new patients, treatment cannot keep up. Also there are clear regional variations and there are many problems hindering the implementation of measures to prevent the disease (Table 17).

3) Leprosy

It is as serious a health problem as tuberculosis. There were 3,960 new cases revealed in 1983, but the rate of new cases has tended to increase between 2.2% and 2.5% annually. There were 6,300 new cases in 1987 which brought the nation-wide total to 122,901. Leprosy is particularly serious in the eastern and central parts of Nepal where between 62% and 68% of new cases are discovered.

4) Japanese Encephalitis

Between 1978 and 1987, 4,395 cases were reported, and 1,383 of the patients died. Morbidity is particularly high among those between 5 and 14 years of age.

5) Meningococcal Meningitis

In 1985/1986 there were 38 deaths among 289 patients, and in 1986/1987 there were 29 deaths among 164 patients.

6) Snake Bite

Hospitals in the Terai region treated 2,489 snake bite victims in 1984, and 116 of them (4.7%) died. The rate of snake bite victims in this region is 70 for every 100,000 population living in the area.

7) Kalazar Disease

Cases of this illness are rare. There were 142 in 1986 and 107 in 1987.

8) Measles

There were 429 cases reported among 6,029 (7.1%) children up to 5 years old living in 7 regions of the country (1985).

3. Health Care and Medical Treatment

(1) Health Personnel

Their numbers are increasing every year, but not only is there a clear shortage of health care personnel, there are also wide regional disparities. In the central part of the country there is 1 physician for every 11,635 people. In the east, there is 1 physician for every 44,691 people, and in the west, 1 for every 39,333 people. In midwest Nepal, each physician serves 60,105 people, and in the far west, 39,590 people. Physician in west central Nepal serves 5.2 times as many patients as those in central Nepal (Table 18). Plans have been made to have 2,400 doctors by the year 2000.

(2) Number of Medical Treatment Facilities

The number of hospitals is increasing a little each year but that of health centers have been declining. Other types of facilities have been increasing slowly (Table 19).

(3) Blindness

A 1979 survey estimated that there were 117,623 totally blind people, and 233,612 who were blind in only one eye. The causes of 10.7% of total blindness and 34.2% of blindness in one eye were chicken pox, trachoma, other infectious diseases, accidents, and malnutrition.

(4) Preventative Inoculation

Between 1980/1981 and 1987/1988 (figures for tetanus and measles begin in 1980/1982), the rate of inoculation of children under 11 months old has risen from 32% to 100% for BCG, from 16% to 68% for DPT (Diphtheria, whooping cough, and tetanus), from 1% to 67% for polio, from 9% to 30% for tetanus, and from 2% to 65% for measles. On the other hand, preventive inoculation accidents (1982/1983) per 100,000 people were 14.5 for diphtheria inoculations, 5.9 for tetanus, and 17.2 for polio (however, the rate of accidents in polio inoculations given to children up to the age of 4, was 0.86 per 1,000 population).

(5) Water Supply and Sewerage Facilities Availability Rate

In 1985, there was a large gap between the availability of water

supply facilities between the rural and urban areas. The rate was 70.4% in the cities and 24.7% in farming communities (over-all rate of 28.3%). Sewerage systems are not widely distributed. The rate in the cities was 17.2%, and in the farming communities it was 0.2% (over-all rate of 1.7%). Nepal's present objective is to provide water supply service to 100% of its urban population and 90% of rural people by the year 2000. The country's sewage disposal targets are 100% in the cities, and 34.8% in the rural area by the same year.

Summary

We feel that the material compiled for this report is in part, better organized than that collected for the 1985 survey, but there are still omissions which prevent us from providing a complete picture of the situation in Nepal. Although the birthrate remains high, a clear decline in the death rate can be discerned. However there are marked regional variations in the crude death rate and crude birth rate, and as far as the causes of death are concerned, the diagnostic standards are not considered reliable. This cannot be avoided, as pathological diagnoses are too much to hope for. It is believed that general environmental hygiene and nutrition will slowly improve. The maternal death rate, as revealed only from tabulations of hospital records, is extremely high. In many cases the causes were infections, hemorrhage, or puerperal convulsions, an indication of the need for improvement in health care measures for expectant mothers. A supervisory system involving the reporting of pregnancies and regular examinations should be established. Judging from the number of problems experienced by those women who can enter hospitals, it can be assumed that the situation is even more dangerous for those women who are unable to go to a hospital and must give birth at home.

Leprosy and tuberculosis are serious infectious diseases in Nepal. An integrated tuberculosis supervision system should be set up to be responsible for early discovery, diagnosis, treatment, prevention, rehabilitation, and so on. Blindness is prevalent, and in many cases, is the result of infection. Therefore it is important that comprehensive measures to prevent infectious disease accompany the spread of preventive inoculation of children against infectious diseases.

It cannot be denied that the country suffers from shortages of both medical treatment personnel and facilities. Regarding environmental health, the widespread introduction of a modern water supply system is an important way to prevent infectious diseases. In particular, a supply of sterilized drinking water should be secured and the areas where water is available should be expanded.

References

1) Policy, Planning, Monitoring & Supervision Division, Country Health Profile June 1988, Nepal.

2) Dibya S. Malla. Study on Causes of Maternal Death in Nepal - Research Findings - June 1986, Kathmandu.

Table 1 Annual Changes in Crude Birth Rates

Year	Rate
1961	42.1
1971	42.4
1976	43.61
1981	39.7
1987	41.56

Source: Country Health Profile Nepal Policy, Planning, Monitoring & Supervision Division Nepal. June 1988.

Table 2 Crude Birth Rates by Development Region

Region	1987
East	43.46
Central	39.60
West	40.30
Mid-west	40.04
Far-west	38.59

Source: Same as in Table 1.

Table 3 Annual Changes in Crude Death Rates

Year	Death Rate
1952 - 1961	30 - 37
1961	22 - 27
1971	22.0
1976	22.2
1987	14.85

Source: Same as in Table 1.

Table 4 Crude Death Rates by Development Region

Region	1987 Rate
East	12.63
Central	13.96
West	15.36
Mid-west	18.84
Far-west	18.10

Source: Same as in Table 1.

Table 5 Sex and Age Adjusted Death Rates /1,000 population

(1977/78)

Age Group	Male	Female	Both
Under 1 Year	109.9	97.9	104.0
1 - 4	23.4	22.1	22.8
5 - 14	4.7	5.2	4.9
15 - 24	4.4	4.3	4.3
25 - 34	6.0	6.5	6.2
35 - 44	11.9	10.2	11.0
45 - 54	20.3	16.6	18.4
55 - 64	33.0	39.2	36.0
65 - 74	87.8	71.5	79.6
75 and Older	145.7	129.0	136.8
Total	17.9	16.2	17.1

Source: Same as in Table 1.

Table 6 Urban and Rural Adjusted Death Rates

(1977/1978)

	Urban	Rural
Under 1 Year	67.2	105.1
1 - 4	11.1	25.5
5 - 14	2.6	5.4

Source: Same as in Table 1.

Table 7 Annual Changes in Infant Mortality Rates

Year	Rate		
	Male	Female	Both
1954	260	250	-
1965/66	-	-	152
1971	-	-	172
1976	128	138	134
1978	147	142	144
1981	136	111	117
1986	-	-	106.5
1987	-	-	105.3

Source: Same as in Table 1.

Table 8 Infant Mortality by Development Region Rate

Region	1987
East	130
Central	137
West	147
Mid-west	175
Far-west	165

Source: Same as in Table 1.

Table 9 Racially Adjusted Infant Mortality Rates

Race	1983 Rate
Newar	153
Brahmin	102
Chhetri	120
Tamang	300
Total	139

Source: Same as in Table 1.

Table 10 Infant Mortality Rates by Urban Region (Rural, Mountains, and Hills)

	1970-74			1977/78			1981			1983 or 1984
	Male	Female	Both	Male	Female	Both	Male	Female	Both	Both
Urban	-	-	-	72.8	60.8	67.2	-	-	-	78(1983)
Rural	-	-	-	111.1	99.9	105.1	-	-	-	111(1983)
Mountainous	-	-	188	-	-	-	190	183	186	107(1984)
Hilly	-	-	143	-	-	-	166	161	163	99(1984)
Terai	-	-	165	-	-	-	125	119	122	116(1983)
Total	175	168	171	109.9	97.9	104.0	147	142	144	108(1983)

Source: Same as in Table 1.

Table 11 Number of Maternal Deaths (Rate)

	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	Total
Maternal Deaths	12	20	18	7	13	11	81
Maternal Death Rate	2.05	3.16	2.59	0.99	1.70	1.22	1.89

Source: Dibya S. Malla: Study on causes of maternal death in Nepal-Research Vindings-1986. 6. Kathmandu.

Table 12 Live Births, Still Births, Perinatal Mortality (Rates)

	Live Births	Still Births (Rate)	Early Infant Mortality (Rate)	Postnatal Mortality	Perinatal Mortality
1979/80	5,848	191(31.6)	204(34.9)	395	65.4
1980/81	6,321	225(34.4)	170(26.9)	395	60.3
1981/82	6,952	191(26.7)	204(29.3)	395	55.3
1982/83	7,048	266(36.4)	120(17.0)	386	52.8
1983/84	7,633	222(28.3)	149(19.5)	371	47.2
1984/85	9,043	240(25.9)	169(18.7)	409	44.1
Total	42,845	1,335(30.2)	1,016(23.7)	2,351	53.2

Source: Same as in Table 11.

Table 13 Average Life Expectancy

	1961-71	1971-81	1981	1988
Men	37.08	46.28	50.88	54.38
Women	36.66	44.29	48.10	51.60
Total	36.87	45.31	49.53	53.02

Source: Same as Table 11.

Table 14 Ten Major Causes of Death in the Eastern Region

1983/1984	%	1985/1986	%
1 Neoplasms	22.2	Diseases of Nervous System and Sensory Organs	11.6
2 Mental Disorders	22.2	Endocrine, Nutritional Metabolic Disease and Immunity	10.8
3 Endocrine, Nutritional Metabolic Disease and Immunity Disorders	11.7	Diseases of the Circulatory System	5.9
4 Diseases of Nervous System and Sensory Organs	10.5	Diseases of the Respiratory System	4.4
5 Diseases of the Circulatory System	9.6	Symptoms, Signs and Ill-defined Conditions	4.2
6 Infectious and Parasitic Diseases	7.9	Infectious and Parasitic Diseases	3.8
7 Diseases of Blood and Blood Forming Organs	6.0	Diseases of the Digestive System	2.7
8 Diseases of the Respiratory System	4.1	Injuries and Poisoning	2.5
9 Injuries and Poisoning	3.8	Diseases of the Genitourinary System	1.6
10 Symptoms, Signs and Ill-defined Conditions	2.7	Neoplasms	3.8

Source: Same as in Table 1.

Table 15 Ten Major Causes of Maternal Mortality

1	Serious Infection in Confinement	(17.3%)
2	Abnormal Post Partum Hemorrhage	(13.6%)
3	Other Abnormal Post Partum Hemorrhage	(13.6%)
4	Puerperal Convulsions	(7.4%)
5	Anemia	(6.2%)
6	Other Ante Partum Hemorrhage	(6.2%)
6	Ante Partum Hemorrhage, Details Unknown	(6.2%)
6	Rupture of the Uterus During and After Parturition	(6.2%)
9	Amniotic Fluid Embolism	(4.9%)
10	Delayed Delivery	(4.9%)

Source: Same as in Table 11.

Table 16 Morbidity (8 Major Illnesses)

	1984/85 (1)	%	1985/86 (2)	%
1	Normal Delivery	32.5	Normal Delivery	24.0
2	Other Diseases of the Respiratory System	11.0	Other Diseases of the Respiratory System	11.4
3	Symptoms, Signs and Ill-defined Conditions	8.9	Direct Obstetric Causes	9.9
4	Direct Obstetric Causes	8.1	Symptoms, Signs and Ill-defined Conditions	9.1
5	Gastroenteritis	6.1	Diseases of the Other Parts of the Digestive Organs	9.1
6	Diseases of the Other Parts of the Digestive System	5.8	Diseases of the Skin and Subcutaneous Tissue	4.7
7	Abortion	4.0	Abortion	4.6
8	Pulmonary Tuberculosis	4.0	Diseases of the Urinary System	3.9

Note: (1)is based on data of 54,216 people from 9 hospitals in the eastern part of Nepal. (2) is based on data of 6,009 people from 32 hospitals in the eastern, central, mid-western, and far-western parts of the country.

Source: Same as in Table 1.

Table 17 Tuberculosis Patients by Development Region and Geographical Region

	1982		1984		1987	
	New Cases	Under Treatment	New Cases	Under Treatment	New Cases	Under Treatment
(Development Region)						
East	171	5,703	1,216	3,945	1,829	3,436
Central	130	3,561	956	3,199	1,428	3,786
West	310	3,111	315	2,332	365	1,299
Mid-west	325	576	331	780	384	1,180
Far-west	70	70	201	634	258	825
Total	1,006	13,021	3,019	10,690	4,264	10,526
(Geographical Region)						
Mountainous	130	412	110	274	167	469
Hilly	327	6,359	478	4,985	1,048	2,156
Terai	549	6,250	2,431	5,431	3,049	7,901

Source: Same as in Table 1.

Table 18 Annual Changes in the Number of Health Care Personnel

	1985	1986	1987	1988
Number of Physicians	698	710	863	879
Population per Physician	23,907	24,128	20,344	20,471
Midwives/Nurses	2,109	2,223	2,319	2,763
Kaviraj	164	164	197	197
Baidya	124	124	124	124
Health Aids	795	795	795	795
Village Health Worker	3,345	6,472	7,011	12,314
PBHW	2,596	2,598	2,548	2,648
Total	9,831	13,086	13,957	19,720

Source: Same as in Table 1.

Table 19 Annual Changes in the Number of Medical Treatment Facilities

	1983	1984	1985	1986	1987	1988
Number of Hospitals	77	80	89	91	92	96
Health Center	26	26	20	20	20	18
Health Post	744	744	745	814	814	816
Ayurred Units	125	125	135	145	145	155
Number of Hospital Beds	3,058	3,522	3,769	3,842	3,842	4,153

Source: Same as in Table 1.

Chapter 4

Field Survey Report

1. Activities of Related Organization
2. Survey Areas
   - 2-1 The Village of Ramkot
   - 2-2 The Village of Balakot

1. Activities of Related Organizations

Nepal's population, medical treatment, and hygiene problems are now extremely serious. These problems have been pointed out and analyzed in the previous chapters.

For example, the infant mortality rate is extremely high; as high as Japan's in 1935. In addition, its population explosion is continuing (a growth rate of 2.66%), and its society and economy are still pre-modern.

The agencies of the government of Nepal will have to make serious efforts to improve the situation as quickly as possible. The following is a brief introduction to the activities of a number of important related organizations which were visited during this survey.

(1) National Commission of Population (NCP)

The NCP is the government of Nepal's top-level population-policy-drafting and coordinating body. It is chaired by the Prime Minister, and is composed of social workers and representatives of the National Planning Committee, the legislature (Rashtriya Panchayat), and other governmental and non-governmental agencies concerned with population problems. The executive office includes: 1 permanent vice chairman, 1 director, and specialists in various fields.

In order to carry out the responsibilities described above, the NCP conducts surveys and studies related to population problems, and also provides information and conducts educational and advertising activities in order to implement policies. Activities under way at the time of the investigation included a multifaceted analysis and research of the structure of the population and analysis using a microcomputer. A documentation office which had been provided was engaged in high-level publishing activities.

(2) Ministry of Health

Nepal's Ministry of Health is the administrative body responsible for health, medical treatment, hygiene, family planning, and population matters. The administrative structure, from the head office to the local areas, consists of the head office, and offices at 3 levels: 14 zones, 75 districts, and the Panchayats in the cities and the Ilakas. Its health services are organized hierarchically, and consist of regional hospitals, zone hospitals, district hospitals, and health posts. Village health workers are assigned to each village Panchayat to provide terminal health service below the Ilaka-level health posts. In addition, community health volunteers are posted to the wards within each village Panchayat. The female health volunteers in each ward

provide careful family planning services to the women.

However, this structure has not been implemented nationwide. For example, female health volunteers receive a small allowance of only about 100 rupees per month, but they are only paid in 28 out of the 75 districts in the country. The Ministry of Health administrative system is complete at the central level, but budgetary problems and personnel difficulties severely restrict it at the regional level, so the organization is incomplete.

(3) Bhaktapur Hospital

Administered by the hospital division of the Ministry of Health, it is one of the district hospitals. It also serves as the Bhaktapur Panchayat Hospital. It now provides general medical treatment and dentistry services, and has 50 beds. It has a staff of 42, including 9 doctors, 10 nurses, 10 nursing assistants, and 13 other workers. It suffers from a lack of equipment: the only important piece of medical apparatus it has is an X-ray machine. Therefore, patients with serious illnesses are sent directly to Bira Hospital in Kathmandu. Approximately 100 people visit the outpatient clinic every day. Eighty percent come directly, 10% are sent from the health posts, and another 10% are sent by local doctors. The most-often heard complaints are diarrhea and parasitic ailments.

The hospital operates on three shifts (8:00 a.m. to 2:00 p.m., 2:00 p.m. to 8:00 p.m., and 8:00 p.m. to 8:00 a.m.). However, an increase in population has been accompanied by a jump in the number of patients, so staff, facilities, equipment and supplies, and drug shortages are all extremely serious. During the field survey, we saw many women and children patients receiving intravenous drips while lying on mats laid on the corridor floors. Also, Nepal's death rate for women, extremely high when compared with the rest of the world, is partly explained as the effect of a large number of deaths resulting from abnormal childbirths and post-partum illnesses.

(4) Water Supply and Sewerage Corporation

Established in 1984, it is the successor to the Water Supply and Sewerage Board, which dates back to 1973. It is responsible for providing the water supply and sewerage services in the cities, and at the present time its jurisdiction includes the Kathmandu Basin and 11 other cities. It supplies water to 985,000 people through a total of 750 kilometers of water pipe. It has 170 kilometers of sewage pipe and common-use water taps at 2,021 locations.

In the Kathmandu Basin, (includes the districts of Kathmandu, Lalitpur, and Bhaktapur) the water required for daily life comes from surface water, natural well water, and underground water, and the Water

Supply and Sewerage Corporation supplies 100 MLD of the water used by about 530,000 people. Half of it comes from rivers, and half is underground water. However, the system is inefficient, as 50% of it either leaks out of the system or is wasted. In addition, with Kathmandu's population growing at the rate of 4.5% a year, the city is short of water. The underground water contains large amounts of iron and ammonia, so drinking quality is also a problem. The corporation is presently working to prevent leaking and to exploit water sources outside the Kathmandu Basin. For example, it is now pushing ahead with a water-development project on the Melamchi River.

(5) National Planning Commission

The National Planning Commission draws up Nepal's social and economic development plans and coordinates its policies. It is now implementing its 7th development plan (1985 to 1990), and making efforts to stimulate production and to build infrastructure. The 7th plan is promoting policies to satisfy (by the year 2000) the basic needs of the people (food, shelter, health, education, clothing, and security) as determined in FY1984/1985. A real economic growth rate of 5% was achieved in 1988. The 8th 5-year plan will begin in July 1990, with one of its goals being the reduction of the rate of population increase to 1.9% per annum.

(6) Registrar's Office

The Registrar's Office was established in 1976 by the "Vital Registration Act of 1976," as a part of the Ministry of Home Affairs. Vital registration involves the registration of all events in people's lives from birth to death, including changes of address, births, deaths, miscarriages, marriages, divorces, adoptions, acknowledgments, annulments, and separations. Until recently Nepal did not have a civil-registration system, a serious administrative deficiency. This is because there is a close unbreakable relationship between a civil-registration system and vital registration.

The vital registration system was in operation in 10 districts in 1977, and is now in force in 40 of Nepal's 75 districts. Registration officials are assigned to each district under the Chief District Officer. Two officials compile records from the urban and rural Panchayats, and send them to the central registry office. The village Panchayat Director is responsible for vital registration, but one official is assigned to the urban Panchayat as the regional registrar.

In fact, its actual implementation is extremely inadequate. Reporting is poor, and there are no statistical analyses carried out on the records. The major reason the vital registration system is not functioning well is that the vital registration identity card bears no relation whatever to the economic activities of the people. Another

important factor is that the Vital Registration Offices are under the jurisdiction of the Ministry of the Interior, but the village panchayat directors and the urban panchayat regional registrars are under the jurisdiction of the Ministry of Panchayat and Local Development. Other problems are a shortage of staff and inadequate office facilities. Moreover, when it was introduced in 1977, assistance was available from the United Nations Fund for Population Activities (UNFPA), but this was cut off 5 years later, and when it became completely dependent on government support, its activities were severely curtailed.

Despite the fact that the most fundamental issue for a modern state is knowing the condition of its population, Nepal still does not have a registration system. This is a major defect in the administration of the country. As a result, it is still impossible to obtain basic dynamic statistics about the population of the country. It is necessary to increase the efficiency of the state by modernizing Nepal's administrative structure and providing it with the ability to obtain accurate information about its population.

2. Survey Areas

2-1 The Village of Ramkot

(1) General Features

Ramkot village, one of the survey areas, is located in the Kathmandu District, Bagmati zone, Central Development Region. Kathmandu District is composed of the Kathmandu Town Panchayat which is capital of Nepal and 62 village Panchayats. Ramkot is one of these village Panchayats.

In terms of Nepal's geographical divisions, the Kathmandu Valley is located in the hilly regions. The altitudes of central part of the Kathmandu Valley is ranging between 1,200 and 1,400 meters, and belongs to Semi-Temperate zone. Ramkot spreads from East to West along the western slope of the Kathmandu Valley, and, therefore, is located in a little higher place than the central part of the valley. Altitude also varies among in Ramkot.

Ramkot is located close to Kathmandu's municipal area. Although the distance from Ramkot to the municipal area varies from ward to ward, it takes from 30 minutes to one hour to walk to the bus stop on the ring road. The bus ride into the center of Kathmandu takes about 30 minutes. Therefore, Ramkot is easily accessible to the municipal area, that is, relatively easy to commute. This location gives Ramkot the advantage of being close to market for agricultural products and employment opportunities.

Ramkot is predominantry an agricultural community, with over half of its labor force employed agricultural sector. Others work for public and private services and as wage laborers such as agricultural laborers and building and road construction laborers in Kathmandu.

The way of agriculture practiced varies from ward to ward, reflecting on the geographical conditions. The map of Ramkot are shown in Figure 1. It has already been pointed out that the altitude varies among wards. Wards 1, 2, 3, 8, and 9, are located on the upland slopes. As there are no appropriate irrigation facilities in these wards, they are not suitable for paddy cultivation. Therefore, fruit is mainly cultivated there. On the point of marketing, the location of Ramkot has great advantage, that is, closely located to Kathmandu city. Hearing from a villager who peddles fruit, he could go to a market in Kathmandu early in the morning, sell his fruit, and return home before noon. In that season (August), the most prevalent fruit was pears. The peddler would sell about 130 rupees worth of pears for one time, and his return is about 60 rupees. (At the time of the survey: 1 rupee is approximate 10 yen) This kind of peddling, is one of the forms of service employment mentioned above.

Paddy cultivation is operating in Wards 4, 5, 6, and 7 which are at a relatively low altitude. The major summer crop is rice; in the winter it is wheat. Irrigation system has been introduced into Ward 7 twenty-five years ago. In the other 3 wards, there is a shortage of agricultural water because, without an irrigation system, they must rely on rain water to fill their paddies.

The major source of water varies among the wards. Wards 1, 8, and 9 are located at higher altitudes, and part of the Panchayat's border is located along a forest. Drinking water can be obtained from springs in the forest. The forest is part of the Panchayat, but is administered to by the central government. In Wards 2 and 3, the most important sources of water are rainfalls and the river. Twenty-five years ago, a water supply system was introduced into Wards 4 and 5, but as a result of poor maintenance, the broken pipes have not been repaired, so it does not operate efficiently. In Ward 6, water is taken from a spring inside the ward. The only ward in Ramkot with water supply system is Ward 7. The provision of a water supply system is an important issue for the Panchayat. It is a particularly vital matter for the residents in those wards where river water is used. It is customary to bury rather than cremate the dead, and many graves are located near the rivers. In addition, toilet sites also are close to the river. Consequently, it is inevitable that the water flowing through the inhabited areas downstream will be contaminated by human waste entering the river upstream. Since this is a cause of contagious diseases, the provision of a water supply network is an essential element in the policies intended to prevent epidemics.

(2) Population and vital statistics

Total population of the Ramkot village Panchayat is 7,226 people: 3,528 male and 3,679 female. With a total of 994 households, the average household size is 7.27. This is higher than the national average of 5.8 persons per household. For the interviewing, 4 wards were selected among 9 wards and interviews were conducted with the members of a total of 20 households, 5 from each of the 4 wards. Table 1 shows the total population, number of households, and average household size in each ward.

The average household size of the 20 households surveyed was 6.4 persons. There were 10 extended families, including stem families, and the other 10 were nuclear families. Women over 35 had an average of 4.3 children, those over 30 had 3.4, and women under 30 had an average of 2.8 children.

Concerning questions about infant deaths, a total of 17 infants had died in 10 of the households. Among these, the number who did not survive one year (including still births) came to 11.

Even this small sample of only 20 households indicates that a high rate of infant mortality results in a low child survival rate. In order to compersate, this birth infant mortality rate, women continue to give a birth even in the latter period of reproductive age.

Complete records of the vital statistics of Ramkot have been kept for 23 years by Mr. Prem Bahadur Giri (Village Chief). He recorded births, deaths, marriages, divorces, and migration records. This vital statistics recorded 11 years ago, when Nepal implemented vital statistics project. It is necessary to present a child's birth certificate when he or she enters elementary school. Consequently, even if parents fail to report the birth of a child, the omission is corrected when the child reaches school age. According to Pradhan Panchayat, because the members of many Ramkot households work full time, or obtain seasonal jobs in Kathmandu, children to elementary schools which function as day-care centers. As a result, the rate of school attendance is high. Consequently, when children whose births were not reported reach school age, it is possible to detect and register them. At the present, civil registration has only been implemented in 40 of Nepal's 75 districts. In these 40 districts the reporting rate for births and deaths is extremely low rates, that is, 25.6% and 11.6%, respectively. Under these circumstances, this long-term, continuous record of vital statistics is particularly noteworthy. During the survey, a visit was made to the Vital Registration Office, but it was difficult to obtain vital statistics based on the records available because of its extremely low reporting rate. It is necessary to improve the efficiency of the project by recommending the adoption of the methods used in Ramkot. Records obtained at the Panchayat level are

passed on to the Ministry of the Interior through the district office and the Central Office for Vital Registration, but regrettably they are not aggregated at each level.

(3) Living conditions

The major public educational facilities in Ramkot are 5 elementary schools and 1 middle school. Public health services are a health post and a branch office of the Family Planning and Mother and Child Project. There are also a cooperative association, a post office, and a youth club, called a "Joyanti." The youth club's activities include coordinating assistance programs within the Panchayat.

The elementary schools have a total of 888 pupils, and there are 599 pupils in the middle school (1989). There are 18 elementary school teachers and 14 middle school teachers. All of the elementary teachers live in the village, while 40% of the middle school teachers commute from outside.

Ramkot was electric field about 2 years ago. Two or three years ago, television antennas were not seen in the Panchayat, but this time they were extremely conspicuous. Thirteen of the households surveyed had a radio and 3 owned a television set. Spot advertisements concerning medical matters are broadcast on the radio and television. They are also a major source of information on preventative inoculation and family planning services. These services will be explained later.

The standard of living in Ramkot has been rising steadily for the last 5 years. Of the 20 households interviewed, 2 said that their standard of living had risen very sharply, 12 reported that it had risen a little, and 6 said that it had unchanged. This indicates that overall, the standard of living is tending to rise. In almost all the households reporting a rise in their standard of living, the income was derived from both agricultural and wage laborer, and, in many cases, their income was non-agricultural. Living close to municipal area of Kathmandu, the villagers enjoy the benefits of relatively easy access to employment opportunities, particularly in the service industry.

(4) Health and medical care

As mentioned before, there is a health post in Ramkot. The main function of a health post is for primary health care. In addition, an MCH (Mother and Child Health) clinic is held once a week for antenatal and postnatal care of mothers. However, it does not provide delivery services. The health post has 5 staff members: 1 health assistant, 2 auxiliary health workers, and 2 auxiliary nurse and midwives). The health post also provides health care and medical treatment services to 6 other Panchayats besides Ramkot. Its consultation hours are from 10 a.m. to 2 p.m., and an average of 30 patients are treated per day.

In addition, 63 community health volunteers (CHV) are involved in the task of publicizing and guiding family planning and maternal care services under the jurisdiction of the health assistant in charge of the health post. Introduced in 1989, the system's main function is to inform women about family planning and mother and child health. The volunteers are all literate women. In principle, one volunteer is chosen from each ward. They are volunteers, but receive 100 rupees per month as honorarium.

Despite the fact that the health post is located inside the Panchayat, it is not well utilized. Concerning questions about the place for treatment when they are sick, 8 households replied they go to the health post, 9 replied they receive treatment at a hospital or private clinic and 3 answered that they go to faith healers, called "Dhami" and "Jhankri." Being close to the capital, it is relatively easy for the people to use hospitals and private clinic, which are better equipped than the health post. In this sense, the community is favored with a relatively good medical accessibility. However, the results also show that the old custom of receiving treatment from faith healers is still preferred.

About the delivery, six of the households go to a hospital or private clinic to give birth, and 14 have delivered at home. About the attendants at the time of delivery 6 reported that the woman's mother-in-law assisted at the birth, and an experienced neighbor helped out in 8 of the households. It seems that villages cooperates each other in the community in the case of home delivery. It appears that a qualified physician rarely attends at a birth. The proportion of births taking place in institutions is higher than the national average, but the fact of deaths including, stillbirths shows that the medical conditions on childbirth is not fully sufficient.

The cause of the 8 child deaths was either unknown or else no post-mortem examination was done. Most of the infant deaths reported were caused by contagious diseases: diseases of respiratory system such as coughing, measles and digestive infections such as diarrhea.

Insects are the medium for the spreading of some contagious diseases, and insect extermination is under consideration as an epidemic-prevention measure. Electric insecticidal mats were being used in the houses visited during the survey. In the hilly regions of Nepal, the houses are generally 3 stories high. The first floor is for the animals, the second for sleeping and the storage of fodder and grain, and the third floor is the location of the kitchen where sacred symbol - fire - is used. In the houses which were visited, the electrical insecticidal mats were not used to protect the people, but rather the animals on the first floor. This indicates that, in this region, where animals are extremely useful possessions, their management takes precedence over people's health.

There are still many problems within the medical system. The high rate of preventive inoculations promises an improvement in the infant mortality rate. Only 1 household out of the 20 interviewed stated that their children had not been inoculated. Their main source of information about inoculations is the radio. It appears that pamphlets distributed by the health post have also contributed to the publicizing of inoculations. School attendance is high and there is a child day-care center which also serves as a nursery school. It is possible to promote inoculations and health care and medical treatment through these institutions. Their activities will be an issue in the future.

(5) Family planning

The results of interviews on family planning are shown in Table 2. The average number of sons in the 20 households is 2.1; the average number of daughters is 1.25. It appears that a high proportion of the households are practicing family planning. As the figures for the average number of children indicate, in households practicing family planning, the average number of children is high. An examination of the relationship between the practice of family planning and the number of children shows that while the desired family size is 1 son and 1 daughter, sterilization is accepted when the family has 3 to 5 children. As already mentioned, the infant mortality rate is high, so couples must have many children in order to bring the number of surviving children in the family close to the desired number. Also, when asked how many additional children they wanted, members of households with no sons stated that they wanted at least one son. Therefore, in these homes, condoms were preferred.

Son preference has been shown 8 of the households. However, even in those households whose members answered to have no preference, the number of children was 2 sons and 1 daughter. There observed actually a strong preference for sons. The major reason given for preferring sons, cited in 7 households, was the parent's security in their old age. Others cited religious reasons.

Reasons for not practicing family planning, 4 replied menopause, 1 cited health reasons, and 1 household reported not knowing of family planning. The women who answered menopause were, with one exception, in their early thirties. In all cases, they had at least 4 children, and based on the children's ages, the first was born when the mother was about 15 years old. Considering high infant mortality rate, the actual birth rate is probably much higher. If the severity of the women's work in the agricultural village and the low nutritional level is considered, women's reproductive period in Nepal must be shorter than the normal reproductive period, from 45 to 49 years old. Newspapers and the radio are an important information source of family planning. On the point of educational level of the head of household, the educated, persons with at least an elementary education, is getting information on family

planning from newspapers and radio. In the case of the household head who replied not practicing family planning because he has no information about it, neither he nor his wife had any education. This indicates that educational levels played an important role of getting information of family planning. It is expected that home visits by CHV volunteers to disseminate information about family planning and mother and child health will eliminate this information gap in the future.

2-2 The Village of Balakot

(1) Summary

Balakot is a village about 15 kilometers east of the middle of Kathmandu in the Kathmandu Basin. Located about 1,300 meters above sea level, it lies on a gentle slope which drops to the west, and which is crossed by a number of small rivers. Consequently, it is favored with extremely good water conditions, and most of its land is used for wet-field rice cultivation. Aside from one Indian-managed carpet factory, the only productive activity in Balakot is agriculture. However, because of a lack of skills, no one of the villagers works in the factory which is completely staffed by outsiders.

Officially it is called the Balakot Village Panchayat, and is located in the 7th Ilaka of Bhaktapur District in the Bagmati Zone. It is made up of 9 wards. The 7th Ilaka also includes Dadhikot Village Panchayat and Sirutar Village Panchayat.

The present population of Balakot is 4,027, and it has 3 elementary schools, 1 middle school, and 1 high school. The village is located directly between Kathmandu and Bhaktapur, close to the Aaranik Highway that connects the two cities. Therefore, transportation is extremely convenient. The village roads are all gravel-covered, but the national road is paved, and trolley busses run on it. Consequently, it is possible to travel to either Kathmandu or Bhaktapur in 20 minutes by car, and in 45 minutes by trolley bus. The infrastructure includes: electric power (introduced 10 years ago), a simple public water supply system (introduced 6 years ago), telephone service (extremely limited scale), a public office, and a meeting hall. A health post is currently under construction in Ward 4.

(2) Population and standard of living

In 1987, the population of Balakot was 4,027, including 2,030 men and 1,997 women. In 1988, it was 4,221: 2,145 men and 2,076 women. This means that its population increased by 194 - 115 men and 79 women - in a single year. These surveys were conducted by volunteers from the family planning group which visits every home in Balakot. In 1986, they began their activities with the support of the United Nations Fund for

Population Activities (UNFPA). The program was scheduled to continue for at least 5 years.

A village vital-registration system is in operation at the public office. Citizens must report the required events to the office within 35 days, or pay a 1-rupee fine for every day the report is late. Despite this penalty, it is said that the reporting rate is below 25%. The citizens usually report deaths, but rarely report births, marriages, and changes of address. They remember it when problems occur. The mayor has sent notices to the ward officers regarding the enforcement of this law, but the information does not seem to reach the people. Therefore, the Balakot public office does not have accurate information about the make-up of its population.

In 1987, Balakot had 664 households with an average of 6.04 family members, slightly higher than the national average. The number of households in each ward ranged from 64 to 93, and the population varied between 343 and 600. About 40% of the residents of Balakot are Newar, about 40% are either Brahmin or Chatri, and the rest are Damai and other groups. It is a community with a relatively large Newar population.

As mentioned above, the major product of the community is rice. Corn is grown along with secondary crops, such as wheat and beans. It has a good water supply, and since it is close to Kathmandu and Bhaktapur, it has all the advantages of a farming community located close to urban markets. However, it only produces agricultural products, and because most of its land is owned by absentee landlords living in Kathmandu, between 90% and 95% of its agricultural workers are tenant farmers. After land reform, nobody could own more than 20 ropani (1 ropani = 509 square meters), but by recording different pieces of land as the property of various members of their families, the landlords (Zamindar) have ended up owning as much land as before. However, the tenants have a latent right of ownership. If a tenant cultivates a piece of land continuously for more than 1 year, the landlord must give him 25% of the land for free when he sells it. There are 3 levels of cultivation fees charged according to the condition of the land, but on the average, it is 50% of the crop. However, secondary crops are not subject to a fee. The area a tenant farmer cultivates varies according to his relationship with the landowner and the length of time he has worked the land, but it is said to be about 4 ropani per household. Using the old Japanese terms, that comes to about 3.5 tanbu (1 tanbu = 1/10 hectare) per household.

This shows that Balakot, a community which at first glance appeared to be a rich, wet-field farming village, is, in fact, a community consisting almost entirely of tenant farmers cultivating extremely small plots. Consequently, they are hard up for food, cannot hope to obtain very much cash for their secondary crops, and are forced to live extremely frugal lives.

Balakot is close to Kathmandu, and many of its residents, about 800 per day, go to Kathmandu to work. About 400 of them work as construction laborers, an insecure form of employment. However, this non-agricultural income is very important to their household finances. In addition, by going to the city, they are able to obtain a variety of information about the economy and their society.

(3) Medical treatment and hygiene

Balakot has neither a hospital nor a health post. One health post is currently under construction in Ward 4, and will open soon. So when a villager is sick, the choices are a 40-minute walk to the Thimi health post, or a one-hour bus ride to Bir Hospital in Kathmandu, or Bhaktapur Hospital. They have no household medicines, and when they feel ill, they first go to a traditional healer, either a Dhami or a Jhankri, then they go to either the health post or a hospital. If one member of a family commutes to Kathmandu to work, it is common for members of the household to go directly to the hospital in Kathmandu.

Births generally take place at home with the woman's mother or mother-in-law, or an older neighbor, assisting. Awareness of hospital births has not penetrated to this community. In addition, the people are poor. This investigation of 20 households revealed only one case of a hospital birth. It is customary for births to take place in a room adjoining the kitchen, the place where water can be boiled. If the kitchen is on the first floor, the birth takes place on the first floor. It is on the second floor the birth occurs there, and so on. This creates extremely severe hygiene problems because in the Kathmandu Basin, animals such as cattle, goats, donkeys, and chickens are kept in people's houses. Also the ovens have no chimneys, so smoke and soot drift around inside the rooms. This is a source of serious hygienic problems when a women is bearing a child.

Also, like the people in other villages, the residents of Balakot use grassy plots and the banks between their rice fields for toilet purposes, and generally, there are no toilets in or near the houses. Therefore, both animal and human excreta are left to be blown by the wind in the dry season, and washed away by rain water during the rainy season. As a result, it permeates the paddies and fields and the underground water supply. Despite the fact that Nepal is not part of a cultural area where human waste is used as fertilizer, dangerous cycles occur here. They are: human excreta --> paddies and dry fields --> food, and: ground water --> people --> human waste. The damage done by these cycles, which introduce bacteria and parasites into the human body, can be seen everywhere.

Large quantities of river water, water from the fields, and well water are used for drinking and other day-to-day uses, and recently a public water supply system has come into use in Balakot (6 years ago).

People cannot get water from the public supply system through the taps in their homes. Common-use taps are located at strategic points in the wards. Each day someone from each household goes to one of the common taps to get water and take it back to her house. It is a Nepalese custom to drink surface water, well water, and water from the public supply without boiling it. At many Balakot funerals the body is cremated at the Hindu Pashupatinath Temple and this causes no problems, however, if the cremation takes place upriver, the residue from the cremations is thrown into the water, or, as some people still follow the custom of burying the dead, it will have an effect on the quality of Balakot's surface and well water. In addition, the city of Bhaktapur (population about 50,000) is upriver from Balakot, which means that its waste water flows through the town. As a result, the water used for drinking and other day-to-day uses in Balakot is definitely not hygienic. The unhygienic condition of the water is a major reason why, in Balakot, diarrhea is widespread among the general population, and it is a major cause of infant deaths.

The Balakot health post is now under construction, and 9 community health volunteers are assigned to each of Balakot's 9 wards. They are the front-line workers in the task of promoting health, hygiene, and family-planning among the inhabitants. As their title indicates, they are volunteers who get 100 rupees per month from the government to cover their transportation costs, and they receive only 15 days training in health care and hygiene. Many aspects of the subject of family planning guarantee that only women can get a satisfactory response. Therefore, educated female health volunteers have been recruited and their activities are being integrated with those of the community health volunteers. Their work will make a great contribution to the improvement of the backward state of Nepali medical care and the poor hygiene found in the farm communities.

(4) The women of Nepal --Bearing a heavy load, low social status--

The life expectancy of Nepalese women is 51.6 years, 2.8 years shorter than the 54.4 year life expectancy of the men of Nepal (1988). Throughout the world, women's life expectancy is usually longer than men's. This is a unique aspect of Nepal's population problem. According to the director of Bhaktapur Hospital, one factor contributing to the high death rate among women is the high death rate resulting from abnormal childbirths and post-partum illnesses. The excessive workload and poor nutrition of women throughout Nepal's poor agricultural society also contributes to their shorter life expectancy. In addition, they do not know enough about hygiene during and after childbirth. Other major problems are the old customs and low educational level of women in Nepal's rural society.

In Balakot, almost all the farms are extremely small and owned by absentee landlords, the level of agricultural technology is low, and

productivity is poor. Under these circumstances, many of the farmers must rely upon non-agricultural work for half of their incomes. (see Table 4). As a result of the low level of agricultural technology, more workers are needed to operate the farms. Consequently, the work performed by women and children is extremely important. It is mostly men who go to the cities to work. This increases the burden on the women, who must labor on the farms in place of the absent men. As a result, the women must risk their health during pregnancy and return to work much sooner than they should.

In Nepal, the women's status is lower than men's, a fact that is clearly evident in the way parents educate their children. The survey conducted in Balakot shows that the overwhelming majority of those over the age of 11 (the age they complete elementary school) without an elementary school education were women, and indicates that the people feel a boy should have at least an elementary school education (see Table 4). It is the fundamental responsibility of the government to popularize education, and uneducated women bearing and raising children is the major obstacle to efforts to raise the standards of health and hygiene in Nepalese families. The 1981 national census revealed that educational levels were very low in Nepal: only 34.9% of its men, and only 11.5% of its women are literate. Also, elementary school (ages 6 to 10) enrolment ratio compiled by the Ministry of Education and Culture (1984/1985) were 84.8% for men, but only 44.1% for women.

The low status of the women of Nepal is prescribed by Hindu doctrine. Women are considered to be the possessions of men, and must obey them. Although an item in the constitution declares that men and women equal, women are not treated equally under the laws concerning property, inheritance, marriage and divorce. For example, women do not have the right to inherit their parents' property, and after a women marries she does not have the right to own anything but her personal possessions. It is still customary for men to eat before women do.

(5) Case study of a sample household

In family S in Balakot Ward 3, the husband is 34 years old, the wife is 30 years old, and they have 2 children. The children are both girls; one is 7 and the other 1 1/2 years of age. They did have two boys, but one died of diarrhea at the age of 3, and the other developed a tumor and died when he was 1 year and 7 months old. They want another son, so they do not practice family planning.

Each time the wife went into labor, her husband's mother came from her nearby home to help, boiled water on the first floor and left. The wife has never studied pregnancy and childbirth nor the precautions which should be taken at the time of childbirth. All she knows is a few things her mother told her. Each time, she continued to work until the baby was born, took only a two week rest, and returned to her normal

daily routine after one month. During pregnancy, she was careful to eat meat once a week instead of once a month as usual. Because she does not drink milk, she occasionally ate eggs.

She nursed her newborn infants for one year, then switched them to rice broth and soup. The children have diarrhea regularly, and the oldest child had been suffering from diarrhea for more than a month when we interviewed her. The mother has diarrhea two or three times a year, but the father does not, perhaps because he drinks wine. They drink the water from the nearby common tap without boiling it. They use a specific place outside as a toilet because they do not have one in the house.

No one in the family has had a serious illness, but when they have a minor ailment, they either seek help at a drugstore on the national highway or go to a health post. The wife has never gone to the health post during her pregnancies, and the children have never been inoculated, nor have they had a medical checkup. They did not register their marriage or the births of their children, and know nothing about the system. Although she is now 7 years old, the eldest child helps her mother by taking care of the baby, going for water, etc., instead of going to elementary school. They say that the problem is that if the eldest child went to school, the mother would not be able to do farm work.

The house is their own, but they rent the paddies and dry fields. They grow rice in the summer and wheat in the winter on 3 ropani of land. The family have been tenant farmers for generations. They give 50% of their rice to the landlord but can keep all the wheat for their own use. Their total income is 8,800 rupees. The husband receives 3,500 rupees as a paid laborer, and the farm provides another 5,300 rupees. They work as hard as they can in order to provide their family with three meals a day.

They would like to send the youngest child to school to learn how to read and write. The whole family eats together every day, and they are satisfied with their life in Balakot. Neither the husband nor his wife has any education.

(6) Conclusion

Balakot is a farming village located close to 2 cities. It is directly between the capital of Kathmandu and Bhaktapur, the location of the district government, and about 20 minutes by car and 1 hour by trolley bus from either city. The people of the community can easily commute to school or to a job in both centers. Actually, about 20% of them commute to Kathmandu to work, and a number of young people go to middle school in the capital. Despite this, life in Balakot is still extremely traditional. This can be seen in their lives: family

relationships, house construction, agricultural methods, education, and various administrative procedures.

Balakot is within commuting distance of the capital and its people have ready access to the information Kathmandu can provide, but a major reason for the backwardness of Balakot, is that the capital of Kathmandu is still not a very modern city. Balakot is a poor farming community composed entirely of extremely small tenant farmers. Without their own land, the farmers have little motivation to invest in production, and have not accumulated any capital.

However, they all want to improve their daily lives and the health of all the members of their families. It is the responsibility of the government to build up a trusting relationship between itself and the people by promoting the improvement of their daily lives, and by working to develop Nepalese society and the nation's economy, both of which are far behind that found in the rest of the world.

The following reforms are necessary to improve the daily life of the people:

1) Eliminate the damage done by bacteria and parasites by promoting the boiling of drinking water.

2) Eliminate the custom of freely using the outside as a toilet by popularizing the use, in or beside people's houses, of siphon toilets, a type which is in general use in Thailand. By using a siphon toilet, it is possible to remove excreta and urine completely with 1 liter of water. They are simple to install and inexpensive.

3) Separate buildings should be built for farm animals in order to end the practice of people and their animals living in the same house. This would sharply improve the hygienic conditions in people's homes.

4) Popularize the use of chimneys to reliably discharge cooking fire smoke from people's houses.

5) The government should implement a nutritional guidance program to improve the people's diet.

The following reforms are necessary to improve Nepal's administrative procedures.

6) It is necessary to immediately carry out a national reorganization of the system of public offices and establish a civil registration system.

7) In order to reform the people's burial practices, the establishment of low cost, interfaith crematoriums to be managed by the district administration should be realized. If possible, electric crematoriums should be built to take advantage of the development of electric power services in the future.

8) For the time being, the setting up of a compulsory education system which will include at least elementary education and institute a free school lunch program should be undertaken. This will bring sweeping improvements in the quality of the children who will be the bearers of the next generation. It will also increase their parent's trust in the government.

9) Promote land reform, increase the number of landed farmers, and develop a system of agricultural cooperatives. This will improve both agricultural productivity and the living standards in the farming communities.

Note

1) Rajeshwar Acharya, Registration of Vital Statistics in Nepal: Overview, 1987, p.27

Table 1 Population and Number of Households by Ward

Ward number	Population		Number of households	Average household size
	Male	Female		
2	297	445	106	7.0
4	464	400	108	8.0
5	420	280	110	6.4
7	391	470	124	6.9

Source: Hearing from the Panchayat Office at the time of the survey in 1989

Table 2 Numbers of Children and Methods of Family Planning

Household number	Number of children		Sex preference	Family planning method	Information source of family planning
	Sons	Daughters			
1	4	2	Son	F.S.	Newspaper/radio
2	2	2	None	-	-
3	2	2	Son	Injection	PHC
4	2	0	Son	Condom	PHC
5	3	2	None	-	-
6	3	1	Son	-	-
7	3	0	Son	Condom	Private clinic
8	2	3	None	F.S.	Training of FP
9	4	1	Son	-	-
10	0	1	None	Condom	Private clinic
11	3	0	None	Condom	Newspaper/radio
12	2	0	None	F.S.	Newspaper/radio
13	3	0	Son	Condom	Newspaper/radio
14	1	2	None	F.S.	Newspaper/radio
15	2	1	None	F.S.	PHC
16	1	3	Son	-	-
17	2	2	None	F.S.	Newspaper/radio
18	2	1	None	-	-
19	0	1	None	Condom	Newspaper/radio
20	1	1	None	F.S.	Newspaper/radio

Notes: F.S. - Female sterilization
PHC - Primary Health Center

Table 3 Families and Children

Item	Language	Family size	Unmarried children		Number of children that have die	
			Boys	Girls	Boys	Girls
Household number						
1	Newar	4	1	1	2	
2	Nepali	8	3	1	1	
3	Nepali	7	1	2		1
4	Nepali	4	2		1	1
5	Nepali	4	1	1	2	
6	Nepali	4	1	1	3	
7	Newar	5	2	1		1
8	Newar	13	3	4	1	
9	Newar	11	2	4		
10	Nepali	5	1	2		
11	Nepali	4	3			
12	Newar	5	1			
13	Nepali	6	1	2		
14	Nepali	5	2	1		
15	Newar	5	3			
16	Nepali	5	2			
17	Nepali	6	3	1	1	
18	Nepali	8	4	1		
19	Nepali	7	2	2	1	
20	Nepali	8	2	2		1

Note: Includes direct-descent families and, in the case of large families, grandchildren.

Table 4 Annual Income and Educational Levels

Household number	Annual income (rupees)			Educational level of people over 11 years of age					
	Agricultural income	Non-agricultural income	Total	Illiterate		Less than elementary school		Elementary school graduate or higher	
				Boys	Girls	Boys	Girls	Boys	Girls
1	5,300	3,500	8,800	1	1				
2	6,050	15,000	21,050	2	2			2	
3	1,500	12,200	13,700	1	2			2	1
4	3,900	4,000	7,900	1	1	1			
5	4,650	3,050	7,700	1	2			1	
6	3,360	4,000	7,360	1	1				
7	2,000	7,500	9,500	1	1			2	1
8	2,000	12,400	14,400						
9	2,000	13,000	15,000		3	1	1	1	2
10	2,000	11,000	13,000		1			1	
11	40,000	44,000	84,000		1			3	
12	2,500	12,000	14,500	1	2			1	
13	4,000	3,000	7,000		2			1	1
14	7,000	0	7,000		1			1	
15	1,600	4,200	5,800	1	1	1			
16	27,500	0	27,500		2	2			
17	5,300	0	5,300		1	1		2	
18	9,100	18,000	27,100				1	3	2
19	16,100	15,000	31,100		1		1	2	2
20	6,950	9,600	16,550		3	1		2	1

Figure1 The Village of Ramkot

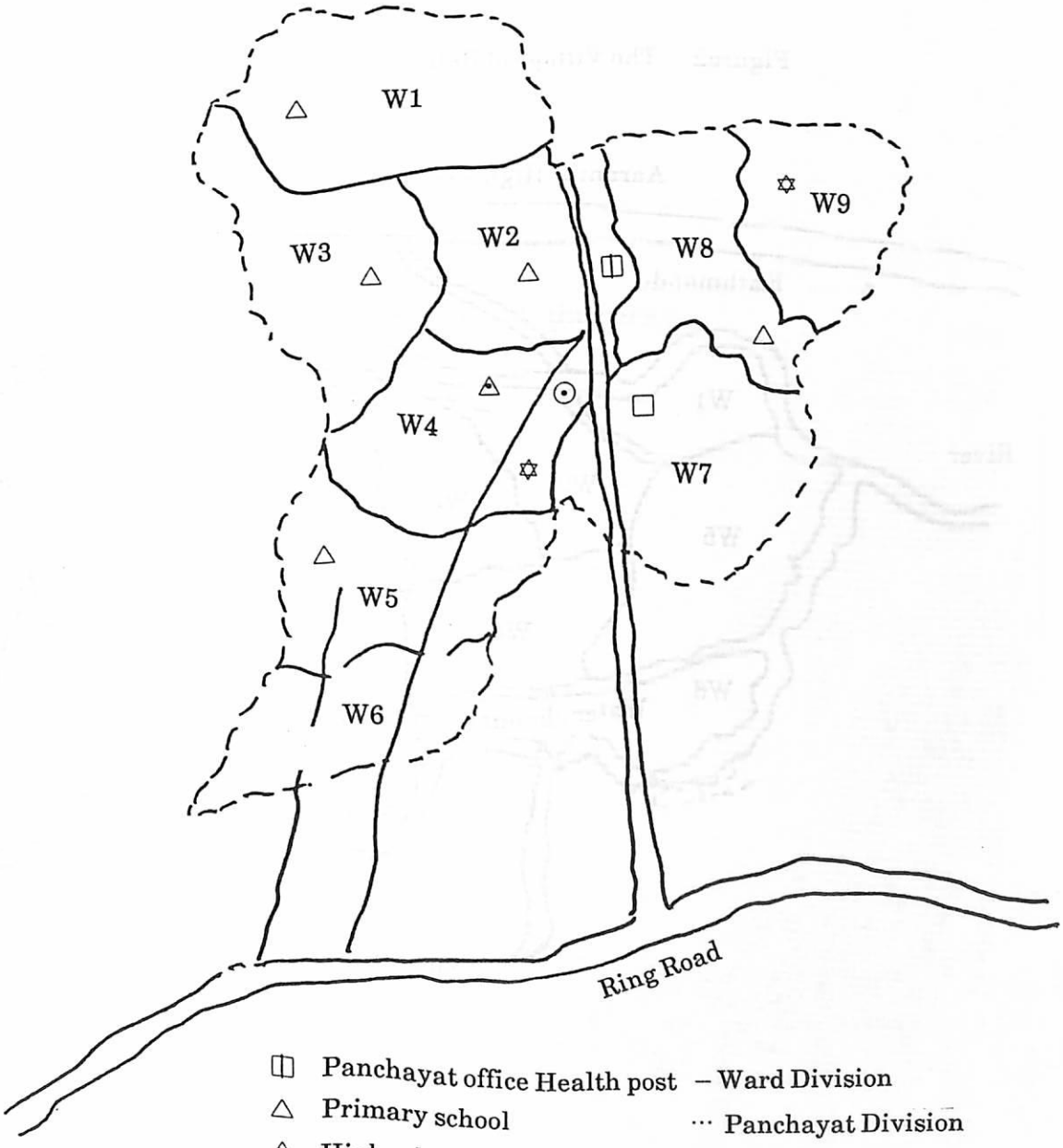
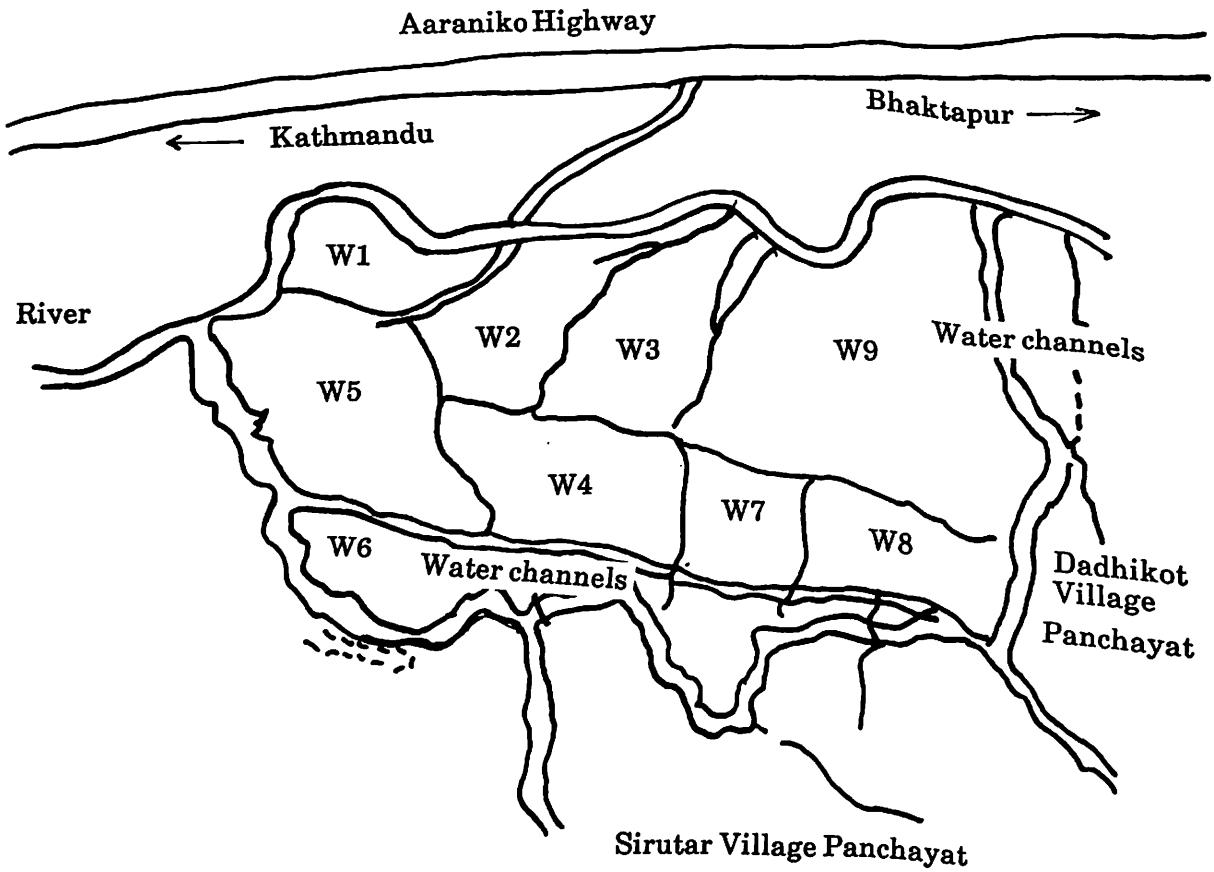


Figure2 The Village of Balakot



Chapter 5

Survey Members and Itinerary

Survey Members

1. Japanese Committee

Dr. Toshio Kuroda	Director Emeritus, Nihon University Population Research Institute (Head, Field Research Team)
Mr. Hiroaki Washio	Senior Researcher, Economic Cooperation Department, Institute of Developing Economies (Member, Field Research Team)
Dr. Hidesuke Shimizu	Professor of Public Hygiene, School of Medicine, The Jikei University
Ms. Yuiko Nishikawa	Lecturer, Shokei Women's Junior College (Member, Field Research Team)
Mr. Tsuguo Hirose	Secretary General, The Asian Population and Development Association
Mr. Masaaki Endo	Senior Program Officer, The Asian Population and Development Association

2. Cooperators

Embassy of Japan in Nepal

Mr. Kazuaki Arichi	Ambassador
Mr. Takashi Muromoto	Second Secretary

Rashtriya Panchayat

Hon. Tika Jung Thapa	Chairman, Rashtriya Panchayat Forum on Population and Development
Mr. Jeevan Lal Satyal	Secretary, Rashtriya Panchayat Secretary
Mr. Bishnu D. Uprety	Assistant Secretary, Rashtriya Panchayat Secretary

JICA Office in Nepal

Mr. Shuichi Kumano	Director
Ms. Keiko Kokubu	FP/MCH Project Leader

National Commission on Population

Mr. S. P. Adhikari	Secretary
Dr. R. D. Pant	Senior Economic Advisor
Dr. P. L. Joshi	Advisor

National Planning Commission

Mr. M. S. Dhakal	Member Secretary
Ms. P. Mathima	Assistant Secretary
Dr. G. R. Khamal	Section Officer

Ministry of Health

Mr. Bashudev Pradhan	Secretary
Dr. D. N. Regmi	Additional Secretary
Dr. Ram B. Adiga	Chief, Public Health Division
Dr. A.M. Acharya	Chief, FP/MCH Project

Water Supply and Sewerage Corporation

Dr. B.P. Shah	Chairman
Mr. D.R. Sharma	Chief Engineer
Mr. S.B. Shrestha	Planning Manager

Vital Registration Office

Mr. Y. B. Karki	Registrar

Central Statistics Bureau

Mr. K.R. Sharma	Deputy Director

Tribhuvan University

Center for Economic Development and Administration

Dr. Sant B. Gurung	Executive Director

Central Department for Population Studies

Dr. Gajanand Agrawal	

Teaching Hospital

Dr. Bhala Rijal	Director
Mr. Yoshinori Terasaki	JICA Coordination Expert, Medical Education Project
Dr. Yoshikuni Satoh	JICA Expert, Medical Education Project

Maternity Hospital

Dr. D. S. Malla	Director
Dr. A. Shresta	Assistant Director

Bhaktapur Hospital

Dr. I. S. Pradhan	Director

Bhaktapur District Public Health Office

Mr. D. P. Sharma	Senior District Public Health Officer

Ramkot Village Panchayat, Kathmandu District

Balakot Village Panchayat, Bhaktapur District

UNFPA

Mr. Gerardo Gonzalez	Country Director
Mr. D.B. Lama	Senior Programme Officer

UNICEF

Dr. Lay Maung	Representative

Survey Itinerary

August 13 to 25, 1989

Aug. 13 (Sun.)	11:00 Leave Narita on TG641 15:30 Arrive in Bangkok
Aug. 14 (Mon.)	10:55 Leave Bangkok on TG311 12:45 Arrive in Kathmandu Pay courtesy call to Hon. Tika Jung Thapa, Chairman of Rashtriya Panchayat Forum on Population and Development and explain the outline of survey. Mr. Jeevan Lal Satyal, Secretary, Nepal Rashtriya Panchayat Secretary
Aug. 15 (Tue.)	Visit Embassy of Japan. Pay courtesy call to Ambassador Kazuaki Arichi and explain the survey outline. Visit Ministry of Health
Aug. 16 (Wed.)	Visit JICA Office Visit FP/MCH Project Office Visit UNICEF
Aug. 17 (Thu.)	Visit National Commission on Population Visit National Planning Commission
Aug. 18 (Fri.)	Household interview (Ramkot Village Panchayat, Kathmandu District)
Aug. 19 (Sat.)	Household interview (Balakot Village Panchayat, Bhaktapur District)
Aug. 20 (Sun.)	Visit Center for Economic Development and Administration, Tribhuvan University Visit Central Department for Population Studies, Tribhuvan University Visit Bhaktapur Hospital Visit District Public Health Office, Bhaktapur District
Aug. 21 (Mon.)	Visit Maternity Hospital Visit Tribhuvan University, Teaching Hospital Visit Public Health Division, Ministry of Health

Aug. 22 (Tue.)	Visit UNFPA Visit Water Supply and Sewerage Corporation Visit Vital Registration Office Visit Central Statistics Office
Aug. 23 (Wed.)	Report the survey results to the Embassy of Japan. Report to the Hon. Tika Jung Thapa of the Rashtriya Panchayat Forum
Aug. 24 (Thu.)	Data compilation 13:45 Leave Kathmandu on TG321 18:15 Arrive Bangkok
Aug. 25 (Fri.)	Leave Bangkok on TG740 18:25 Arrive Narita

Appendices

COMMUNITY SURVEY QUESTIONNAIRE-NEPAL

Name of Panchayat : _____

Ward No. : _____

Mother Tongue : _____

I. Household :

I-1 Name of the head _____

I-2 Present members of the household

Name	Relation to the head	Age	Sex	Marital status[1]	Age of marriage	Education[2]	Occupation[3]
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

note)

① Marital Status

1. Never married 2. Married 3. Divorce
4. Separated 5. Widower / Widow because spose is dead

② Education

1. No schooling 2. Elementary school not complete 3. Elementary school
4. Junior high school 5. Senior high school 6. Academy / University

③ Occupation

1. Cultivator 2. Agricultural labourer 3*. Working other than agricultural sector
4. Seeking job 3. Engaging in home duties 6. Attending school

*If encircle No.3, please write the kind of job engaged in and working place.

Job : _____

working place: _____

I-3 If you have any child who died before, please give details.

	Sex	Age of death	Cause of death		Sex	Age of death	Cause of death
1				5			
2				6			
3				7			
4				8			

I-4 Migration

① Where is your birth place ?

Husband_____ Village_____ Panchayat _____ District
Wife _____ Village_____ Panchayat _____ District

② Where is your last residence ?

Husband_____ Village_____ Panchayat _____ District
Wife _____ Village_____ Panchayat _____ District

③ Any family member who left your home ? _____

④ Do you receive any remittance from your family who has already gone out ?
1. Yes 2. No

If yes, how much did you receive ? _____ Rs./year
(One year from July last year to August this year)

⑤ Do you or any family members wish to go out from this village ?
1. Yes 2. No

If yes, please write family relationship and the place to go. _____

If yes, what is the reason ?
1. Employment 2. Education 3. Marriage 4. Other (Specify_____)

II. Living Conditions

II-1 Please give details about the house where you live now.

① Do you live in your own house ? 1. Yes 2. No
② Number of rooms _____room(s)
③ When was it built ? _____years old
④ Electrified 1. Yes 2. No
⑤ With toilet 1. Yes 2. No

II-2 What kind of water do you use for drinking ?
1. Tube well 2. Tab 3. Spring 4. Lake 5. River
6. Well 7. Deep Well 8. Rain Water 9. Others (Specify) _____

* Is there any change last 5-10 years ? 1. Yes 2. No
If yes, what kind of change ? (Specify)_____

II-3 What are you using for cooking and heating ?
1. Firewood 2. Cow dung 3. Coal 4. Others (Specify)_____

* Is there any change last 5-10 years ? 1. Yes 2. No
If yes, what kind of change ? (Specify)_____

II-4 What are you using for lighting ?
1. Electricity 2. Lamp 3. Candle 4. Others (Specify)_____

* Is there any change last 5-10 years ? 1. Yes 2. No
If yes, what kind of change ? (Specify)_____

III. Asset

III-1. Do you and your household members have any land ?
1. Yes 2. No

If yes, how many ropanies do you and your household members have in total ?
_____ ropanies

Ⅲ-2. How much was your income last year ?

1. Income from agricultural product _____ Rs.
2. Income other than agriculture _____ Rs.

* Comparing with the income of 5 years ago, how is it now ?

1. Much higher 2. Slightly higher 3. No change
4. Slightly lower 5. Much lower

Ⅲ-3. Did you work outside your household's farming ?

1. Yes 2. No

If yes, please tell the followings:

	Kind of work	Days	Wage per day (Rs.)
Husband			
Wife			
Children			

Ⅲ-4. Durables

Name of goods	Number	When did you get ?
Bicycle		years ago
Watch		years ago
Radio		years ago
Casset recorder		years ago
Television set		years ago
Motor bike		years ago
Car autotrack		years ago
Any other durables		years ago

Ⅳ. Health Care Information(If possible, please ask women in reproductive age)

Ⅳ-1. Which is the nearest Health Institution(Hospital / Health center / Health post) from here ?

Name_____

Distance (in hours)_____

Ⅳ-2. What do you usually do when someone in this house becomes ill ?

① Self-dignosis
② Family member / relatives
③ Go for treatment
   1. Hospital / Health center / Health post
   2. Doctor / Health Assistant / Nurse
   3. Traditional healer (Dhami / Jhankri)
   4. Ayurvedic doctor
④ Others (Specify)_____ _____

Ⅳ-3. Did you go for medical check-up due to pregnancy ?

1. Yes 2. No

If yes, where did you go for check-up ?

1. Hospital 2. Health Post 3. Traditional Birth Attendant

Ⅳ-4. Where was your place for last delivery ?
1. Medical institution 2. Non-medical institution 3. Home 4. Others (Specify) _____

Ⅳ-5. Who attended at your last delivery ?
1. Doctor 2. Nurse / midwife 3. T.B.A. 4. Others (Specify) _____

Ⅳ-5 Have you immunized your children? 1. Yes 2. No

If yes, what kind of immunization?
1. BCG 2. DPT 3. Polio 4. Measles

V. Family Planning

V-1. Do you want more children than you have now?
1. Yes specify the reason (if any)_____.
2. No specify the reason (if any)_____.

V-2. How many children are ideal in your opinion?
_____ sons and _____ daughters

V-3. Do you prefer sons to daughters?
1. Yes specify the reason (if any)_____.
2. No specify the reason (if any)_____.

V-4. Heve you or your spouse ever used the method mentioned below?

① Pill	1. Yes	2. No
② Condom	1. Yes	2. No
③ Loop	1. Yes	2. No
④ Injectable	1. Yes	2. No
⑤ Vasectomy	1. Yes	2. No
⑥ Female sterilization	1. Yes	2. No
⑦ Tranditional (Specify)	1. Yes	2. No
⑧ Others (Specify) _____		

V-5. Are you or your spouse currently using any FP method mentioned below?

① Pill	1. Yes	2. No
② Condom	1. Yes	2. No
③ Loop	1. Yes	2. No
④ Injectable	1. Yes	2. No
⑤ Vasectomy	1. Yes	2. No
⑥ Female sterilization	1. Yes	2. No
⑦ Tranditional (Specify)	1. Yes	2. No
⑧ Others (Specify) _____		
⑨ Currently using no method_____		

V-6. From where do you get information and tools of Family Planning ?
1. Primary Health Center 2. Village Health Worker 3. Private Clinic
4. Others _____

V-6 What is the reason for not using any F.P. methods till now ?
① Desire for more children
1. Want to have son 2. Want to have daughter 3. Want to have both
② Due to religion
③ Due to health reason
④ Husband away
⑤ Too old
⑥ Unavailability of family Planning method
⑦ Others (Specify)_____

VI. Community and Life

VI-1 Are you partcipating in any kind of community activities?

1. Yes 2. No

If yes, what kind of activity are you participating ?

_____

VI-2 Are you satisfied with this community ?

1. Yes, satisfied 2. More or less satisfied 3. More or less dissatisfied
4. No, dissatisfied 5. Not stated

VI-3 During last five years, how progress your living standard is in ?

1. Much better 2. Slightly better 3. No progress
4. Slightly worse 5 Much worse

His Majesty's Government
Ministry of Home Panchayat
Registrar's Office

Birth, Death and Other Personal Events Registration Act 2033 (1976/1977), Amendment Act 2037 (1980/1981) And Birth, Death and Other Personal Event Registration Rule 2034 (1977/1978)

[VITAL REGISTRATION ACT]

2039
(1980/1981)

Birth, Death, Marriage, Divorce & Migration Registration Act

Proposal; *It is very important to make a law (act) to register and distribute the certificate on birth, death, marriage, divorce and migration for the people of the Kingdom of Nepal.

His Majesty's the King Birendra Bir Bikram Shah Dev has made this act with discussion and agreement of the national assembly (Rastriya Panchayat).

Note: * Amendment (first) on act 2037 (Birth, Death and Other Personal Events Registration).

1. **Name, area and implementation:**
   a. Name of this act is called "Birth, Death and Other Personal Events Registration Act 2033."
   b. Area of this act will be the Kingdom of Nepal. (Whole Country)
   c. Right soon annex 1 will be implemented. Other annex will be implemented by His Majesty's Government through the notice publish on Nepal gazette in-order-to specify the date of implementation and area as necessary.

2. **Definition:**
   If there is no any practical meaning this act will be define as follows;
   a. Personal events; means a person's born, death, marriage, divorce and migration.
   b. * Migration means a person migrate one village/town panchayat to another village/town panchayat or left for foreign country or from foreign country to Nepal for period of more than six months.
      But if a person left one place to the another for study, research and official work and etc. will not be define as migration.
   c. Registrar's office mean the office of a selected or ordered Registrar or local registrar who will be selected as Annex 3.
   d. Head of Household mean the person who looks after all the household problems.
   e. Defined or as per definition mean the matters which

is defined or as per definition in this act.

3. Registrar and local registrar:

To implement this act His Majesty's Government can select one registrar and other local registrar for each and every village panchayat and town panchayat are to assist the registrar through the advertisement (notice) at Nepal gazette.

4. Information on personal events:

4.1 In the following condition, following person shall register their events by fill-up the necessary form (information) to the local registrar under thirty-five days.

a. Birth and death information shall be informed by the head of household. If he/she is not available the form can be filled by the eldest person of the family (male).

b. Marriage information shall be given by bride-groom, if he isn't available it shall be informed by bride.

c. Information of divorce shall be given by both husband and wife.

d. Migration information shall be given by the head of household (if migrated with family) or the migrated person (if migrated alone).

4.2 If a person is in abroad, has some personal event which shall be informed, he/she can inform his/her events under sixty days of his/her arrival in the Kingdom of Nepal.

4.3 A person who has to inform his personal event according to Sub-annex 4.1 can authorize any person to register the information.

4.4 If the person who has to inform birth or death according to Sub-annex 4.1.a. is not available, His Majesty's Government will decide the person to inform through Nepal gazette. And decided person has to inform.

5. To register personal event:

5.1 Local registrar shall register the personal event on the register book as information under Annex 4 as follows.

a. Local registrar has to check the information form if the form is not correct, has to ask the informer to correct the form.

b. If the informer is illiterate, local registrar shall fill-up the form or ask to fill-up by the literate person and get thumb print on the informer.

5.2 Before register the divorce information the local registrar shall (has to) (should) check the decision of the court.

5.3 If a person has not come to inform the personal events within the duration of thirty-five days as Annex 4 Sub-annex 4.1 and 4.2 local registrar shall fine Rs 8.00 (eight) only as a punishment for next thirty-five days (assertion) for registration.

5.4 If a person cannot inform to register their personal events up to seventy days as Sub-annex 5.3 because of especial problem (out of his control) local registrar shall fine maximum Rs 50.00 (fifty) and registered the events.

6. Distribution of registration certificate:
According to Annex 5 local registrar shall distribute the registration certificate in free of cost to the inform as his/her information based on Annex 4, Sub-annex 4.1.

7. Provision of duplicate registration certificate:

7.1 If the Registration certificate has been lost or damaged which is distributed based on Annex 6 the related person shall apply the application for to the local registrar.

7.2 If the application based on Sub-annex 7.1 is true the local registrar shall collect necessary fee for duplicate registration certificate from the applicant and distribute the duplicate.

8. Can assign the staff to collect household list:

8.1 His Majesty's Government can assign the staffs to collect household list for support the personal event registration system if as necessary.

8.2 If the staff assigned for collect the data based on Sub-annex 8.1 the related person of household must answer the questionnaire as well as detail information truly.

*9 **Validity of the registration:**

Distributed certificate under Annex 6 will be the proof of the personal events. Such that it can be used in any office, court as well as on the business.

* It will be dis-effective, if the person has given wrong information to get the registration certificate.

* a. It can be freely corrected if there is any mistake on age, name and caste.

*9.a.1. When the act is implemented, if any body has made a mistake on his/her age, name or caste on his first registration certificate, can request through the application to re-correct to the local registrar within six months (from the distribution of first certificate).

*9.a.2 Local registrar shall check the request application for correction of age, name and caste based on 9.a.1. If the application is true, registrar (local) can correct in both registration book and registration certificate in free-of cost.

9.a.3 * Only under this act, age, name and caste can be corrected in registration book and registration certificate. Another any act, rule and regulation won't work to correct age, name and caste.

Note - Amendment on vital registration act (2037)

10. **Can inspect the vital registration book:**

Any body can inspect the vital registration book which is in the registrar or local registrar's office by paying the fee (necessary) and getting approval of the related registrar.

11. **Has to maintain the register:**

All local registrar has to send the vital registration record to the central registrar's office as soon as possible. And central registrar's office also has to collect all records and has to maintain the statistical record and has to develop and produce the yearly bulletin in vital registration record.

12. **Duty of local panchayat:**

12.1 If any villager has such personal event which has to be

registered under this act, related village/town panchayat has to motivate and demonstrate and help to the related person to register the event.

12.2 Local panchayat should give necessary help to the staffs or local registrar to implement this act or work under this act.

13. Punishment:

13.1 If any one give the wrong information on the questionnaire as stated on Annex 8 Sub-annex 2, will be punished maximum Rs 50.00 (fifty).

*13.2 If any body has registered the personal event to create the trouble to other or for get personal benefit and if it was proved, the person will be punished maximum Rs 100.00 (one hundred) or on one month imprisonment or both. This type of registration will automatically dis-effective.

13.3 If any body has destroyed the personal event information, Registration Book or household information by personally understanding for personal benefit or for illegal use, the person will be punished three months imprisonment or fined Rs three hundreds to six hundreds or both.

*13.4 If any body interrupt, stop or demonstrate negatively to the person who want to register his personal event, the interrupter will be fined maximum Rs two hundreds.

14. His Majesty's Government will be the protector:

In every cases which will be filed under Annex 13 His Majesty's Government will be the protector.

15. The job description and the person who can decide about the case:

15.1 Chief district officer has power to decide the cases filed under Annex 13 in this act.

* Amendment on vital registration Act (2037)

15.2 Chief District officer shall work on this case as defined under sub-annex 15.1 according to the special courts Act 2031.

15.3 If the decision of chief district officer under the case as Sub-annex 15.1, the person can re-protect at

zonal court on his decision.

16. If there is any problem to implement this act His Majesty's Government can introduce new order through Nepal gazette to eliminate the problem.

17. Power to make rules:

17.1 His Majesty's Government can make new rules to implement this act effectively and to approach the forget.

17.2 His Majesty's Government can make new rules according to Sub-annex 17.1 without any problem to other acts as follows.

17.2.a. On personal event information form and registration book for registrar's office under this act.

17.2.b. On vital registration certificates

17.2.c. On duplicate vital registration certificate and registration book inspection fee.

17.2.d. On take a decision to develop the questionnaire to collect household information.

17.2.e. On correction of descriptions

17.2.f. On registration of child name and re-correction of name which is already been registered.

Vital Registration Act (Rule) 2034

His Majesty's Government has made following rules under applying the power as stated on Annex 17 vital registration act 2033.

1. Short name and action

1.1 This rule shall be called vital registration rules 2034.

1.2 This rules will act right soon.

2. Definition

If there is no other practical meaning it shall be known as;

2.a Act means vital registration act 2033.

2.b Informer mean the person who has to give (must) information to register the personal event as this act.

3. Job description of a registrar

Registrar has to do following jobs including the other works stated in this act.

3.a Registrar shall give necessary direction to the local registrar for register the personal event (vital registration).

3.b Registrar shall check and punish on complain from the local people (informer), to local registrar.

3.c If there is any case to re-correct the personal events and name, registrar shall advice to the local registrar.

3.d Registrar shall decide the monthly progress report form for local registrar.

3.e Registrar shall give the necessary advice to His Majesty's Government for duty collection.

3.f Registrar has to send the yearly progress reports to His Majesty's Government.

3.g Registrar has to take a necessary action to implement this act.

4. Household information

4.1 His Majesty's Government can assign the staffs to collect household information for support the vital registration system under the Annex 1.

4.2 Household information shall be stored (placed) at registrar's office and registrar's office will ask or subtract the information based on local registrar's monthly report.

5. Information on personal event

5.1 Informer has to inform their personal event by fill-up the form as following Sub-annex to the local registrar.

Personal events	Form
a.Birth	Sub-annex-2
b.Death	Sub-annex-3
c.Marriage	Sub-annex-4
d.Divorce	Sub-annex-5
e.Migration	Sub-annex-6

5.2 If the name of child has not fixed when the Birth registered, it can the registered latter.

5.3 Above said form (Annex 5.1) will be provided freely to the informer.

6. Registration of the personal event

Local registrar has to register the personal events in the register book under the rule No.5 according to this act as following Sub-annex.

Personal events	Register book
a.Birth	Sub-annex-7
b.Death	Sub-annex-8
c.Marriage	Sub-annex-9
d.Divorce	Sub-annex-10
e.Migration	Sub-annex-11

7. Distribution of registration certificate

Local registrar shall distribute the registration certificate to the informer under above said rule No.6, as following Sub-annex.

Personal events	Registration Certificate
a.Birth	Sub-annex-12
b.Death	Sub-annex-13
c.Marriage	Sub-annex-14
d.Divorce	Sub-annex-15
e.Migration	Sub-annex-16

8. Distribution of duplicate certificate

8.1 In the case of lost or damage, the related person has to apply a application to the local registrar for duplicate certificate.

8.2 Local registrar shall note on remark column of register book about the distribution of duplicate certificate and date of distribution. Informer has to pay Rs 5.00(five) only as a duplicate certificate fee and has to apply for it as rule No.8.1.

9. Re-correction of information

9.1 If any person want to re-correct the information, has to apply to the local registrar with necessary proof.

9.2 If such application as under rule No.9.1 has been filled, the local registrar shall check the application and re-correct in register book as well as certificate.

10. Registration of child name and re-correction of name which is registered.

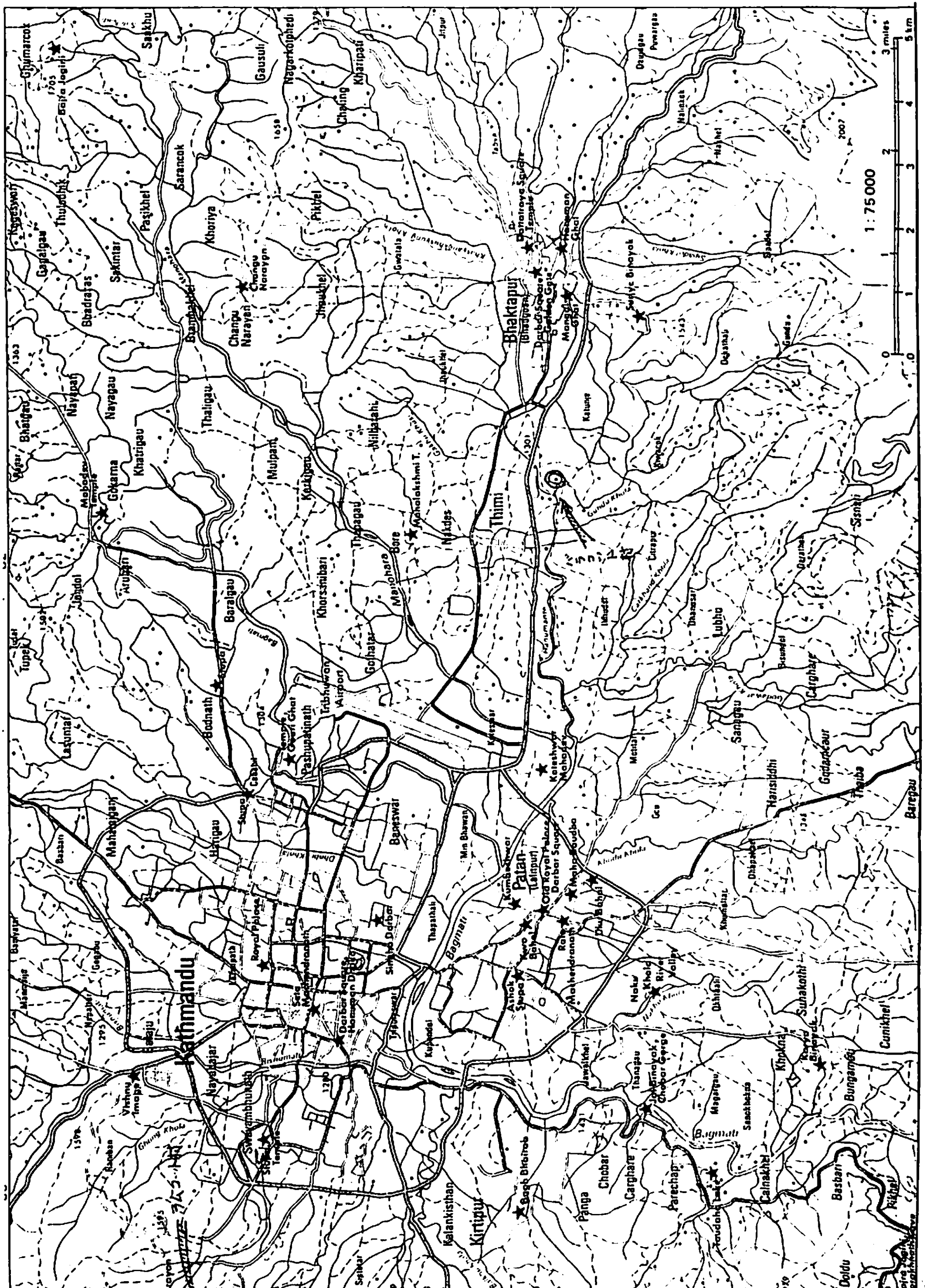
10.1 If any person want to change their child name as rule No.5.2 the person has to apply to the local registrar with necessary proof.

10.2 If such application as under rule No.10.1 has been applied, the local registrar shall check the application and re-correct in register book as well as certificate.

ネパール全土


NEPAL
(ADMINISTRATIVE)
FAR WESTERN
MID WESTERN
WESTERN
CENTRAL
EASTERN
CHINA
INDIA
BOUNDARY
BHERI
GULMI
HEADQUARTERS
ROAD

調査地


Kathmandu
Patan
(Lalitpur)
Bhaktapur
(Bhadgaon)
Thimi
Kirtipur
Bagmati
1:75000
3 miles
5 km
Royal Palace
Darbar Square
Swayambhunath
Pashupatinath
Bodnath
Tribhuwan Airport
Changu Narayan
Gokarna
Sankhu
Baneswar
Singha Darbar
Kalankisthan
Chobar
Chobar Gorge
Pharping
Thankot
Balaju
Lubhu
Harisiddhi
Godawari
Sanagau
Nagarkot
Tokha
Tupek
Mahadev Temple
Sipadol
Nakhu
Chapagau
Bungamati
Khokna
Sunakothi
Thaiba
Baregau
Dhapakhel
Lagankhel
Sarancok
Bhadrabas
Sakhintar
Pasikhel
Bhatgau
Nayapati
Nayagau
Khatrigau
Thaligau
Mulpani
Koriya
Pikhel
Thapagau
Manohara
Gothatar
Khorsnibari
Lasuntar
Maharajganj
Harigau
Nayabajar
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Kalimati
Bishnumati