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in
Nepal**



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D.C. Upadhyaya

Jose V. Abueva

Preface

Welcome Speech

By Dr. Govind Ram Agrawal

Act. Director of CEDA

The growth of population is proceeding on a scale and at a speed unprecedented in human history. The growing population has posed a challenge to the human community and a threat to its prosperity. The problems of hunger, health, housing and employment become more difficult to solve when the population increases more rapidly than the available resources. The arithmetic of population in Nepal suggests that our population will be doubling in the next thirty years.

In the context of development, the population problem can be looked at from two respects. On the one hand, there is the problem of population growth itself, and on the other, the problem of effective utilization of people for development purposes.

Nepal faces far greater problems in respect to the effective utilization of its human resources. Indeed, the experience has indicated that without sufficiently overcoming this problem, isolated and selective policy measures are almost unresponsive to the problem of population growth.

Population policy is not an end but only a means--a means to a better life for all. National population policies must be an integral part of the overall development policies. Nepal has her own population problems and our population

(Preface Con't)

policies must be relevant to our policies, we must give priority to action-oriented research in this field.

This seminar is CEDA's contribution to celebrate World Population Year 1974. Today is the beginning of "Population Week" in Nepal which is being celebrated by various organizations in different ways.

This Seminar is also a follow-up of the first seminar on Population and Development organized by CEDA in July 1971. In this Seminar we have tried to bring together distinguished representatives of various sectors of opinion in Nepal. We believe that the disciplined analysis and discussion of population problems in relation to development by participants lively from different walks of life will bring forth action-oriented policy suggestions and insights that are relevant to our country. Our intention is to focus on comprehensive and specific aspects of population-related government actions in the context of national development.

Most countries of the world face a population problem, but it is the least developed countries like Nepal that must seek urgent answers in the race between population and resources.

With these remarks, once again I warmly welcome all of you.

Foreword

Shared Responsibility for Population Control

by the Honorable Prime Minister
Nagendra Prasad Rijal

At present when two thirds of the world's population is affected by hunger and poverty, about 70 to 80 million people are being added every year.

Developing countries are saddled with the problems of relying too much on the agricultural sector, high rate of population growth, unemployment, low per capita income, paucity of savings, illiteracy, low industrial growth, and lack of transport facilities.

The per capita income in Nepal is about Rs. 800. Ninety per cent of the population are dependent upon agriculture. Only 13 per cent are literate. In the 60 years' period between 1911 and 1971, the population of Nepal had almost doubled. If proper and effective population control cannot be resorted to now, the population at the present growth rate of 2.07 per cent would double again in 33 years.

The responsibility of population control does not lie on the government alone, but also on panchas, members of class organizations, social scientists and intellectuals.

The propagation and extension of family planning programmes are essential in the rural and remote areas of the country, as much as in the urban areas. Everyone must contribute his share from his respective place for the successful solution of our population problem.

Chapter One
Problems of Rapid Population Growth
In Relation to Development

By Jose V. Abueva and Daya Chandra Upadhyaya

The title of the seminar which gave this collected papers its name, "Population and Development in Nepal," suggests the interaction and interdependence between two sets of variables subsumed under "population" and "development." The setting and subject of the seminar is a small Himalayan Kingdom landlocked by two of the most populous countries in the world, and which is also among the least developed. The seminar participants focussed on various characteristics of Nepal's populations and how these affected her development efforts. They were concerned with how demographic variables, such as population size, rapid growth, uneven dispersion, migration and the dependency ratio, impinge upon the realization of development goals. They were also interested in how development policies and actions, or the lack of these, influence population dynamics, directly or indirectly, positively or negatively.

The seminar brought out the complex nature of the problems of rapid population growth experienced by Nepal, their deep roots in the socio-economic and political conditions and the cultural milieu of the country, and their multidimensional impact upon and implications for public policy. It was recognized by the participants that the complexity here revealed was matched only by that of the problems and processes of inducing national development itself which was the context of the discussion of the problems of rapid population growth.

This chapter highlights and attempts to integrate the problems presented in the seminar papers and discussion, incorporating other relevant information and the authors' own views. In the final chapter, we shall present a summary and analysis of the varied measures recommended by the seminar and by others for coping simultaneously with the problems arising from the rapid increase in population and the need for accelerating development in Nepal.

1. The Demographic Aspects

Nepal has more than 12 million inhabitants. This makes her almost as populous as Australia, Sri Lanka and the Netherlands. She has more people than Malaysia, Venezuela, Hungary, Portugal, Belgium, Greece, Ghana, Cuba, or Sweden. The population of Nepal more than doubled in the 60 years between 1911 (5,638,749) and 1971 (11,555,983). It is estimated that her population may again double in less than half that interval, or by the year 2000.

The crude birth rate and the crude mortality rate, respectively, are estimated to be 50 and 27 per 1,000 population. While modern medicine has reduced mortality rate significantly, the birth rate has steadily increased, thus resulting in the soaring population. Although the average life expectancy is only 40 years, this is believed to be twice the figure at the turn of the century.

The annual growth rate is estimated between a low of 1.8 per cent by the World Bank and a high of 2.07 per cent by Nepal's National Planning Commission. This varies markedly from the northern mountains and intervening hills (1.3 per cent) and the southern plains of the Tarai (3.4 per cent). Accordingly, from 1961 to 1971 the population of the whole

country increased by 2.07 per cent or 1.7 million; in the mountains and hills by about 17 per cent; in the central and eastern Tarai by one-third of the 1961 base; and in the Western Tarai it doubled.

The population size and growth rate of Nepal must be viewed in the context of the country's poverty and underdevelopment to be fully appreciated. The World Bank Atlas, 1973, reports Nepal's per capita GNP to be \$90 and its GNP at \$990 million. Its economy is marked by low productivity, low growth, a poverty of known natural resources, acute capital scarcity, a labor surplus, and a heavy dependency on external aid and on India. Nepalese society still bears the legacies of a feudal and medieval age when the country was insulated from the global forces of modernization. Modern institutions have been introduced in earnest only since Nepal opened its doors to the world in the early 1950s (Abueva: III) The literacy rate is just over 10 per cent. Modern transportation and communication are far from adequate. Proportionately more Nepalese than any other peoples walk to their destinations and carry their goods on their backs.

King Birendra and His Majesty's Government are manifestly committed to development. It is officially estimated that the growth rate of GNP is almost at par with population expansion. For 1960-1971 the World Bank Atlas, 1973, says that the average growth rates for Nepal's population and per capita GNP were 1.8 per cent and 0.3 per cent, respectively. This shows an economic growth which is extremely marginal or negative. In all of Asia Nepal's economic performance appears to surpass slightly only that of Sikkim, Bhutan, Bangladesh, Burma, certain parts of India, and embattled Cambodia. Given the inequality of incomes and sharing of the fruits of develop-

ment, large numbers of Nepalis are becoming more disadvantaged each year. The long term trend, without drastic improvements in the developmental capabilities of the public and private sectors, is not hopeful. This is because the world's crises in food, energy, inflation, and instability of the monetary system, and India's own aggravating policies, exacerbate Nepal's already serious development problems as a poor, land-locked country.

It is distressing to development-conscious Nepalis and their friends that the crude birth rate, the crude death rate and the increasing life expectancy indicate a high fertility rate and a high, although declining, mortality rate. The changing age structure is expectedly showing more and more young people, a relative decline of the economically active population and proportionately more inactive people, or an increase in the dependency ratio from 77 in 1952-54, to 82 in 1961, to 85 in 1971 (Gurung: ch.2). One implication of this age structure is that "even if every family in the country began having only two children on the average from [1974 onward], the population would nevertheless continue to grow for approximately 60 years and would then stabilize at approximately double its present size, i.e., 26 million" (NPC Task Force: 10).

The direction and magnitude of migration also reflect the growing pressures of population on land in a mountainous country whose climatic conditions range from sub-tropical to arctic as one moves from the plains to the high Himalayas. The directions of internal migration have been described as "from high to low altitudes; from lower slopes of the Himalayas to higher slopes of Mahabharat (mainly Tamangs in the east and Magars in the west); and from hill areas of

4000-6000 feet to the adjacent lower valleys below 3000 feet" (Rana and Thapa: ch.3). From 1961 to 1971 the migration from the hills to the Tarai constituted 83 per cent of the inter-regional migration. During the same decade on balance the mountains and hills lost 37,959 and 359,666 persons, respectively, while the Tarai had gained 399,925 persons.

Regional densities have undergone substantial changes during the last two decades. The Tarai which was sparsely populated in the past is showing signs of rapid increase in density. The eastern part of the country has a higher density than the west. The highest density is in Kathmandu Valley. Although the hill areas show declining rates of growth these have very high densities when compared to the cultivated areas. Changes in densities reveal a strong relationship to agricultural conditions.

In 1971 the density of population for the whole country was estimated 79 per square kilometer. However, as mentioned above, there are striking inter-regional and intra-regional variations in densities from east to west and from the southern plains (Tarai) to the hills and the mountain areas northward as altitudes rise. In the hills the agricultural density of population was twice the national average and almost four times that of the Tarai. The steep increases in population in the Tarai due to migration, in addition to the natural increase, are both cause and effect of increasing imbalances between population and resources. From 1961 to 1971 Tarai land provided additional employment to nearly 235,000 migrants.

A succinct comparison of the population and output of the Tarai and the hills is captured in the following statement: "Only a little over a third of the country's population

living in the Tarai produces almost two-thirds of agricultural output and all of Nepal's cereal grain surplus (the bulk of her exports); whereas the other two-thirds of the population in the hills produce only one-third of the crops and exist at a subsistence level" (Rana and Thapa: ch.3). These population-resource imbalances, along with the widespread poverty, low productivity and economic growth, and the limited arable land because of its rugged topography and climatic differentials show that "Nepal is a densely populated mountain country" (Gurung: ch.2).

In many developing countries large shifts in population into urban areas have occurred, especially towards the primate city, because of the pull of development activities there and the push of rural poverty and unemployment outward. Nepal is an exception where a mere four per cent is reported to live in urban areas, even if this is an underestimation because the urban areas have grown outside the municipal boundaries not considered as town areas in the 1971 census. The distribution of urban areas is rather lopsided, with over 60 per cent located in the central development region alone. The reported increase of 24 per cent in the urban population in the 1960s should be actually closer to 40 per cent according to one estimate. Nevertheless, as an indicator of development, urbanization in Nepal testifies to very little progress achieved by development planning.

Emigration of Nepalis from the hills mostly to India has taken place over many decades and appears to continue. In the past this "muscle drain" contrasted with the Nepali Gurkhas who joined the British or Indian Army and who earned, saved and invested at home far better than the majority of the emigrants who ended up in low-paying menial jobs in

India. In the future fewer Gurkhas will be recruited in either army and the emigration of Nepalis to India may be restricted. On the other hand, large numbers of Indians have crossed the border into the Tarai, causing serious problems which are described later in this chapter.

II. Inter-relations Between Population and Development

As elsewhere, in Nepal development planning is concerned with inducing increasing rates of economic growth, per capita income, social progress and even political development. Given the low levels of living, King Birendra has emphasized that development aims to provide Nepalis with more food, clothing, and shelter, life's bone necessities. Literacy, the right kind of education, and health services are also to be extended and improved. Greater productivity, higher incomes, self-sufficiency, redistribution of wealth are to be achieved through agricultural and regional development and land and tax reforms. Ultimately, the party-less Panchayat system of government under royal guidance hopes to bring about an exploitationless society in which solidarity, equality and harmony would prevail.

However, accomplishing these goals in a situation of rapidly increasing Nepalis becomes progressively problematical, for their ever larger numbers reduce their per capita share of available resources and amenities. At the same time they increase the need for greater savings and investment, higher productivity and incomes, and the people-oriented production and re-distribution of goods, services and opportunities. Key participants at the seminar elucidated this theme in various ways.

Retrospectively, Harka Gurung concluded that several characteristics of Nepal's population delineated above "amply reveal the marginal impact of development efforts made so far" (ch. 2). Commenting on Gurung's paper, Ram C. Malhotra said that "the rate of economic growth has been less and perhaps very much less than the rate of population growth", and he remarked that population issues and development issues "are two sides of the same coin." In his paper on population growth and agriculture, B.P. Dhital referred to "the failure of development" which Gurung as commentator regarded as "the success of human multiplication." In his comments on Mohan Man Sainju's paper on population and development policy, Pashupati S.J.B. Rana called attention to the seminar theme writ large: "The important factor of the seminar seems to me that the population issue underlines the whole problem of the inadequacy of development efforts." He went on to predict that "population policy is unlikely to succeed in the context of development policy which in general is a failure." At about the same period a task force on population policy of the National Planning Commission made this congruent observation on the relationship between rapid population growth and development planning: "The gains of development are easily swallowed up by enormous increases in population jeopardizing capital formation and making it still more difficult to transform our subsistence economy into a self-generating one." (Task Force Report: 15).

The seminar papers and the comments and discussions on them together highlighted the corrolaries of rapid population growth and their consequences which are summarized on page nine.

Rapid Population Growth in Nepal*

Corrolaries

Consequences

Increasing number of people	Environmental problems. Need to increase food production. Technological problems
Larger family size	Malnutrition of children. High cost of education and services.
Larger proportion of children	High dependency. Lower per capita income.
Increasing number of families	Decrease in size of farms. Increase in landless labor. Poor income distribution.
Increasing density in rural areas	Increase in agricultural labor force, Unemployment and underemployment. Agricultural deterioration Conflicts in land use

* Adapted from "South Asia Seminar on Population Policy,"
Colombo, Sri Lanka, 12-16 February 1973, In Search of Popula-
tion Policy: Views from the Developing World. National
Academy of Sciences, Washington, D.C., 1974, p. 12.

Rapid Population Growth in Nepal (continued)

<u>Corrolaries</u>	<u>Consequences</u>
Rapid increase in numbers seeking employment	Large investments to create jobs. Pressures for government employment, Compounding problems of efficiency of the bureacucracy
Differentials of fertility in ethnic groups ,	Political instability, ethnic conflicts
Migration, emigration, and immigration of Indians	Competition and conflict (internal and external), Environmental problems, Brain and muscle drain, Income from expatriates, Drain of income and resources by Indians

In the next sections of this chapter, we shall elaborate somewhat on these corrolaries and consequences under the headings of III. Economic Consequences, IV. Consequences for Social Services and Welfare, V. Social and Political Consequences, and VI. Ecological Consequences. A fuller explication is made in the next seven chapters, followed by the final chapter on the policy implications of rapid population growth in Nepal.

III. Economic Consequences

From our overview of the inter-relations between rapid population growth and development, we now turn to some of their more specific aspects. For an agrarian society in which agriculture employs 94 per cent of its labour force

and produces 80 per cent of its exports earnings and 96 per cent of its GDP, food production and supply are vital to the national economy and the well-being of the people. In this context poverty is almost synonymous with the problems of agricultural development. In this light it is distressing that B.P. Dhital has predicted the following consequences of unchecked population growth rate:

It would outstrip the per capita availability of agricultural products, despite the envisated growth in agriculture and increased migration from the hills to the Tarai.

Present cereal surpluses would diminish drastically and make Nepal a net importer of food by 1990, if past trends in food production and food demand were to continue.

The National economy which is based on cereal production would decline, because the deficit cereal balance would inhibit imports for future industrialization and thus also worsen unemployment.

Increased population pressure on the hills will aggravate poverty and low productivity there; by 2000 A.D. the hills will have close to one-half of the national population and will need to import 337,000 metric tons of foodgrains.

The economically active population in agriculture will continue to increase, so that by the year 2000 there will be over 11 million engaged in agriculture in a total labour force of 12.6 million.

The per capita cultivated land will become .086 hectare, which is similar to the present dire situation in the mountains.

The present deficiencies in nutrition, particularly in protective foods and those of animal origin, will become acute, [thus also reducing mental and physical productivity].

The increase of the economically active rural population from 4.56 million in 1970 to 6.68 million in 1990 will add 2.11 million to the underemployed rural labor.

The underutilization of labor would increase from the present 50 per cent to the maximum of 64 per cent by 1990.

There will be no substantial change in the sectoral distribution of the population in the next decades if present trends in sectoral growth continue, thus agriculture will have to carry the burden of future population increases.

And yet the agricultural sector cannot generate the needed employment and incomes or raise the dietary standards of the people, especially if agricultural productivity is not increased substantially.

Evidently, as Dhital also stated, the greatest need and problem of development in Nepal is to produce sufficient agricultural commodities for human consumption, for export and for supply to agro-based industries. The crucial question therefore is whether the government and the people will and can respond accordingly, at the same time that, as all the seminar participants suggested, they should also control fertility and population growth.

Vis-a-vis the burgeoning population and the underdevelopment of the country, the present scarcities in capital and skilled manpower may become even more serious in the near future. The situation is made more difficult because of the limited domestic market for manufactured goods, the lack of entrepreneurs, the failure of many public enterprises

pioneering in industries, and the unwillingness of foreign capital to invest in this small, landlocked country. Foreign aid will probably continue to dwindle in the coming decades. The expected widening gap between the developed and the underdeveloped countries as a whole would be more severe in the case of Nepal, unless some still unknown deposits of natural resources are discovered and exploited. To break the circular causation of poverty and underdevelopment, Nepal's leaders will somehow also have to raise funds for selective investment in manpower development and utilization in magnitudes commensurate with the growing numbers of the youth and the expanding labor force. Investments in health, housing, water supply, electricity, transportation and communication will have to grow apace.

IV. Political and Social Consequences

All these economic problems and imperatives and more, ultimately demand political responses in large and more effective ways. Nepal's race between people and food, or between people and space, as Dhital put it, will test the capabilities of the Nepali nation-state: its leaders and citizens and institutions. At present, fortunately, Nepal does not face a crisis of national identity or a crisis of political participation, although numerous problems, actual and potential could change the situation in the not distant future.

For example, the influx to the Tarai of migrants from the hills and Indians from across the southern border is displacing the indigenous people and creating tensions among the three elements who are being locked in economic competition for land, employment and in trade. The integration of migrants and settlers with the older inhabitants is also made

difficult because of their different cultures, and because the politically-conscious people of the Tarai are unhappy about their under-representation in His Majesty's Government despite their larger contribution to the nation's wealth and revenues.

Political participation is tightly regulated by the partyless four-tiered Panchayat system based on indirect elections and government sponsored class organizations, by a centralized bureaucracy, and by the police and the military. A controlled press and radio, the absence of easy travel and communication, and a tradition of non-participation by most citizens who have always been regarded, and thus have come to believe themselves to be, subjects of inherently superior rulers have likewise prevented demands for popular participation from becoming unmanageable. However, as the population of 12 million become 18 million or more within less than a generation, with proportionately and absolutely more younger citizens striving to find their place in the Himalayan sun, the quiescence and submission of the citizenry could very well change. Improved and expanded education, as well as the examples of neighboring China, India, Pakistan and Thailand cannot fail to influence the Nepalis in the long run.

Unfortunately, His Majesty's Government of Nepal is already confronting a crisis of penetration outward from Kathmandu into the far-flung and only tenuously integrated remote areas and isolated villages. This has implications in terms of the diversion of resources for surveillance and security, the inadequacy of technical personnel for deployment in the rural areas, and the meagre revenues from farmers and from income tax. Gross regional disparities by almost any

criteria indicate the minimal impact of development efforts noted earlier. Not surprisingly, the crisis of penetration is accompanied by a crisis of resource maximization and distribution among individuals, income levels and regions. King Birendra and the national planners are fully aware of these crises and are doing their best to cope with them even without the pressures of popular political participation.

The changing man-land ratios in the hills and the Tarai, and the depletion of forests and consequent erosion, have direct policy implications for His Majesty's Government in land use, resettlement, land reform, agricultural development, forestry, animal husbandry, and regional development strategy (Rana and Thapa: ch. 4). Although migration to the Tarai has relieved the population pressure on the hills and has to some extent contributed to national integration, such migration is only a temporary solution to the problems of unmanageable size, rapid growth and uneven distribution of Nepal's population.

In their paper Ratna S.J.B. Rana and Yadav S. Thapa identify the limits to migration and resettlement from the hills to the Tarai. Only the incremental population is being shifted away from the hills and this does not solve the basic problems of poverty and underdevelopment. Aside from creating tensions in the Tarai, migration and resettlement might only cause discontent on the part of unsuccessful settlers. Resettlement requires sophisticated organization and heavy investment, neither of which is easy to bring about. The Tarai's capacity to productively absorb settlers is obviously limited if it is to continue to contribute its share to national development. The temporary alleviation of the pressures in the hills distracts attention from the basic

development problems there. The absorptive capacity of the Tarai is lessened still by increasing and unrestricted immigration of Indians.

Indian economic competition with and displacement of Nepalis in their homeland is increasingly felt. According to the 1971 census 96 per cent of the foreign-born population (2.8 per cent of total population of Nepal) were from India, and they numbered 322,718. Heavily concentrated in the Tarai where they dominate trade and industry, they also constitute the majority of foreign-born residents in Kathmandu. The report of the Population Task Force of the National Planning Commission states: "The influx of semi-skilled and highly competitive people of Indian origin in the Tarai regions has proved to be a serious handicap to the employment and resettlement of the Nepalese people who are not as skilled and as competitive as their Indian counterparts" (1974: 16). Indian immigration also tends to obstruct the implementation of land reform because if the tenants are non-Nepali the land reform program cannot award tenancy rights to them. Moreover, the Indian exodus into the Tarai "could render the entire family program 'worthless'. In the words of Rana and Thapa, until this phenomenon is checked "it may be difficult to marshal full support for a population policy to reduce the growth rate of Nepalese population" (ch. 4).

Commenting on the paper of Harka Gurung, Rishikesh Shaha elaborated on the complications of Nepal's inability, despite the 1950 India-Nepal Treaty provision for reciprocity in the matter of residence and acquisition of property, to prevent "an unrestrained immigration of Indian nationals into Nepal." In Shaha's observation: "Controversies and tensions have already arisen in the Tarai as to who is a 'local Nepali' and

who is an 'outsider,' meaning an Indian citizen. Again, there is tension between recent migrants from the Nepali hills who consider themselves to be representative of Nepali culture and the indigenous Tarai dwellers most of whom are of Indian social and cultural origin. The Nepali government's attempt to integrate the Tarai emotionally, politically and economically into Nepal, by reducing links with India wherever possible also produces political tensions" -- domestically and in Nepal's relations with India. Shaha fears that Nepal may become involved in the citizenship disputes that have afflicted Ceylon, Burma and East Africa. There are Nepalis who fear greater Indian control and domination, if not outright takeover, and they reacted with foreboding to Sikkim's becoming an associate Indian state in 1974 (also see Myron Weiner, 1971).

Since the 18th century the Shaha monarchy and the preservation of Nepal's territorial integrity and independence have aided national integration. The use and spread of Nepali as the national and official language have likewise helped in this process. In the long run the improvement of transportation and communication, increasing literacy and the growth of a national market would undoubtedly also be beneficial. In the short run, however, rapid population growth with marginal development may intensify the problem of integrating the various ethno-linguistic minorities into the evolving national majority. The situation in the Tarai illustrates this tendency in the extreme. The great advantages enjoyed by the Brahmins, Chhetris and Newars in education, income and in employment in His Majesty's government, and the regional disparities favoring Kathmandu Valley and the Tarai, make it so much more difficult for the cultural

minorities to catch up and feel that they truly belong to the nation-state being dominated by the cultural majority.

V. Consequences for Education, Health, Housing and Welfare

As one of the world's least developed countries, Nepal enters the development race with extremely low levels of education, medical services, safe water supply, sanitation, electrification, and modern transportation. To provide for these basic needs and facilities for a fast increasing population, we have mentioned the tremendous investments that are required, not only to reach the levels enjoyed by the more advanced groups and areas of the country but also to increase national per capita availabilities on a more equitable basis of distribution. Meanwhile, the traditional joint family system will have to continue providing for the minimum consumption, comfort and security to its members which the state and private enterprise cannot assure. Ferdinand E. Okada has expressed the imperative of Nepal's accelerated development simply and vividly: "in short ... we must run fast merely to maintain the existing rate of social facilities and amenities; we must run faster if we are to extend and improve them" (ch. 6).

In 1970 only 31 per cent of the 1.4 million primary school-age population were in school and the teacher-pupil ratio was 1:25. The target of the New Educational Plan is to enroll 64 per cent of primary school age children by 1976. Facilities will have to be provided for the 135,000 children who would then be added to the present half a million. Children of this age are expected to reach 1.12 million by 1981 and 1.24 million by 1986. It would be necessary to expand the present facilities for primary school 2.3 times

by 1981 and 2.5 times by 1986. If the teacher-pupil ratio of 1:25 is to be maintained, 45,000 and 49,600 primary teachers would be needed by 1981 and 1986, respectively. Teacher training facilities would also have to increase 40 per cent by 1976, 77 per cent by 1981 and another 10 per cent by 1986. This worrisome arithmetic does not even include vocational and higher education expansion envisioned in the New Education Plan.

From the baseline of utter neglect prior to 1950 the health statistics also shows remarkable improvement, although behind the quantum jump in public education. The phenomenal migration from the hills to the Tarai, for example, was made possible by the successful eradication of malaria in large areas of the Tarai. In terms of adequacy and rate of expansion, however, health services and facilities are minimal and far too slow. In 1974 it was estimated that the doctor to population ratio was 1:40,125. To make matters worse, Nepal's 338 doctors are poorly distributed. The central region has one doctor per 20,000 population while the most backward and inaccessible far western region has one doctor per 100,000. Until now Nepal has no medical school. It is projected that with an annual increment of 25 doctors, the comparable figures after one and two decades, respectively, would be 1:24,300 and 1:20,883. There are only 2,113 hospital beds in the country and the average annual increase has been only 59 beds under the current Fourth Plan. The nutritional aspect of health is not brighter, as we have noted above. According to one estimate, a two per cent annual improvement in diet, measured by cereal production requirements alone, would entail a four-fold increase in the cereal output by the year 2000 (Sainju: ch.7). But as B.P. Dhital has predicted Nepal

might actually have a cereal deficit by 1990. As in all public services, realistic innovations in health and nutrition are in order if levels of living are to be improved with the severely limited resources at hand.

Traditional housing without governmental assistance will continue to be adequate in most of the rural areas, thanks to the abundant brick, mud and stone, and the dispersed dwellings. The housing problem in the urban areas is a different matter. Overcrowding in joint-family dwellings devoid of adequate sanitation, garbage disposal, drainage and sewerage is bound to get worse. Attitudes toward hygiene and sanitation will change slowly. Lack of water for drinking, laundry or cleaning is already being felt. The resulting pollution and stench hasten the deterioration of living conditions. Deforestation reduces the supply of wood for construction of fuel, and makes it harder for poorer families to build, extend or repair their homes. Only in a very few cities and towns is electricity available for lighting, cooking, radio or industry. It thus makes sense for His Majesty's Government to put more emphasis on harnessing its great hydro-electric power for home consumption, for industry for transportation, and for alleviating living conditions generally, especially in the larger settlements.

VI. Ecological Consequences

We have just discussed the deterioration of the urban environment, although in Nepal the pace of development has not triggered much urbanization. Earlier we described how the people have overflowed southward from the hills, and alluded to the deforestation and erosion of the hills and mountains as a consequence of population pressure. Overgrazing and the use of wood for fuel and construction, in the

absence of reforestation, should be added as consequences of rapid population growth and subsistence farming in the uplands. The wanton destruction of forests, which induces soil erosion, also upsets the hydrological balance by causing the drying up of springs. Floods and landslides wreak havoc on farms and villages and make the road maintenance terribly expensive in actual cost and the obstruction of traffic flows. On the other hand drought cut back agricultural production, as does the generally declining soil fertility (Paru and Thapa: ch. 4). Even in the less densely settled and more productive Tarai the migration from the hills has also caused the destruction of forests. The interaction is dramatized in the eastern plains where the doubling of the population between 1952 and 1971 was accompanied by the reduction of the forest area by half (Garung: ch. 1).

To the outside world Nepal is perhaps best known for its majestic Himalayan peaks which include several of the highest on earth. In fact more than 500 of them are above 20,000 feet. The perennial snow that covers them contrasts splendidly with the tropical scenery not far below as viewed from the air or some elevated point. The hills and mountains offer challenging topography and attractive scenery for growing numbers of trekkers and mountaineers who come from many developed and urbanized countries.

In recent years of trekking and mountaineering, some of these scenic havens have become littered with piles of the debris and waste left of the supplies and equipment carried over from distant and affluent societies--and finally borne on the backs of Sherpa porters. Alas, the climate at the high altitudes has a pernicious capacity for preserving various kinds of refuse. Unless some sensible measures are taken to dispose of the waste and junk and to prevent or

reduce pollution in the Himalayas, one of our planet's remaining sanctuaries of earthly grandeur and solitude would be very quickly despoiled. The toll in the natural beauty of this secluded kingdom is thus the curious outcome of indigenous population pressure on the environment in the struggle for subsistence survival and of an international seasonal visitation in the luxurious pursuit of adventure and esthetics.

We now turn to the individual papers of the seminar.

Chapter Two

The Population Aspect of Development

By Harka Gurung

I. Introduction

The objective of development planning is to increase the rate of economic growth and social progress. Among the various factors of economic development, such as social and political organisation and the terms of trade and foreign assistance, the size and composition of the population plays an important role. Insofar as economic growth implies an increase in production per unit of labour, population growth due to high birth rate not only reduces savings but also affects the productive labour force. The problems of enskilling the population through education and training becomes harder with an increasing burden on available resources. Development is essentially addressed to the benefit of the people. Whether the population of a country will be a liability or a resource asset to development very much depends on the quality of that population. Development policy needs to encompass the demographic aspect not only because undue increase in population negates economic growth but also because it shrinks the exploitable natural resources per capita.

II. Population Densities

With a population of 11.5 million and a density of 79 persons per square kilometre in 1971, Nepal is a densely populated mountain country. In spite of the rugged topography, some distinct pattern can be discerned in the distribution of population. Owing to the high dependence on agriculture, population decreases northwards in mountain areas and the



drier western half. The mountain areas exceeding 3,000 metres in altitude have a wild and barren landscape with high ranges under permanent snow, and human habitation is confined to river valleys. The 16 mountain districts covering an area of 50,122 square kilometres has a population of 1.1 million and a density of 22 persons per square kilometre (Table 1). The mountain districts in the western part have extremely low population densities: Manang (3.6), Dolpa (2.3) and Humla (4.9).

The Hill region (900m - 3,000m) lying between the high Himalayas and the Mahabharat Lekh has been the traditional centre of Nepalese population. Flights of terraces on hill-sides are the characteristic feature of the Hill landscape. Only over the last decade have the low-lying valleys (Besi) seen large-scale settlement. The bulk of the hill population now live below 1,500 metre elevation. The 39 Hill districts that extend over 64,331 square kilometres of the country's central belt have a population of 6 million, with an average density of 94 persons per square kilometre. The hill districts of the Eastern region have densities exceeding the National level, whereas in the Far-West seven hill districts have a lower density than that of the national average. The contiguous districts of Syangja (207) and Gulmi (181) in the Western region are the only hill districts approaching eastern Tarai densities with the exception of Kathmandu Valley. The three districts of Kathmandu Valley with an area of 1,074 square kilometres has a population of 618,911 or a high density of 576 persons per square kilometre.

The Tarai, including the 'dun' valleys of Dang and Chitwan, has a gently sloping terrain. It remained a negative area for human settlement until the introduction of the

malaria eradication programme. The Tarai districts, covering 21 per cent of Nepal's total area, now claim 37.6 per cent of the total population. These districts have an average density of 140 persons per square kilometre, compared to 94 persons per square kilometre in the Hills and 22 persons per square kilometre in the Mountain districts. The highest density centres around Dhanusa (290), including the eight Tarai districts from Bara to Sunsari. Jhapa (171) and Rupandehi (205) are the other two high density districts outside the above compact area. It is interesting to note that all the five Tarai districts of the Far West have densities far below the national average of 79 persons per square kilometre. This may be related both to their comparatively low rainfall and the later introduction there of the malaria eradication programme.

III. Regional Distribution of Population

There are equally interesting inter-regional differences in population distribution, indicating a definite advantage of the wether (1778mm average annual rainfall) Eastern region over the drier (762mm) Far Western region for human occupation (Table 2). Furthermore, the larger scale of development activities in the eastern half of the country has led to a greater population concentration. The Eastern region has nearly a quarter of the nation's population and only four districts record a lower density than the national average. Indeed, the eastern hill districts have a higher density than the Far West Tarai districts.

The Central region has a third of the total population but of this 16 per cent is augmented by Kathmandu valley which has 5.3 per cent of the country's total population.

The three Himalayan districts of Rasuwa, Sindhu and Sindhuli with sizeable 'dun' tracts, have low densities. The Western region has a fifth of the total population with a compact block of 10 high density districts. The three mountain districts of the Western region has the lowest average density (3.9). The Far West also has a fifth of the country's total population but the regional density is only 46 persons per square kilometre. The Tarai districts of the Far West have an average density of 55 persons per square kilometre, and only one town panchayat (Nepalgunj). The distinctive features of population distribution in Nepal are extreme high density in Kathmandu Valley, and very high density in the South-East Tarai antipodal to the very low density in the north-west.

IV. Intercensal Growth

The population of Nepal has more than doubled since the first recorded census of 1911 (Table 3). As the population process during the 50-year period 1911-1961 has been dealt in detail in Vidyabir Kansakar's doctoral dissertation (Population Change in Nepal), the present paper will focus on the 1961-1971 decade that corresponds roughly to the Second and the Third Plan periods. The provisional computation of 1961 population figures according to the 75 district administrative boundaries yield a wide range of population changes (Table 4). While the three mountain districts (Bajhang, Mustang, Solu-Khumbu) and four hill districts (Jajarkot, Salyan, Argha-Khanchi, Terhthum) have lesser population in 1971 than in 1961, four mountain districts (Humla, Mugu, Sankhuwa-Sabha, Taplejung) and four Hill districts (Puithan, Gulmi, Syangja, Okhaldhunga) had an

increase of less than 10 per cent. Darchula, Manang, Bhojpur, Lalitpur, Makwanpur, Rupandehi, Nawalparasi, Sunsari and Morang had increased their population by more than 50 per cent. The most conspicuous increases are seen in the districts of Kanchanpur (293%), Chitwan (168%) followed by Kathmandu (124%), Jhapa (109%), and Bhaktapur (102%).

In terms of the four development regions, the Central region including Kathmandu Valley leads with a decennial increase of 25.8 per cent (Table 5). The Far West, with an increase of 17.3 per cent actually has decreased proportionately from 21.9 per cent in 1961 to 21.0 per cent in 1971. The change in population is most obvious when compared by geographic regions. Of the nation's average increase of 22.7 per cent during the period (1961-71), the increase in Tarai was 41.5 per cent as compared to the 13.6 per cent for the Mountain and Hill regions together. The ratio of Tarai population increased in all the four development regions with the result that the percentage of population in the Tarai increased from 32.6 per cent in 1961 to 37.6 per cent in 1971. In other words, there were 1,276,463 more persons in the Tarai in 1971 than a decade earlier. The Tarai had a consistently higher growth rate than the other areas, and the highest increase (60 per cent) occurred in the Far Western Tarai.

V. Urbanization

Urban population increased by 24 per cent during the decade 1961-71 and constitutes 4 per cent of the country's population. Of the total population of 16 town panchayats, 70 per cent is concentrated in the Central region, 21 per cent in the Far West. By geographical regions, the three

Kathmandu valley towns claim nearly 60 per cent of the total urban population, while the nine Tarai towns have 38 per cent. With the exception of Iokhara where the unusual increase seems more due to change in enumeration area, the 1961-1971 percentile increase is consistently higher in Tarai towns: Janakpur (60%), Rajbiraj (49%), Nepalgunj (48%), Dharan, (46%), and Biratnagar (27%). The percentile increase in Kathmandu valley was: Kathmandu, 27 per cent; Lalitpur, 23 per cent; and Bhaktapur, 18 per cent. It is not possible to make a correct assessment of the urbanisation process in the country, inasmuch as many sizable towns have not been incorporated as Town Panchayats (Ghapa district alone has six village panchayats with over 10,000 population).

Growth in Urban Population: 1961-1971

1961			1971			Increase during 1961-71
Total Population	Urban Population	% Urban	Total Population	Urban Population	% Urban	
9,412,996	336,222	3.6%	11,555,983	416,938	4.0%	24.0

So far as the population growth rates of most Tarai districts exceed those of incorporated towns, urbanisation process does not seem an important phenomena. Indeed, a comparison of industrial classification of economically active population for 1952/54, 1961 and 1971 censuses shows negligible increases in the number of people engaged in secondary and tertiary industries. On the other hand, the

percentage of those engaged in agriculture increased from 93.3 in 1952/54 to 93.8 in 1961, and to 94.3 in 1971. Nearly a million was added to the agricultural labour force since 1952/54. In addition, the composition of Nepalese population exhibit other traditional characteristics. The dependency ratio* that was 77 per cent in 1952/54 increased to 82 per cent in 1961 and 85 per cent in 1971. Again, the percentage of economically active population declined from 90.4 in 1952/54 to 45.7 in 1961 and 42 in 1971, with corresponding increase in the economically inactive population.

* Dependency ratio is defined as the ratio of children under 15 years of age plus person aged 60 years and above to population 15-59 years of age X 100. That is,

$$DR = \frac{P_{0-14} + P_{60+}}{P_{15-59}} \times 100$$

Where, DR = The Dependency Ratio

P_{0-14} = Children Under 15 years of age

P_{60+} = Persons aged 60 years and above

P_{15-59} = Persons aged 15-59 years.

Economically Active and Not Economically Active Population

1952/54, 1961 and 1971

Year	Total	Total	% of Total Population	Total	% Of Total Population
	Population	Economically Active		Economically Not Active	
1952/54	8,235,079	4,153,455	50.43	4,081,624	49.57
1961	9,412,996	4,306,839	45.75	5,106,157	54.25
1971	11,555,983	4,852,524	42.08	6,703,459	57.92

VI. Population and Development

The above phenomena amply reveal the marginal impact of development efforts made so far. Indeed, so far as development is for the people's benefit one must enquire into the consequences of uncontrolled population growth. Although we have twice as many people per square kilometre than 60 years ago, it is not sheer size alone but the structure and quality of the population that affects development. The main consequences of increasing pressure of population are seen in external migration, disguised unemployment and depletion of forests. Employment outside the country has been an important feature of the Hill economy and in this there seems no letting-up in the drain of human resources externally. Another aspect of this feature that we might label 'muscle strain' is the low per capita earning of rustic Nepali migrants.

The agricultural density in the Hills is already four times that of the Terai and uncontrolled growth of population will further aggravate the situation. Considering the marginal nature of land and the seasonality of agriculture, it is assumed that the Hill agricultural labour force is working only 50 per cent of a 'full employment'. The economy of the Hills will improve only by siphoning off part of the population there to the lower density Tarai and by infusion of massive rural works program. As agriculture will continue to be a major employment sector for the increasing labour force, the Tarai appears an obvious safety valve. Yet the Tarai forest has its own limitations as indicated by population trend in Eastern Tarai. The population of Eastern Tarai nearly doubled during the period 1952-1971 but at the cost of reducing the forest area by half.

Population Growth and Forest Depletion,
Eastern Tarai (1952-1972)

District	Population			Forest (acres)	
	1952	1971	Increase	1954	1972*
1. Sirha	176,915	302,304	+125,389	30,400	19,700 - 10,700
2. Saptari	254,658	312,565	+ 57,907	32,200	29,900 - 22,300
3. Morang) Sunsari)	228,952	524,991	+296,039	230,400	119,900 -110,500
4. Jhapa	80,252	247,698	+167,446	149,500	35,500 -114,000
	740,777	1,387,558	676,781	462,500	205,000 -257,500

Of the 638,300 acres of forest land in 1928, only 205,000 acres are left in the Eastern Tarai. The rate of depletion is increasing: 28 per cent during 1928-54, 30 per cent during 1954-1964, and 36 per cent in 1964-1972. If the Eastern Tarai, favoured with numerous development activities, exhibits a positive correlation between population growth and forest depletion, the process will be more evident in the undeveloped Far West Tarai. The increased population of the Tarai cannot be absorbed by expansion of cropland alone without ecological consequences. The encroachment of forests may be minimized by doing away with the present undernourished "holy cow treatment" of forests and adopting large-scale resettlement schemes. It is equally important to reduce the farm size in the Tarai both for intensive farming and for inducing a high density population that will check immigration from across the border where average densities are three times as high. Finally, in order to ensure that programs of

* Forest areas based on Earth Resources Technology Satellite image 1972-73.

employment generation in industrial and service sectors, planned migration and resettlement are not transient panacea, one must also turn to the policy of population control.

Table 1. Area, Population, Density by Districts, 1971

	<u>Pop. 1971</u>	<u>Area in Sq. Kms.</u>	<u>Density/Sq. Km.</u>
A. Mechi	<u>617,760</u>	<u>7,210.56</u>	<u>85.67</u>
1. Taplejung	84,715	3,026.78	27.99
2. Panchthar	145,899	1,206.73	120.83
3. Illam	139,538	1,534.94	90.91
4. Jhapa	247,698	1,442.21	171.75
B. Kosi	<u>866,260</u>	<u>8,135.50</u>	<u>106.48</u>
1. Sankhuwa Sabha	114,313	3,205.80	35.66
2. Tehrathum	119,307	881.84	135.29
3. Dhankuta	107,649	898.42	119.82
4. Morang	301,557	1,962.60	153.65
5. Sunsari	223,434	1,186.84	188.26
C. Sagarmatha	<u>1,313,480</u>	<u>12,647.49</u>	<u>103.85</u>
1. Solukhumbu	115,324	3,756.12	28.04
2. Okhaldhunga	122,862	1,100.65	111.63
3. Khotang	163,297	1,117.22	146.16
4. Bhojpur	194,506	2,002.38	97.14
5. Udaipur	112,622	2,231.13	50.48
6. Saptari	312,565	1,385.75	225.66
7. Siraha	302,304	1,054.24	286.75

<u>District</u>	<u>Pop. 1971</u>	<u>Area in Sq. Kms.</u>	<u>Density/Sq. Km</u>
D. <u>Janakpur</u>	<u>1,265,755</u>	<u>9,149.95</u>	<u>138.33</u>
1. Dolakha	130,022	1,999.06	65.04
2. Ramechhap	157,349	1,604.56	98.06
3. Sindhuli	147,409	2,533.90	63.16
4. Dhanusha	336,601	1,137.11	290.74
5. Mahottari	324,831	1,183.53	274.46
6. Sarlahi	175,543	891.79	196.84
E. <u>Bagmati</u>	<u>1,496,971</u>	<u>10,678.25</u>	<u>140.19</u>
1. Dhading	236,276	3,139.49	75.26
2. Rasuwa	17,517	1,239.88	14.13
3. Sindhu Palchok	206,364	2,559.23	80.64
4. Kavre Palanchok	245,165	1,458.69	160.07
5. Nuwakot	172,718	1,206.73	143.13
6. Kathmandu	353,756	547.01	646.71
7. Lalitpur	154,998	394.51	392.89
8. Bhaktapur	110,157	132.61	830.68
F. <u>Narayani</u>	<u>1,103,027</u>	<u>8,370.88</u>	<u>131.77</u>
1. Makwanpur	163,766	2,247.71	72.86
2. Chitwan	183,644	2,502.97	73.37
3. Parsa	202,123	1,266.41	159.60
4. Bara	233,401	1,259.78	185.27
5. Rautahat	320,093	1,094.01	292.59
G. <u>Gandaki</u>	<u>1,023,110</u>	<u>12,123.69</u>	<u>84.39</u>
1. Manang	7,436	2,055.42	3.62
2. Parbat	1,118,689	1,253.15	94.71
3. Kaski	151,749	1,289.61	117.67
4. Lamjung	140,226	2,148.25	65.27
5. Gorkha	178,265	2,585.86	68.98
6. Shyanja	268,606	1,292.93	207.75
7. Tanahu	158,139	1,498.47	105.53

<u>District</u>	<u>Pop. 1971</u>	<u>Area in Sq. Kms.</u>	<u>Density/Sq. Km.</u>
H. <u>Dhaulagiri</u>	<u>276,729</u>	<u>15,412.37</u>	<u>17.95</u>
1. Dolpa	19,110	8,221.70	2.32
2. Mustang	26,944	3,421.29	7.88
3. Myagdi	57,946	1,541.57	37.59
4. Banglung	172,729	2,227.81	77.53
I. <u>Lumbini</u>	<u>1,165,701</u>	<u>8,970.93</u>	<u>129.94</u>
1. Gulmi	227,746	1,256.46	181.26
2. Arghakhanchi	130,212	1,375.81	94.64
3. Palpa	212,633	2,360.42	90.08
4. Nawalparasi	146,549	1,243.20	117.88
5. Rupandehi	243,346	1,186.84	205.04
6. Kapilabstun	205,216	1,548.20	132.55
J. <u>Karnali</u>	<u>168,012</u>	<u>13,409.98</u>	<u>14.02</u>
1. Humla	29,524	5,980.62	4.94
2. Mugu	25,718	3,139.49	8.19
3. Jumla	122,753	2,824.55	43.46
4. Tibrikot	10,017	1,465.32	6.84
K. <u>Rapti</u>	<u>705,813</u>	<u>9,504.68</u>	<u>74.26</u>
1. Rukum	96,243	1,836.62	52.40
2. Rolpa	162,955	1,704.01	95.63
3. Salyan	141,457	1,876.40	75.59
4. Piuthan	137,338	1,392.38	98.64
5. Dang Deokhuri	167,820	2,695.26	62.26
L. <u>Eheri</u>	<u>575,071</u>	<u>10,529.07</u>	<u>54.02</u>
1. Dailekh	156,072	1,637.71	95.30
2. Jajarkot	86,564	2,244.39	38.57
3. Surkhet	104,933	3,209.11	32.70
4. Bardia	101,793	1,558.14	65.33
5. Banke	125,709	1,879.72	66.88

<u>District</u>	<u>Pop. 1971</u>	<u>Area in Sq. Kms.</u>	<u>Density/Sq. Km.</u>
M. <u>Seti</u>	<u>597,071</u>	<u>12,488.36</u>	<u>47.81</u>
1. Fajhang	108,623	3,785.96	28.69
2. Bajura	61,342	1,611.19	38.07
3. Doti	166,070	2,904.11	57.18
4. Achham	132,212	1,319.45	100.20
5. Kailali	128,877	2,867.65	44.94
N. <u>Mahakali</u>	<u>361,170</u>	<u>6,759.70</u>	<u>53.43</u>
1. Darchula	68,868	1,829.99	37.63
2. Baitadi	128,696	1,783.58	72.16
3. Dadeldhura	94,743	1,554.83	60.93
4. Kanchanpur	68,863	1,591.30	43.27

	<u>Pop. 1971</u>	<u>Area in Sq. Kms.</u>	<u>Density/Sq. Km.</u>
1. Eastern Development Region	2,797,500	27,993.55	99.93
2. Central Develop- ment Region	3,865,753	28,199.08	137.09
3. Western Develop- ment Region	2,465,540	36,506.99	67.54
4. Far Western Development Region	2,427,190	52,691.79	46.06
Population	11,555,983	145,391.41	79.48

Table 2. Area, Population, Density by Regions, 1971

Regions (Districts)	Area (km ²)	Population (1971)	Density
I. <u>Eastern</u>	<u>27,993.65</u>	<u>2,797,500</u>	<u>99.93</u>
1. Mountain (3)	9,988.70	304,352	30.47
2. Hill (8)	10,973.31	1,105,590	100.75
3. Plain (5)	7,031.64	1,387,558	197.33
II. <u>Central</u>	<u>28,199.08</u>	<u>3,865,753</u>	<u>137.08</u>
4. Mountain (3)	5,798.27	353,923	61.03
5. Hill (9)	13,065.21	1,741,594	133.30
6. Plain (7)	9,335.60	1,770,236	189.62
III. <u>Western</u>	<u>36,507.10</u>	<u>2,465,541</u>	<u>67.53</u>
7. Mountain (3)	13,698.41	53,490	3.90
8. Hill (11)	18,830.45	1,816,940	96.48
9. Plain (3)	3,978.24	595,111	149.59
IV. <u>Far West</u>	<u>52,691.78</u>	<u>2,427,190</u>	<u>46.06</u>
10. Mountain (7)	20,637.12	426,845	20.68
11. Hill (11)	21,462.59	1,407,283	65.53
12. Plain (5)	10,592.07	593,062	55.99
<u>Nepal</u>	<u>145,391.70</u>	<u>11,555,984</u>	<u>79.48</u>
a. Mountain (16)	50,122.50	1,138,610	22.71
b. Hill (39)	64,331.65	6,071,407	94.37
c. Plain (20)	30,937.55	4,345,967	140.47

Table 3. Population Change, 1911-1971

Year	Total Population	Absolute Change	Percentile Change	Growth Rate
1911	5,638,749	-	-	
1920	5,573,788	- 64,961	- 1.1	
1930	5,532,564	- 41,224	- 0.7	
1941	6,283,649	- 751,085	+11.7	
1952/54	8,473,478	+2,189,829	+34.8	
1961	9,799,820	+1,326,432	+15.6	
1971*	11,555,983	+1,756,163	+17.9	

* The Total population figure for this year does not include the population absent from the country.

Table 4. Population Change by Districts* 1961-1971

Zone/District	1961	1971	Change	
			Absolute	Per Cent
<u>Mechi Zone</u>				
1. Taplejung	83,700	84,745	+ 1,015	1.2
2. Panchther	126,000	145,809	+ 19,809	15.72
3. Illam	125,000	139,538	+ 14,538	11.63
4. Jhapa	118,000	247,698	+ 129,698	109.91

*Source: Central Bureau of Statistics, Provisional Data.

Zone/District	1961	1971	Change	
			Absolute	Per Cent
<u>Koshi Zone</u>				
1. Sankhuwa Sabha	105,400	114,313	+ 8,913	8.45
2. Terhathum	134,000	119,307	- 14,693	- 10.96
3. Dhankuta	86,000	107,649	+ 21,649	25.17
4. Morang	153,500	301,557	+ 148,057	96.45
5. Sunsari	144,000	223,434	+ 79,434	55.16
<u>Sagarmatha Zone</u>				
1. Solukhumbu	106,400	105,324	- 1,076	- 1.01
2. Bhojpur	113,500	194,506	+ 81,006	71.37
3. Khotang	136,000	163,297	+ 27,297	20.07
4. Okhaldhunga	113,000	122,862	+ 9,862	8.72
5. Udaypur	92,700	112,622	+ 19,922	21.49
6. Saptari	243,500	312,565	+ 69,065	25.25
7. Siraha	261,000	302,304	+ 41,304	15.82
<u>Janakpur Zone</u>				
1. Dolakha	106,400	130,022	+ 23,622	27.84
2. Ramechhap	107,500	157,349	+ 49,849	46.37
3. Sindhuli	114,500	147,409	+ 32,909	28.74
4. Dhanusha	258,000	330,601	+ 72,601	28.13
5. Mahotari	259,000	324,831	+ 65,831	25.41
6. Sarlahi	121,500	175,543	+ 54,043	44.47

Zone/District	1961	1971	Change	
			Absolute	Per Cent
<u>Bagmati Zone</u>				
1. Sindhu Palchok	183,700	206,385	+ 22,685	12.34
2. Rasuwa	13,100	17,517	+ 4,417	33.71
3. Nuwakot	145,000	172,718	+ 27,718	19.11
4. Dhading	195,500	236,276	+ 40,776	20.85
5. Kavre Palanchok	207,000	245,165	+ 38,165	18.43
6. Bhaktapur	51,500	110,157	+ 52,657	102.24
7. Kathmandu	157,500	353,756	+ 196,256	124.60
8. Lalitpur	87,000	154,998	+ 67,998	78.15
<u>Narayani Zone</u>				
1. Makwanpur	98,500	163,766	+ 65,266	66.25
2. Chitwan	68,500	183,644	+ 115,144	168.09
3. Rautahat	245,000	320,093	+ 75,093	30.65
4. Bara	176,000	233,401	+ 57,401	32.61
5. Parsa	154,500	202,123	+ 47,623	30.82
<u>Gandaki Zone</u>				
1. Gorkha	145,200	178,265	+ 33,065	22.77
2. Manang	4,400	7,436	+ 3,036	69.00
3. Lumjung	125,500	140,226	+ 14,726	11.73
4. Kaski	100,500	151,749	+ 51,249	50.99
5. Parbat	97,000	118,689	+ 21,689	22.35
6. Tanahun	129,500	158,138	+ 28,638	22.11
7. Syanga	240,500	268,606	+ 28,106	10.39

Zone/District	1961	1971	Change	
			Absolute	Per Cent
<u>Lumbini Zone</u>				
1. Nawalparasi	95,000	146,548	+ 51,548	54.26
2. Palpa	156,000	212,633	+ 56,633	36.30
3. Gulmi	214,500	227,746	+ 13,246	6.17
4. Arghakhanchi	138,500	130,212	- 8,288	- 5.98
5. Rupendehi	159,000	243,346	+ 84,346	53.04
6. Kapilbastu	162,500	205,216	+ 42,716	26.28
<u>Dhaulagiri Zone</u>				
1. Mustang	33,600	26,944	- 6,656	- 19.80
2. Dolpa	16,800	19,110	+ 2,310	13.75
3. Myagdi	45,000	57,946	+ 12,946	28.75
4. Banglung	149,000	172,729	+ 23,729	15.92
<u>Rapti Zone</u>				
1. Rukum	85,000	96,243	+ 11,243	13.22
2. Volpa	122,500	162,955	+ 40,455	33.02
3. Salyan	153,000	141,457	- 11,543	- 7.54
4. Pyuthan	127,500	137,338	+ 9,838	7.71
5. Dang Deukhuri	141,500	167,820	+ 26,320	18.60
<u>Karnali Zone</u>				
1. Humla	28,100	29,524	+ 1,424	5.06
2. Mugu	23,400	25,718	+ 2,318	9.90
3. Tibrikot	8,600	10,017	+ 1,417	16.47
4. Jumla	107,900	122,753	+ 14,853	13.76

Zone/District	1961	1971	Change	
			Absolute	Per Cent
<u>Bheri Zone</u>				
1. Jajarkot	133,000	86,564	- 46,436	- 34.91
2. Dailekh	132,500	156,072	+ 23,572	17.79
3. Surkhet	90,900	104,933	+ 14,033	15.43
4. Barke	78,500	125,709	+ 47,209	47.92
5. Bardia	68,000	101,793	+ 33,793	49.69
<u>Seti Zone</u>				
1. Bajura	52,000	61,342	+ 9,342	17.96
2. Bajhang	125,000	108,623	- 16,377	- 13.10
3. Achham	106,500	132,212	+ 25,712	24.14
4. Doti	145,000	166,070	+ 21,070	14.53
5. Kailali	96,500	128,877	+ 32,377	33.55
<u>Mahakali Zone</u>				
1. Darchula	42,300	68,868	+ 26,568	62.80
2. Baitadi	96,500	128,696	+ 32,196	33.36
3. Dandeldhura	78,000	94,743	+ 16,743	21.46
4. Kanchanpur	17,500	68,863	+ 51,363	293.50

Table 5. Population Change by Regions, 1961-1971

Region	1961		1971		Per cent Increase During 1961-71
	Number	Percent	Number	Per cent	
<u>Eastern Region</u>	<u>2,273,496</u>	<u>24.15</u>	<u>2,797,500</u>	<u>24.20</u>	<u>23.94</u>
Hills & Mountains	1,317,750	13.99	1,409,942	12.20	7.99
Terai	955,746	10.15	1,387,558	12.01	45.18
<u>Central Region</u>	<u>3,072,596</u>	<u>32.64</u>	<u>3,865,753</u>	<u>33.45</u>	<u>25.81</u>
Hills & Mountains	1,747,178	18.56	2,095,517	18.13	19.93
Terai	1,325,418	14.08	1,770,236	15.31	33.56
<u>Western Region</u>	<u>1,998,663</u>	<u>21.23</u>	<u>2,465,540</u>	<u>21.33</u>	<u>23.35</u>
Hills & Mountains	1,580,482	16.79	1,870,430	16.18	18.34
Terai	418,181	4.44	595,110	5.14	42.31
<u>Far Western Region</u>	<u>2,068,241</u>	<u>21.97</u>	<u>2,427,190</u>	<u>21.00</u>	<u>17.35</u>
Hills & Mountains	1,698,083	18.03	1,834,128	15.87	8.01
Terai	370,158	3.93	593,062	5.13	60.21
<u>Nepal</u>	<u>9,412,996</u>	<u>100.00</u>	<u>11,555,983</u>	<u>100.00</u>	<u>22.76</u>
Hills & Mountains	6,343,493	67.39	7,210,917	62.39	13.66
Terai	3,069,503	32.61	4,345,066	37.61	41.58

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Note: District boundary changes that have also affected regional population marginally have not been adjusted while computing these population figures.

Chapter Three

Population Migration: Nature and Scope

By Ratna S.J.B. Rana and Yadav S. Thapa*

I. Introduction

There are indications that in the last two decades major shifts of population have been taking place in Nepal. Their most striking feature is the redistribution of population within the country which amounted to 0.13 per cent of the total population in 1952-1954.^{1/} This figure increased to 1.3 per cent in 1961 and to 3.6 per cent in 1971. In terms of gross migration, the shifts in population within the country are even higher than indicated by the above figures. According to the 1952-1954 census, intra-country migration involved approximately 0.16 per cent of the total population.^{2/} This has increased to 2 and 4.5 per cent in the 1961 and 1971 censuses, respectively.

These shifts in population occurring within the country are also reflected in the interregional variations of the growth rates within the last decade. While the growth rate for the country during 1952-1954 - 1961 census period was two per cent annually, it ranged from 1.1 per cent in the eastern mountains and hills to 2.4 per cent in eastern Tarai.^{3/} This is further indicated by changes in population density over the last twenty years which has increased by almost 75 per cent in many areas in the Tarai, while remaining more or less the same in the hills.^{4/}

* The help of Mr. Krishna Ram Khadka in the preparation of some of the tables is gratefully acknowledged.

The results of the 1971 census reveal that this trend is continuing at a rapid pace. During the 1961-1971 intercensal period, population increase in the mountain and hill regions did not exceed 17 per cent and the highest growth rate was 1.76. During the same period, the increase in the central and eastern Tarai was a third of the 1961 base, and population doubled in the western Tarai.^{5/} In other words, the annual growth rate for the country as a whole was two per cent, while that for the Tarai was 3.4 per cent, compared with 1.3 per cent for the hills and mountain regions.^{6/}

In addition to the natural growth rate, the increment for the Tarai region includes both settlers from the hills as well as immigrants from India. In 1961, 10.8 per cent of the total population of the Tarai region was born outside the country. Of this foreign-born population, 98.9 per cent had been born in India. Of the total population found in the Tarai, only 2.5 per cent had been born in the hills (including Kathmandu Valley). Of those who had moved to the Tarai by 1961, four times as many persons had been born in India as those in the hills. In contrast the 1971 census indicated that 9.75 per cent of the total population of the Tarai had been born in the hills (including Kathmandu Valley). Those born in the mountains numbered less than one per cent of the total population. In 1971 the population born in India was 8 per cent of the total population of the Tarai, which indicates that immigration in the Tarai has shifted somewhat in favor of the population born in the hills and mountains.

The Tarai is going to continue attracting migrants in the years ahead. A recent survey has indicated that there has been a substantial increase in migration from India, perhaps larger than the migration of the hill people into the Tarai, but this is not substantiated by the 1971 census. Nonetheless there cannot be any doubt that migration into this area is steadily increasing.

Differences in fertility and mortality rates between regions of the same nation often are rather small in comparison with differences in migration rates between regions. The most important single factor that explains why some regions grow faster (Tarai) than others (hills) must be due to migration. As a result, the principal mechanism for redistribution of population in Nepal, as is often also the case with other nations, is internal migration. Population movement in Nepal, however, is not limited to migrations into the Tarai, Nepal has since long been a population-exporting country and the past two censuses indicate that this trend is on the increase. Whereas 2.4 per cent of total population had migrated outside the country in 1952-1954, for 1961 and 1971, respectively, the corresponding figures were 3.5 and 5.2 per cent.^{8/} Unfortunately, however, this critical variable inducing demographic, economic and socio-political changes has been given little attention, if any in the literature that deals with population in Nepal.

II. Historical Perspective

In Nepal migration is practically as old as the history of its colonization by peoples from the north as well as the south. The matter for concern is that the scale of migration has considerably increased in recent years and is likely to continue, ceteris paribus, in the future.

A major trend in migration commenced following the conquest of the Kathmandu valley by Prithvi Narayan Shah in 1758, and his subsequent campaigns in the rest of the country which was until then fragmented into a number of petty kingdoms and principalities. The economic policies and programs undertaken by the Government of Nepal during the period after political unification was directed toward mobilizing the resources to finance the campaigns of conquests which involved a great deal of population mobility internally. It was then a prime objective of official policy to attract settlers from India and Tibet; there was a growing trend towards immigration and the government tried its best to encourage it and check emigration.^{9/}

Another trend can be discerned after the Sugauli Treaty of 1816 which allowed the British Government to raise three regiments of Gorkhas for the armies of the East India Company. However, prior to this treaty, migration from Nepal had taken place, although less intensely, to Kangra Valley at the time of Gorkha conquest. Yet the period following this treaty witnessed a largescale exodus of people from several parts of Nepal to Indian territory.^{10/} However, the most important Nepali migration to India occurred only after the 1850's and was directed towards Assam, Darjeeling, Sikkim and Bhutan. Among the important factors contributing to this migration was the free plots of land given to the plantation workers in Darjeeling and Assam.

As in the past, the official policy during the Rana period (1846-1951) was to attract settlers into the Tarai from both the hills and India. The effects of this policy were mainly confined to settling people close to the Indian

border but, unofficially, people had started moving slowly into the Inner Tarai, such as in Udaypur and Sindhuli in the east and Dang-Deukhuri in the west. However, it was the eradication of malaria in Chitwan Valley and its resettlement in the later half of the 1950's that marked another chapter in the history of migration in Nepal, accentuating the southward migration which was already taking place in a measured way. Although the search for land from higher to lower elevations continued for decades, leading to a transfer of population from the hills to the Tarai and from ridges to valleys in the hills, the opening up of Chitwan Valley, which was then called a "death valley" (kala pani), was a turning point in both the direction and magnitude of internal migration in Nepal. This was directed southwards and involved numbers of people larger than even before. Their destinations were the Inner Tarai and Tarai, the most fertile regions of Nepal which are a narrow strip of plains running from east to west between the foot-hills and the 500-mile long border with India.

The main reason for this influx of people into this area has been the success of the malaria eradication program. First initiated in conjunction with the Rapti Valley Development Board (Chitwan), the Nepal Malaria Eradication Organization (NMEO) was established in 1958. It was the success of this program in the 1960's which removed the major constraint against the influx of people to these rich lands. The Tarai is not only Nepal's granary, but also the source of almost all her exportable surplus. It is an area famous for its forest resources as well. Now providing an additional outlet for the hills population which once tended to migrate to

India, it is here that all "new land" is to be found and to which His Majesty's Government looks to augment its supply of grains.

While the indigenous people, the Tharus seemed immune to malaria in the Tarai and Inner Tarai, it was a deadly for the hill people to live in this area. As result of this hyperendemicity of malaria, this area was sparsely populated until recently, despite the attempts by governments to reclaim it for settlement.^{11/} "Even the Turrye, or Turryahi, generally speaking, would seem to be but indifferently peopled, the village throughout it being...very thickly scattered, and in most places of a mean rank in point of magnitude, as well as appearance."^{12/}

Now things have changed. From India and from the hills people have been settling in uncontrolled and unplanned swarms. Destruction of the "bhaber" and Chure forests has been the main contribution of the settlers from the hills. The Indian settlers have been mostly confined to the already cleared lower Tarai.

However, population shifts in Nepal have not been entirely limited to the movements from the hills to the Tarai, although these are obviously the most important because of their magnitude and the relatively short period within which they have occurred. As was noted previously, there have been population movements from high to low altitudes: from lower slopes of the Himalayas to higher slopes of Mahabharat (mainly Tamangs in the east and Magars in the west), and from hill areas of 4000-6000 feet to the adjacent lower valleys below 3000 feet.

III. The Statistical Record

1. Magnitude. From the last three censuses, it is obvious that there has been a drastic rise in the number of people leaving their homes: from 3.95 per cent of the total population in 1952-1954 to 5.95 per cent in 1961, and to about 9 per cent in 1971.^{13/} The largest number of these migrants were from the hills, accounting for 94.39 per cent of the total absentee population in 1952-1954 and 89.18 per cent in 1961; the corresponding figure for 1971 is about 86.6 per cent which, however, does not include the people who left their homes for other countries. The decline in percentages, does not indicate that the absolute number of immigrants from the hills is on the wane. On the contrary, it was from the hills that most of these migrants originated, among which the western hill contributed the largest number, or 43.14 per cent of the absentees of the country and 7.90 per cent of the total population of the area in 1961 (Table 1). In migration rate also the western hills was ahead of all other areas ^{14/}: from there 86 persons were absent for six months or more per 1,000 persons present, which was more than double the national rate (41) and almost eight times as high as the average for the Tarai.^{15/} According to the 1961 census, approximately one household in five had a member absent for six months or more.

In so far as the districts are concerned, the largest numbers of migrants from the western hills were from Syangja (12.27 per cent), followed by Gulmi (10.07 per cent), Kaski (10 per cent), Tanuhun (7.70 per cent), Baglung (7.71 per cent), Lamjung (7.70 per cent), and Gorkha (5.53 per cent). In the far western hills, Puihan had the highest absentee

population 7.76 per cent of the total population. In the eastern hills the Dolakha and Ramechhap districts had the largest absentee population. Migration rates were highest in the hills but not in the mountains in northern Nepal Himalayan and Inner Himalayan Valleys.^{16/} This could be attributed to the fact that the movement of people from this region would entail a change of altitudes of about 3,000 metres with the consequent problem of acclimatization and environmental adjustment.

Table 1. Population Absent
(for six months and more)

Regions	1952-1954*					1961**				
	Persons		% to the Total Absentee	Persons Absent 6 Months or More Per 1,000	% of Total Population	Persons		% to the Total Absentee	Persons Absent 6 Months or More Per 1,000	% of Total Population
	Absent	Present				Absent	Present			
Eastern Hills	58941	1708816	27.18	34.49	3.33	99699	1886722	25.77	52.00	5.01
Western Hills	37462	767786	17.26	48.74	4.64	166868	1946502	43.14	86.00	7.90
Far-Western Hills	105329	2461391	49.96	44.01	4.21	78432	1698083	20.28	46.00	4.41
Hills (Total)	204696	4937993	94.39	41.45	3.98	344999	5531307	89.18	62.00	5.88
Kathmandu Valley	4766	410995	2.20	11.59	1.14	14520	459990	3.75	32.00	3.05
Eastern Tarai	2384	1806049	1.10	1.32	0.13	17533	2213282	3.50	6.00	0.61
Western Tarai	202	348179	0.09	0.58	0.06	2766	400357	0.71	7.00	0.69
Tarai (Total)	2740	2389417	1.26	1.14	0.11	17218	2885190	4.45	6.00	0.59
Eastern Inner Tarai	2342	189228	1.08	12.00	1.22	5172	193666	1.14	27.00	2.60
Central Inner Tarai	1796	239677	0.83	7.49	0.74	4147	244236	1.07	17.00	1.67
Western Inner Tarai	513	89315	0.24	5.70	0.57	766	98607	0.19	8.00	0.77
Inner Tarai (Total)	4651	518220	2.14	8.97	0.99	10087	536509	2.60	19.00	1.84
Nepal (Total)	216853	8256679	100.00	26.26		386824	9412356	100.00	41.00	3.95

Total Population of Nepal: For 1952-54: 8,473,478; For 1961: 9,413,000

Source: * Census of Population, Nepal: 1952/54, His Majesty's Government of Nepal, Central Bureau of Statistics, Part I, Vol. 1, Table 2, pp. 16,12.

** Results of National Population Census: 1961, His Majesty's Government of Nepal, Central Bureau of Statistics, Vol. 1, Table 11, pp. 29-31 (figures rounded to nearest whole number).

In 1952-1954, 216,853 persons were absent from their homes, compared to 386,824 in 1961: an increase of 169,971 persons or 78.38 per cent. Comparable figures are not available for the 1971 census but from available data (based on place of birth and place of last residence) those living outside their place of birth within the country had numbered 506,921 persons.^{17/} Of these, the Eastern Hills had contributed 37 per cent of the out-migrants. Next to it was the Central Hills (28 per cent), then the Western Hills (13 per cent). Among the areas which had received large numbers of in-migrants, the Eastern Plain was leading by 37 per cent, followed by the Central Plain (32 per cent), and the Western Plain (14 per cent).

What is interesting is that Kathmandu Valley has negative net migration. According to the 1971 census, whereas 26,440 persons had moved into the valley, 45,484 persons had out-migrated, with a net loss of 19,044 persons or 3 per cent of its total population in 1971. In 1952-1954 Kathmandu valley recorded a positive net migration, with 6,218 persons moving into the valley. Little more than three-times as many persons as in the previous census year immigrated into Kathmandu valley in 1961, but the number of out-migration from the area also increased substantially. Still, Kathmandu valley recorded a net positive migration in 1961. In view of this fact the result of 1971 census appears to be an anomaly, especially because of the relative concentration of development activities in this valley. Nonetheless, the net out-migration from this area can be explained in terms of the relatively underdeveloped large parts of the valley in Bhaktapur and Patan Districts, which are not different from the surrounding hill areas where out-migration has been observed for a long time.

In all past three censuses, the Eastern Hills had the largest number of out-migrants within the country, although at a diminishing rate. The Eastern Hills accounted for 53 per cent of the total number of out-migrants within the country in 1952-1954. The corresponding figures for 1961 and 1971 were 42 and 37 per cent, respectively. Next to the Eastern Hills were the Western Hills (Tables 2, 3 & 4). In 1952-1954, 10,769 persons had left the hills (excluding Kathmandu valley) and settled elsewhere in the country, compared to 105,997 persons in 1961 or almost a ten-fold increase within the decade. In 1971, 380,821 persons had left the hills (including the mountains) and moved into other parts of the country.¹⁸ Thus, compared to 1961 almost three times as many persons had left the hills and settled elsewhere in the country in 1971 (compare Tables 2, 3 & 4). On balance, in 1971 the mountains and hills had lost 29,959 and 340,992 persons, respectively, while the Tarai had gained 339,925 persons.

In absorption of the internal migrants, the Eastern Tarai lead in both the 1961 and 1971 censuses, but Kathmandu Valley out-ranked it in the 1952-1954 census. The Eastern Tarai had absorbed about half the number of internal migrants as had Kathmandu Valley in 1952-1954, but in the last census Kathmandu had lost population through internal migration. As was noted previously, whereas Kathmandu Valley had a net negative migration in 1971, the Eastern Plain (Tarai) had absorbed 175,532 persons in 1971 (Table 4) compared to 68,182 persons in 1961. This would indicate an increase of 157 per cent in net positive migration in Eastern Tarai over the previous period.

Table 2. Net Internal Migration in Nepal, 1952-1954

Area	In-migrants	Out-migrants	Net Migration
Eastern Hills	244	7,233	- 6,989
Western Hills	358	4,138	- 3,780
Kathmandu Valley	7,678	1,460	+ 6,218
Eastern Tarai	3,497	294	+ 3,203
Western and Far Western Tarai	1,265	26	+ 1,239
Eastern Inner Tarai	201	407	- 206
Central and Western Inner Tarai	487	172	+ 315
Total	13,730	13,730	0

Source: Census of Population, Nepal: 1952/54, His Majesty's Government of Nepal, C.B.S. Part 1, Vol. 3, p. 25°. (Derived from Table 2).

Table 3. Net Internal Migration in Nepal, 1961

Area	In-migrants	Out-migrants	Net Migration
Eastern Hills	5,354	74,846	- 69,492
Western Hills	5,694	38,326	- 32,632
Far Western Hills	4,783	8,656	- 3,873
Kathmandu Valley	24,748	20,131	+ 4,617
Eastern Tarai	72,030	3,848	+ 68,182
Western Tarai	8,307	2,591	+ 5,716
Far Western Tarai	21,170	545	+ 20,625
Eastern Inner Tarai	5,345	10,552	- 5,207
Central Inner Tarai	27,560	2,188	+ 25,372
Western Inner Tarai	3,446	16,754	- 13,308
Total	178,437	178,437	0

Source: Results of National Population Census, 1961, His Majesty's Government of Nepal, C.B.S. Vol. II, pp. 30-31. (Derived from Table 11).

Table 4. Net Internal Migration in Nepal, 1971

Area	In-migrants	Out-migrants	Net Migration
Eastern Mountains	6,385	37,916	- 31,531
Eastern Hills	17,498	186,843	- 169,345
Eastern Plain	185,799	10,267	+ 175,532
Kathmandu Valley	26,440	45,484	- 19,044
Central Mountains	1,223	2,095	- 872
Central Hills	29,752	140,642	- 110,890
Central Plain	161,751	6,504	+ 155,247
Western Mountains	2,125	9,681	- 7,556
Western Hills	5,063	65,750	- 60,687
Western Plain	70,885	1,739	+ 69,146
Total:	506,921	506,921	0

Source: Central Bureau of Statistics, HMG of Nepal 1971 Census (Result of Table No. 8 & 10).

Note: Figures based on place of birth and last place of residence data and refer to life time migrants.

This, however, is not as significant as the migration into Far Western Tarai where net positive migration in 1971 was 235 per cent over that of the previous census.

Clearly, the trend is that the Far Western Tarai is attracting more of the migration streams from the hills. The absorption of the Eastern Tarai has diminished because it is relatively "filled up", as its comparatively high density would indicate, and because of the relative abundance of "new lands" in the Far Western Tarai. All the same what the results of the past two censuses indicate is a staggering

increase in the magnitude of internal migration during the two decades covered, of which the migration streams from the hills to the Tarai constituted 80 per cent of the inter-regional migration by 1971.

2. Direction of Internal Migration. Where do the absentee Nepalis head when they leave their place of residence? Do they go to other places within the hills, or to the Tarai or elsewhere abroad? The 1952-1954 census figures indicate that the absentee population that went to other districts were relatively lower compared to those who went outside the country. Yet, there has been a sharp increase in the number of absentees who went to other parts of the country, almost double the percentage in 1961 compared to the preceding census period. Likewise, internal migration in 1971 had increased by a little over two and half times over the previous census; the number of those who had gone abroad seems to have increased even more sharply than those who had moved to other parts of the country.

According to the 1952-1954 census, Kathmandu Valley was the largest recipient of those absentees who remained within the country, followed by the Tarai: 41 and 26.4 per cent, respectively, of the absentee population which had moved to other districts. This census also showed that the largest share of the absentee population from the Eastern Hills, the Western Hills and the Eastern Inner Tarai went to Kathmandu Valley, and inter-district movement of the absentee population was highest in the Tarai. The absentee population was highest in the Tarai. The absentee population from Kathmandu Valley went to the Eastern Tarai. Those from the Central Inner Tarai and Western Inner Tarai went to the Western and Far Western Tarai, respectively (Table 5.)

In the Eastern Hills, the Western Hills, the Far Western Hills, and the Central and Western Inner Tarai, out-migration or the absentee population from these districts exceeded the immigration or those absentees from within the country who were living in these areas. In all other areas the reverse was true.

Data on the destination of the absentee population, or internal migrants, are not available for 1961. However, the information given in the 1961 census on the place of birth of the native population gives clues to both the origin and the destination of internal migrants. According to this census, 4.65 per cent of the native-born population were born in districts other than those in which they had their places of residence. The Central Inner Tarai had the highest percentage of population born in other districts (13.14 per cent), followed by the Far Western Tarai (12.3 per cent) and the Kathmandu Valley (12 per cent). The Far Western Hills had the lowest percentage of population born in other districts (2 per cent).

Two-fifths of the migrants had their destination in the Eastern Tarai, 13 per cent in Kathmandu Valley, 9.6 per cent in Western Hills, 7.6 per cent in the Central Inner Tarai, and 7.4 per cent in the Western Inner Tarai. Table 6 clearly reveals that in most of the regions the major source of the migrants was the hills: 45 per cent of their migrants also came from the hills, and the majority of those in the Tarai (particularly the Inner Tarai).

The 1971 census shows the continuing trends from the preceding census periods. The migration stream between the hills and the Tarai accounted for 80 per cent of the

Table 5. Origin and Destination of the Internal Migrants, 1952-1954

Origin	Destination												Unknown	Nepal
	Eastern Hills	Western and Far Western Hills	Hills (Total)	Kathmandu Valley	Eastern Tarai	Western and Far Western Tarai	Tarai (Total)	Eastern Inner Tarai	Central and Western Inner Tarai	Inner Tarai (Total)	In the Same Region, but in the other Districts			
Nepal	244	385	602	7,678	3,497	1,425	4,922	141	487	628	1,398	3,505	18,733	
Persons in %	1.3	1.9	3.2	41.0	18.7	7.6	26.3	0.7	2.6	3.2		18.7		
Eastern Hills	-	105	105	4,978	1,955	127	2,082	51	17	68	400	1,755	9,388	
Persons in %		1.1	1.1	53.0	20.8	1.4	22.2	0.5	0.2	0.7		18.7		
Western Hills	90	-	90	2,192	565	843	1,408	19	429	448	629	1,028	5,795	
Persons in %	1.6		1.6	37.8	9.3	14.6	24.4	0.3	7.4	7.7		17.7		
Kathmandu Valley	105	215	320	-	775	270	1,045	67	28	95		395	1,855	
Persons in %	5.7	11.6	17.3		41.8	12.3	56.3	3.6	1.5	5.1		21.0		
Eastern Tarai	17	12	29	232	-	19	19	4	10	14	303	243	840	
Persons in %	2.0	1.4	3.4	27.6		2.3	2.3	0.5	1.2	5.1		28.9		
Western Tarai	-	2	2	21	3	-	3	-	-	-	41	3	70	
Persons in %		2.8	2.8	30.0	4.3		4.3					4.3		
Eastern Inner Tarai	27	2	29	198	174	3	177	-	3	3	3	4	418	
Persons in %	6.5	0.5	7.0	47.8	42.1	0.7	42.8		0.7	0.7		1.0		
Central and Western Inner Tarai	5	22	27	57	25	163	245	-	-	-	122	77	371	
Persons in %	1.3	6.0	7.3	15.4	6.7	43.9	66.0					20.8		

Source: Census of Population, Nepal; 1952/54, His Majesty's Government of Nepal. Central Bureau of Statistics, Part I, Vol. 3, Table 2, pp. 259.

total internal migration. Most of the migrants from the Eastern Mountains ended in the Eastern Plain (56 per cent) and Kathmandu Valley (9 per cent). Likewise, the majority of the migrants from the Eastern Hills had gone off to the Eastern Plain (80 per cent). Other areas which were significant in absorbing the migration streams from this area were the Central Plain (7 per cent) and Kathmandu Valley (5 per cent).

As in the case of the Eastern Hills, the majority of the migrants from the Central Hills had landed in the adjoining central Plain (88 per cent), with Kathmandu Valley being the next important destination (6 per cent). Similarly, most of the migrants from the Western Hills had found their new homes in the Western Plain (86 per cent). The next place which had received most migrants from this area was the Central Plain (6 per cent). This indicates that most of the migrants had chosen to relocate themselves in areas which were relatively closer to them than in those farther away, providing further evidence to the generally observed relationship between migration and distance (Table 7). Apparently, the distance cost (or distance selectivity) theory of migration is also operating in Nepal. Another interesting feature of the migration flows between the hills and Tarai are that they are essentially one-way (from hills to the Tarai) with insignificant counter-streams.

While most of the migrants from the hills, and to a lesser extent from the mountains, had immigrated to the adjoining plains, almost 50 per cent of the migrants from Kathmandu Valley had gone off to the hills. Of them the Central Hills was the most important destination, absorbing

almost one-third of the total out-migrants from Kathmandu Valley. Among the Tarai, the Central Plain had attracted most migrants, (27 per cent) with the Eastern Plain ranking next (19 per cent). Practically every region of the country seems to have received its share of immigrants from Kathmandu. This may be partly due to the movement of government officials and their families, and to some extent businessmen con-comitulant with the expansion of the administrative infrastructure since the early 1960's.

In 1971, the majority of the migrants from the mountains had gone to the Tarai most of them ending in the Eastern and Western Plains. The Eastern Plain had received the majority of those migrants (43 per cent).

The Tarai had the least number of out-migrants: only about 4 per cent of the total internal migration in 1971. Among the plains (Tarai), the Eastern Plain had sent out the most migrants (56 per cent); the Western Plain, the least (9 per cent). The Eastern Hills and Central Plain each had received about an equal number of migrants from the Eastern Plain: more than one-third of the total migrants. More than half of the migrants from the Central Plain had gone off to the Eastern Plain, with the Central Hills and Kathmandu Valley receiving 22 and 18 per cent of the total migrants therefrom, respectively. The majority of the migrants from the Western Plain had moved to the Western Hills (41 per cent). Other important regions receiving migration streams from this area were the Central Plain and Kathmandu Valley.

Table 6. Origin and Destination of Internal Migrants, 1961

(Based on Population born in the other Districts)

Origin	Destination										Nepal
	Eastern Hills	Western Hills	Far Western Hills	Kathmandu Valley	Eastern Tarai	Western Tarai	Far Western Tarai	Eastern Inner Tarai	Central Inner Tarai	Western Inner Tarai	
Nepal	40507	47071	20551	55055	171937	13842	31281	5722	31992	4444	422402
Persons in %	9.6	11.1	4.9	13.0	40.7	3.3	7.4	1.3	7.6	1.1	100.0
Eastern Hills	21296	909	293	14339	51347	303	368	4314	2941	32	96142
Persons in %	22.2	0.9	0.3	14.9	53.4	0.3	0.4	4.5	3.1	-	100.0
Western Hills	443	33963	2878	7802	2096	5955	700	67	18139	246	72289
Persons in %	0.6	47.0	4.0	10.8	2.9	8.2	1.0	0.1	25.1	0.3	100.0
Far Western Hills	40	1843	13658	438	166	245	2867	9	130	2918	22314
Persons in %	0.2	8.2	61.2	2.0	0.7	1.1	12.9	-	0.6	13.1	100.0
Kathmandu Valley	3717	2060	519	19980	6873	1124	1088	116	4529	105	40111
Persons in %	9.3	5.1	1.3	44.8	17.1	2.8	2.7	0.3	11.3	0.3	100.0
Eastern Tarai	595	108	35	1145	60002	389	282	829	442	23	63850
Persons in %	0.9	0.2	0.1	1.8	94.0	0.6	0.4	1.3	0.7	-	100.0
Western Tarai	19	265	10	117	277	991	479	2	1340	82	3582
Persons in %	0.5	7.4	0.3	3.3	7.7	27.7	13.4	-	37.4	2.3	100.0
Far Western Tarai	8	39	145	83	129	106	4380	-	10	25	4925
Persons in %	0.2	0.8	2.9	1.7	2.6	2.2	88.9	-	0.2	0.5	100.0
Eastern Inner Tarai	381	20	16	36	10072	3	1	176	11	12	10728
Persons in %	3.6	0.2	0.2	0.4	93.8	-	-	1.6	0.1	0.1	100.0
Central Inner Tarai	126	333	8	729	944	16	21	8	482	3	2670
Persons in %	4.7	12.5	0.3	27.3	35.3	0.6	0.8	0.3	18.1	0.1	100.0
Western Inner Tarai	25	117	879	59	126	166	15364	-	18	788	17542
Persons in %	0.1	0.7	5.0	0.3	0.7	0.9	37.6	-	0.1	4.5	100.0

Source: Results of National Population Census, 1961, His Majesty's Government of Nepal, Central Bureau of Statistics, Vol. II, Table 11, pp. 30-33.

Table 7. Origin and Destination of Internal Migration, 1971

Destination	Eastern Mountains	Eastern Hills	Eastern Plain	Kathmandu Valley	Central Mountains	Central Hills	Central Plain	Western Mountains	Western Hills	Western Plain	Total Inter- Regional Migrants from Different Areas
Eastern Mountains	-	8,390	21,215	3,485	9	1,350	3,353	7	7	100	37,214
Eastern Hills	5,054	-	149,401	10,216	64	7,936	13,309	9	52	802	167,843
Eastern Plains	359	3,741	-	1,708	5	368	3,729	17	41	299	10,267
Kathmandu Valley	882	4,868	8,726	-	122	15,172	12,373	53	1,350	2,125	45,484
Central Mountains	-	11	61	141	-	602	1,262	1	1	16	2,095
Central Hills	255	346	2,572	8,681	1,000	-	123,378	91	1,421	2,922	140,642
Central Plain	29	111	3,399	1,141	10	1,426	-	11	50	327	6,504
Western Mountains	5	4	33	136	13	112	64	-	1,428	7,886	9,681
Western Hills	30	19	242	616	-	1,710	3,816	1,928	-	56,359	65,750
Western Plain	1	8	150	316	-	76	467	8	713	-	1,739
Inter-regional migrants residing in different regions.	6,385	17,498	185,799	26,440	1,223	29,752	161,751	2,125	5,063	70,885	506,921

Source: Central Bureau of Statistics, HMG of Nepal, 1971 Census (Data from Tables 8 & 10).

The relocation of migrants within the Tarai was greatest between the Central and Eastern Plains almost equal numbers of migrants moved in either direction. As might be expected, migration between the Western and Eastern Plains was the least. Migration within the mountains, which involved only 35 persons, was insignificant. Relocation of persons within the hills involved 53,387 persons, compared to 352,837 persons going off to the Tarai, Table 8 presents the patterns of inter-regional migration in 1971.

Table 8. Patterns of Inter-regional Migration, 1971

Origin	Destination				Total (out- migration)	Net Migration
	Mountains	Hills	Kathmandu	Tarai		
Mountains	-	11,905	3,762	33,990	49,657	- 39,959
Hills	8,401	-	19,513	352,837	380,751	-340,922
Kathmandu Valley	857	21,390	-	23,237	45,484	- 19,044
Tarai	440	6,534	3,165	-	10,139	+399,925
Total (In-migration)	9,698	39,829	26,440	410,064	486,031	0

Source: As in Table 7.

To recapitulate, four out of five migrants have their destination in the Tarai. The Eastern Plain receives more than one-third of the migrants (37 per cent), the Central Plain slightly less than another one-third (32 per cent), and the Western Plain about 14 per cent.

The Eastern Hills sends out 37 per cent of the migrants, the Central Hills 28 per cent, and the Western Hills 13 per cent. After Kathmandu Valley (9 per cent), the Eastern

Mountains are another area that sends out a significant number of migrants. Kathmandu Valley sends out more migrants than it receives, unlike it used to a decade ago.

Between the hills and the Tarai, the migration streams are one-way, with negligible counter-streams, except for Kathmandu Valley. This phenomenon appears rather unusual since migration streams are generally associated with counter-streams. On the other hand, the movements within the Tarai are two way, for each migration flow is associated with an almost equal volume of counter flow. Among the Tarai regions the Eastern Plain seems to loose population in favor of the Central and Western Plains, although in negligible amounts.

3. Rural Urban Migration.^{19/} Migration does not seem to have played an important role in the urbanisation process in Nepal. The census figures are not comparable and the increase in number of urban places (defined as those places having a population of 5,000 or over in 1961) from 4 in 1961 to 16 in 1971 seems to be primarily due to changes in area of enumeration rather than to rapid population growth due to rural-urban migration. Actually, a comparison of 1961 and 1971 statistics indicates that migration into urban places has been minimal, except in Pokhara (Table 9). Even in Kathmandu where population grew by almost 25 per cent over that of the preceding census, the contribution of migration in its total population is estimated at 1.3 per cent (Table 9). This may be a bit misleading since the growth in Kathmandu has been primarily in the "outer city" and the fringe areas, while the "inner city" might have experienced a decline in population. What this suggests is that our

development efforts thus far have not been able to trigger the process of urbanization on a wide scale.

4. Migration Selectivity. Migration is selective with respect to age and sex of migrants. A large proportion of them were able-bodied males between the ages of 24 and 25. They constituted 40 per cent of the total absentees within the country.^{20/} Informed estimates indicate that the mobility of the labor force in the country has continued to rise and is highest among the age groups between 14 and 25 years, irrespective of sex.

The 1971 census reveals an interesting regional variation in sex ratios. The hills in general have a deficit of males and a surplus of females, while in the Tarai the reverse is the case. As migration is generally male-selective, the variation in sex ratio is primarily due to higher male migration from the hills to the Tarai.

5. Emigration. What about those Nepalese who leave the country? Where did they go and for how long? As indicated earlier, this is not a recent phenomenon and Nepalese have been found enlisted even in the army of Ranjit Singh and also as body guards of the Khan of Khelat.^{21/} To recapitulate, large-scale emigration followed the peace treaty of Sugauli in 1816 which allowed the British to recruit Gorkhas from Nepal, who became highly-prized soldiers in the British Army. Despite past attempts of the Government of Nepal to check the emigration of the Gorkhas for recruitment in the British Army, their outflow continued.^{22/} Gorkha settlements were subsequently established at Kangra Valley, Dharmasala, Bekloh, Dehra Dun, and parts of Shillong and of Assam, to make recruitment easier. Towards

Table 9. Estimated Migration in Town Panchayats, 1961-1971

Rank	Towns	1961 Population	1971 Population	Computed* 1971 Population	Estimated Migrants
(1)	(2)	(3)	(4)	(5)	(6)=(4)-(5)
1.	Kathmandu	121,019	150,402	148,502	1,900
2.	Lalitpur	47,713	59,949	58,549	500
3.	Biratnagar	35,355	45,100	43,384	1,716
4.	Bhaktapur	33,877	40,112	41,570	- 1,458
5.	Nepalgunj	15,817	23,523	19,409	4,114
6.	Pokhara	5,413	20,611	6,642	13,969
7.	Dharan	18,998	20,503	23,512	- 3,009
8.	Bhairawa		17,272	-	-
9.	Hetauda		16,194	-	-
10.	Janakpur	8,929	14,294	10,958	3,336
11.	Birgunj	10,769	12,999	13,215	- 216
12.	Butawal		12,815	-	-
13.	Rajbiraj	5,232	7,832	6,420	1,412
14.	Bhadrapur		7,499	-	-
15.	Ilam		7,299	-	-
16.	Tansen	5,186	6,434	6,364	70

Source: Central Bureau of Statistics, BMG, Nepal.

* The computed 1971-population is derived by the use of the formula, $P_{71} = P_{61} (1+r)^{10}$, where $r = .0207$. The estimated migration is based on the following assumption.

1. that the national growth rate (2.07) held good for each town as well;
2. that the national growth rate is due to the natural increase.

the turn of the century, the Nepalese Government revised its policy of discouraging Gorkha recruitment and this became easier. Thereafter, the settlement of the Nepalese in India was discouraged by the British Government, Nevertheless, Nepalese continued to leave their homeland and settle in India. The development of tea plantations in Darjeeling attracted a large number of Nepalese. In Sikkim and Assam reclaimable land was the main attraction for the land-hungry hill-men of Nepal. Moreover, overseas emigration of Nepalese started at the beginning of the century and reached its peak during the two world wars. Today unknown numbers of people of Nepalese origin are found in Bhutan (where 33 per cent of its population are of Nepali origin), China (Tibet), Pakistan, Burma, Malaysia and Singapore. And further away, about 1,000 families of Nepali origin are reported to have found their home in Fiji.^{23/} There are indications that emigration is increasing, albeit in smaller proportions than in the past. Between the 1952/54-1961 inter-censal period, it increased by 66 per cent and this trend is likely to continue for the present, with India absorbing most of the migrants.

Where did these migrants come from? What Kingsley Davis wrote about the majority of the Nepalese in India being settlers from the other (Nepalese) side of the common boundary, who had married or taken up lands in the contiguous Indian districts, is not borne out by the census.^{24/} These immigrants did not come from the densely populated Tarai districts bordering India but from the less densely populated hills, which contributed 92.9 per cent of the total Nepali migrants in 1961. The Western Hills were the largest supplier

of these migrants, providing nearly 50 per cent of the country's migrants in 1961. The Eastern Hills provided half of that number. India received 79.41 per cent of those migrants in 1952-1954 and 92 per cent in 1961.^{25/} What is most striking is the fact that from every region and district, the largest number of migrants ended up in India; from a majority of the districts more than 90 per cent of the migrants ended in India. A large number of these migrants in India are employed in the military and police services and as watchmen in offices and factories. Others are employed as porters and house-servants and as bearers in hotels and restaurants. On the whole Nepali immigrants to India are employed in jobs requiring little skill.

6. Immigration. According to the Indian census, the number of Nepalese nationals in India was 82,071 persons in 1951 and 133,524 persons in 1961, an increase of 63 per cent over a decade. It is interesting to note that this figure does not tally with that of the Nepalese census which reported 157,323 persons in 1952-1954 and 302,162 persons in 1961.^{26/} In India persons born in Nepal and of Nepalese descent are considerably more numerous. The 1961 Indian census reported 498,436 persons born in Nepal, as against 278,972 persons in 1951, an increase of 219,464 during one inter-censal period, which was the highest since 1891. The majority of the Nepal-born population are distributed over north India extending from Himanchal Pradesh in the west to Manipur in the east, with the largest concentration in Uttar Pradesh. In south India, they are most numerous in Maharashtra than in any other state. However, the proportion of the Nepal-born population along the border states is declining.

This suggests that they are tending to spread out rather than to concentrate in areas of proximity, a trend also noted by Davis.^{27/}

What is the annual migration of Nepalese to India? According to one estimate based on the 1961 census, about 82,000 Nepalese migrated to India annually, and each year about 62,000 migrants returned after having lived in India from one to five years.^{28/}

How many Indians cross the border into Nepal is unknown. Lack of information precludes estimating accurately the number of Indians migrating into the Tarai. Undoubtedly, however, the rapid increase of the population of this region has been, as was noted previously, due to both settlers from the hills and from India.^{29/} The difficulty arises because the censuses do not always distinguish among the three classes of Indians, namely those who are still Indian citizens, those who were born in India but have now taken Nepali citizenship, and those who were born in Nepal but are descended from Indians. This is further complicated by the matrimonial relationship of the people on either side of the border.

According to the 1961 census, the foreign citizens in Nepal numbered 110,060 persons, or 1.17 per cent of the total population. The corresponding figures from 1971 were 136,477 persons on 1.18 per cent of total population. In 1971 the foreign-born population constituted 2.8 per cent of the total population and 96 per cent of them were born in India.

However, the effect or influence of this population is not reflected by this number. In recent years another kind of immigration is taking place. While the great bulk of earlier Indian immigrants had been migrants in search of land and ordinary laborers, those in recent years have been traders; this migration is smaller in number but is of greater politico-economic significance for Nepal.

The largest number of foreign nationals were found in the Tarai in 1961: 90 per cent of the total foreigners in the country, and more than 50 per cent of them concentrated in the Eastern Tarai. In the Eastern Tarai, Biratnagar had a large number of foreign nationals working as industrial laborers. In 1961 Indian nationals constituted the largest number of foreign nationals; they formed 70 per cent of the total foreign nationals, followed by the Chinese and the Pakistanis. It should be stated, however, that nearly one-fourth of the total census returns on foreign nationals did not state any nationality, thus making it difficult to determine the full composition of the foreign community in Nepal. The Tarai had 99 per cent of the total Indian nationals. The reasons for this are apparent in the homogeneity of the topography and culture in the Tarai and across the Indian border. The bulk of the Chinese nationals in Nepal were those who had fled from the Chinese occupation of Tibet and were concentrated in Eastern Hills.

The place-of-birth data, which have a serious defect no so much in accuracy but in their use as an index of migration, depicts a different picture. In 1961, the foreign-born population was four times as numerous as the foreign nationals; the former represented 3.6 per cent of the total

population, as against the latter who made up 1.17 per cent. Of the 337,620 persons born outside the country, 96 per cent were born in India and the bulk of this population (95 per cent) was living in the Tarai. This is not too surprising. As previously noted, the Tarai is an extension of the Gangetic plain geographically and culturally. Also, it was here that the Nepal Government in the past encouraged large-scale land development by people from across the border.^{30/} The India born population in the hills are those, with a few notable exceptions at trading outposts, who are either born of Nepali parents while serving in India or are persons married by the Nepalese migrants. Purely from the census records, on balance, it appears that emigration was nearly three times the immigration as of 1961.^{31/}

It is interesting to note that there were fewer foreign-born persons in 1971 than in 1961. They have decreased not only in percentage of total population (2.8 per cent in 1971 as against 3.6 per cent in 1961), but also in absolute number. While this raises some doubts on the accuracy of the statistics, it is also possible that there has been a significant change in the nature of migration from across the border. As noted above the early migrants crossed the border primarily in search of new lands. Now not only have the "new lands" been rapidly diminishing but the spill-over migrants also face keen competition in acquiring available land from the migrants from the hills. Thus migration from across the border in order to acquire land might have been retarded. While the number of land-hungry migrants might have decreased, it seems that migration in response to employment and other opportunities in the wake of Nepal's

development efforts has considerably increased in recent years. Partly it is due to this reason that the foreign-born population in Kathmandu Valley sharply increased from 1961 to 1971. There were 1,680 foreign-born population living in Kathmandu Valley in 1961 as compared to 6,320 in 1971.

The distribution pattern of the foreign-born population in 1971 was more or less similar to that in 1961 (Table 10). Ninety-three (93) per cent of the total foreign-born population were living in the Tarai, and half of them were in the Eastern Tarai. Among the hill areas, the Central Hills had the most foreign-born population (3 per cent). This is not surprising because this region has been traditionally the prime supplier of the mercenary soldiers.

Table 10. Regional Distribution of Foreign-Born Population, by Countries of Origin, 1971

Country of Birth Regions	India	Burma	China	Other Asian Countries	European	Other Countries	Total
Eastern Mountains	1,220	8	7	308	-	1	1,544
Eastern Hills	2,130	47	18	455	-	24	2,674
Eastern Plain	165,521	1,781	27	1,357	6	70	168,762
Kathmandu Valley	3,645	269	917	968	187	334	6,320
Central Mountains	74	1	9	1,220	-	1	1,305
Central Hills	8,273	405	281	1,132	10	14	10,115
Central Plain	122,791	3,504	7	620	4	10	126,936
Western Mountains	796	-	260	32	-	2	1,090
Western Hills	763	13	8	19	-	33	836
Western Plain	17,505	336	-	20	-	5	17,866
Total Nepal	322,718	6,364	1,534	6,131	207	494	337,448

Source: Central Bureau of Statistics, HMG, Nepal, Vol. Table No. II, 1971 Census.

1/ This index refers to the positive migration of the population in an area and is defined as

$$R_m = (M_i - P_i)$$

Where $(M_i - P_i)$ refers to the measure of net changes due to migration of net changes having positive sign. For further details, see United Nations, Method of Measuring Internal Migration. Manual on Methods of Estimating population, Manual VI.

2/ Unlike the population redistribution index, this figure includes both in-migration and out-migration in a given area.

3/ Thapa and Banskota, Population Study of Nepal, Kirtipur: Centre for Economic Development and Administration, 1971, p. 10 (Misc).

4/ Thapa and Banskota, op. cit., p. 4.

5/ Harka B. Gurung, "Demographic Aspects of Development in Nepal, in Seminar on Population and Development. CEDA Study Series, Seminar Paper No. 2. Kirtipur: Centre for Economic Development and Administration, 1971, p. 13.

6/ Ibid.

7/ Frederick H. Gaige, National Integration in Nepal: A Study of the Nepal Tarai. Unpublished Ph.D. dissertation, University of Pennsylvania, 1970. Cited by Myron Weiner, "The Political Demography of Nepal" in Seminar on Population and Development, op. cit., p. 105.

8/ This percentage for 1971 is obtained by projecting foreign-born population of 1961 (base) by the rate of increase of foreign-born population during the 1952-1961 period.

9/ Mahesh C. Regmi, A Study in Nepali Economic History, 1776-1846. New Delhi: Manjusri Publishing House, 1971, ch. 5.

10/ Ibid. p. 194.

11/ Perceval Landon, Nepal. Vol II. London: Constable and Co., 1928, pp. 182-183.

12/ William Kirkpatrick, An Account of the Kingdom of Nepal. (Being the substance of observations during a mission to the country in the year 1793). London: W. Miller, 1811, pp. 182-183.

13/ These figures might not be strictly comparable because the censuses have used different definitions. For 1952/54 and 1961, the figures are based upon the absentee population defined by the census as those people who were absent for six months or more from their place of residence at the time of enumeration. For 1971 the figures are based on data by place of birth and place of last residence, although the 1961 census also gives information according to the place of birth. Whereas the 1952/54 and 1961 censuses provide information regarding the population which had gone outside the country, the 1971 the census, regrettably, leaves out this vital information. As such, for 1971 the population who had gone abroad was estimated, as mentioned previously (footnote 8), to obtain the total number of population who had left their homes during 1961-1971. Thus

even though these figures are not strictly comparable, they are insightful on the magnitude of migration taking place in the country during the past two decades.

14/ These refer to the census regions. There were 10 such regions in the 1961 census: (1) Eastern Hills, (2) Eastern Inner Tarai, (3) Eastern Tarai, (4) Kathmandu Valley, (5) Western Hills, (6) Far Western Hills, (7) Central Inner Tarai, (8) Western Inner Tarai, (9) Western Tarai and (10) Far Western Tarai. However, the term "area" is used in the text, instead of "region," so as not to confuse the use of the latter in the current sense of Nepal's four development regions.

15/ The data on absentee population (both within and outside) must be interpreted with caution since its gravest shortcoming is that it does not indicate whether the absentee is not necessarily a migrant who has changed his place of residence.

16/ It might be noted that seasonal migrants from the mountain area may actually exceed those from the hills as the Bhutea Population migrate southwards for "eating sunshine" during most of the winter months.

17/ As was mentioned previously, the 1971 census does not show the number of people who have gone abroad.

18/ Since there was no breakdown of the Hills into mountain and hill areas in the previous Censuses, as in 1971, the figures for the mountains have been added up to the figures for the hills for comparison.

19/ The 1971 census does not provide migration statistics for urban places, and the same was estimated as follows:

$M_i = (P - P_r)$, where M_i = migrations into the city, P = Population enumerated in 1971 and P_r = the population of urban places estimated according to the national growth rate (2.07) per cent. Assumption implicit in this estimation have been noted at the bottom of Table 9.

20/ This figure relates to 1952/54. Comparable figures for sex and age specific nature of migration are not available for 1961 and 1971.

21/ C.G. Bruce, Himalayan Wandersons. London: Alexander Maclechose and Co., 1934, p. 200.

22/ Asad Husain, British India's Relations with the Kingdom of Nepal, 1857-1947. London: George Allen and Unwin Ltd., 1970. p. 241.

23/ Kesar Lall, "The Nepalese Without Nepal" Nepal Review. Vol. I (June 1968). pp. 343-346.

24/ Kingsley Davis, The Population of India and Pakistan. Princeton: Princeton University Press, 1951, ch. 12.

25/ As noted elsewhere, the 1971 census does not provide information on emigration. The Indian census could have been analysed for this purpose but this could not be done because of its unavailability at the time of the preparation of this paper.

26/ One possible reason for this discrepancy is the open border between India and Nepal. As the problem of dual citizenship exists all along this border and some people have landed property on either side of the border, it is possible that those absent from Nepal and living in India might have registered themselves as Indian citizens. (This

figure is different from the Nepal-born population reported in the Indian census which was 219,464 and 498,436 persons for 1951 and 1961, respectively.)

27/ Davis, op. cit., ch. 12.

28/ Weiner, op. cit., pp. 99-113.

29/ Gurung, op. cit., pp. 5-16.

30/ Husain, op. cit., p. 97.

31/ Since this estimate is derived from the Nepalese population absent from the country and the foreign-born population, defective records aside, a small error in either the former or latter or both leads to a large error in net migration and as such this estimation must be taken with some skepticism.

Chapter Four

Population Migration: Causes, Consequences and Policy Implications

By Ratna S.J.B. Rana and Yadav S. Thapa

I. Types of Migration

In general, three types of migration may be distinguished from the point of view of its duration and location: (1) seasonal, (2) recurrent, and (3) permanent. In seasonal migration, the migrants leave their home area at least once a year, primarily during the agricultural slack season, to work in the fields or in whatever jobs are available, to sell their produce (such as herbs and ghee) in the Tarai market towns, and, with the proceeds from their sales or from savings in their temporary jobs bring back manufactured goods on their return trip to the hills. This migration often begins after Diwali (sometime in October-November) and ends from four to six months thereafter. This migration is not wholly picked up by either the Nepali census (which counts persons absent for six months or more) or the Indian census which is taken during June and July according to one informed source, this migration involves one-quarter of the total population during the winter months.^{1/}

Recurrent migration is characteristic of those who go abroad for career service in the Gurkha regiments of the British and Indian armies or those who simply "get lost" in urban areas of India working as gurbans, chowkidars and so forth. These migrants are absent from Nepal for most of their productive years. Their periodic return to the home place for limited durations enable them to maintain strong ties at home despite years of absence.

Permanent migration includes the movement of entire families to new areas, Nepali brides marrying into Indian families, and the like. This includes the recruits to the Indian army who bring their families with them to India and, on the expiry of their terms of service, settle permanently there, although this attrition has been decreasing in recent years. Moreover, permanent migration includes those who have been resettled in the Tarai and those who, whatever their original intent, end up taken permanent residence outside the hills, generally in the Tarai. The great majority of hill people who come to settle in the Tarai come with the hope of acquiring land; opportunities for wage labour are a secondary consideration.

Indian entrepreneurs and traders--merchants, contractors, shopkeepers, and peddlers are a notable aspect of immigration. Attracted to Nepal often in the wake of development activities, they know how to cater to the special needs of their Nepali clientele and patrons and to exploit their peculiar weaknesses. Capable of operating profitably at low margins and willing to assume investment risks, they are able not only to compete successfully with their Nepali counterparts but also undercut and outbid them in many areas of competition. The Indian merchants have the added advantage of their better network and their business links across the border in India. They are in a strategic position to make the best of the opportunities that development projects and new economic trends spawn. This entrepreneurial elite which skims the cream of development is deeply resented by the less able and agile Nepalese. Formerly concentrated in the Tarai and the urban centers, they are now making steady inroads into the

hill markets, especially in areas where these are being linked up with the Tarai by roads. These immigrants are like the Newars who left Kathmandu Valley seeking better opportunities in hill bazars, or like the Chinese who left their country and enriched themselves abroad as businessmen or landowners. On the contrary, the Nepalese have migrated to simply to survive, unlike the Indian migrants to East Africa and the Caribbean.

Immigration from India also takes the form of agricultural resettlement in Nepal, but the relative significance of this kind of immigration is hard to assess. Internal migration which directs itself primarily to the agricultural sector does not fully meet the labour needs of that sector, or of a certain portion of Tarai agriculture. These needs are being partly met by Indian immigration. This deserves careful investigation. Apparently, in most cases it is carried out through kinship relations and marriage which stretch across the border. Another important reason for this kind of immigration is the preference of the Tarai landlords for Indian tenants as cultivators, in order to escape the land-to-the-tenant principle of the land reform programme. If the tenants of landlord are non-Nepali, the land reform programme cannot award tenancy rights to the aliens.^{2/} It will be difficult to marshal full support for a population policy to reduce the growth rate of the Nepalese population until the problem of Indian immigration is resolved.

II. Causes of Migration

What are the dynamics involved in migration? If not based upon knowledge of the reasons for migration, policies which seek to influence population distribution are sure to

fail to encourage new migration patterns or to remedy imbalances caused by past movements. Without understanding the migration process, efforts to bring about change in this direction may be subverted and costly.

Perhaps, the main reasons for this migration have been economic. A key point is that there have been changes in the character and volume of production, income and employment in the various regions traceable to migration. Migration from the hills is usually related to the following factors: (1) economic conditions in the hills and outside and (2) environmental stress, particularly in the hills. Another reason, although not as strong, is the desire for the traditional image of high social status that can come from being a "lahure".^{3/} These have resulted from the following factors: (1) economic conditions in the hills steadily deteriorated as population pressure on available agricultural resources increased; (2) environmental stresses were accentuated and became no longer tolerable as increasing population continually put pressures upon the environment, upsetting its balance; (3) there were opportunities elsewhere for employment; and (4) the opening up of the Tarai due to malaria eradication attracted land hungry hillsmen as opportunity for better farming and loomed large in this new land (Tarai). The resettlement programmes for rehabilitating the displaced persons from the hills encouraged further migration out of the hills into the Tarai.

Among the factors noted above, the main reason for migration out of the hills into the Tarai boils down to economic disparity between these areas. The Tarai has shown clear signs of economic vitality.^{4/} In contrast, the hills

have been relatively neglected in development activities. There the agricultural density of population is twice that of the national average and almost four times that of the Tarai. This problem is further aggravated by steadily increasing population pressure on already overburdened land resources, together with heavy dependence on an undiversified subsistence agricultural economy which generates little, if any, cash income locally. Agriculture is the main source of livelihood of at least 95 per cent of the people in the hills. Population pressure has outstripped their ability, using present techniques of cultivation, to meet local subsistence needs in many areas. Due to the limited availability of non-agricultural sources of income, labour migration is a necessary and important means of survival for the hill people.

The reckless destruction of forests in the hills for cultivation, fuel, forage and timber has induced soil erosion, upset the hydrological balance by causing the drying up of springs, and caused landslides and floods. Thus, environmental stresses of various sorts such as droughts, landslides, earthquakes, floods and the general conditions of declining soil fertility due to soil erosion and exhaustion have been factors encouraging migration. Notwithstanding economic factors leading to the decision to migrate, the increasing number of abandoned houses in the hills reported by Ferdinand E. Okada may also be attributed to environmental stress.^{5/} It must be noted that while environmental stresses had occurred in the past, perhaps to a lesser extent, options for people in these areas to migrate were considerably limited until the malaria eradication programme opened up all low-lying areas and the Tarai for settlement.

To recapitulate, greatly increased pressure of population in the hills and steadily deteriorating economic conditions there, combined with the almost complete eradication of malaria throughout the Tarai, has resulted in large-scale migration from the hills to the Tarai at a greatly accelerated rate during the last decade. All indications are that this phenomenon will continue in the next decade. We see, then, that migration has occurred not singularly due to forces operating in the hills or in the Tarai but owing to interaction of these forces operating in both areas in a complex way: the combination of "push" and "pull" factors more or less concurrently operating in the country.

A large number of people seek seasonal employment during the winter in order to support themselves during the slack agricultural period and, if possible, to bring back a few basic household necessities. Seasonal migrants who go to the Tarai and India and different hill areas tend to have long-standing links to areas in the Tarai rooted in the hat-bazar system, and also to different types of job opportunities in particular places in India. Persons seeking longterm employment (for six months or longer) have traditionally gone to India. Even now when employment is available in Nepal and when wage differentials are not significant, they continue to go to India for a variety of reasons, some of them not wholly known.

However, it is clear that this preference is related to communication as well as the range of choices in job opportunities in India. In addition, one might also suspect some form of "Kangani system" involved in this labour migration. In other words, it is possible that some "headman"

would cajole his friends, neighbours and relatives in his home district in the hills into working in India, tempting them with the prospect of higher earnings and greater opportunities in India and then bring them over to work with him. In return for this service the headman may also collect an additional fee from each of the migrants in his gang. Under the headman's enticements, the native hillsmen were sufficiently advanced to be ready to migrate but backward enough to accept cheap terms. Since the wage paid is so low, many migrants cannot even save money to return home and they end up living permanently in India, despite their original intention to return home with money and a higher social status.

In many cases where the hill farms can no longer support expanding members, the entire household may abandon their homeland in the hills and migrate. Or, younger members of the family may leave to seek better farming opportunities or employment elsewhere. In the past many Nepalis were able to resettle outside the country, but, more often than not, this is no longer an option at present. Consequently, the majority of the people in this category are migrating into the new "frontier" in the Tarai. This points out the fact that households migrate when their farms are no longer viable economically. The assertions of Gunnar Myrdal that misery long endured does not spur people to move is probably not borne out by observations in Nepal. Instead, it appears that the poorer the people are, the stronger is their incentive to migrate; poverty is not a barrier to migration as Myrdal had indicated.^{6/} However, the migrants from the hills are not only the poor who have gone south out of

necessity and pure land-hunger but also elite persons who see in the Tarai an opportunity for their enterprise. Indeed, the first to forge a link between the hills and Tarai and thus show the way were obviously the wealthy land-lords and "jagirdars". Seasonal migration aside, it can be stated that the purpose of internal migration is chiefly to acquire land, and only to a much lesser extent to find employment as such. By contrast, temporary migration seeks wage-labour. In the great majority of cases, temporary migration takes the form of emigration to India.

Recent Indian immigration into Nepal is a response to more favourable opportunities in Nepal both for certain types of employment and for agricultural resettlement. Skilled and semi-skilled Indian labourers find better remuneration in Nepal in many situations where their skills are largely lacking--in industry, transport, construction works, specialized types of agriculture, and so on. A good deal of unskilled labour is also attracted which is, however, limited to the Tarai. This is due to the fact that Indians are more adapted to work conditions in the Tarai than most Nepalese hill people, especially in situations calling for sustained hard labour. It appears that development prospects in the Tarai are attractive to many Indians.

III. Consequences of Migration

It hardly needs to be mentioned that migration will have a great impact on our national development in the years ahead. It is evident that these undirected human waves are causing the destruction of forest resources which Nepal can

ill afford. It is equally evident that the changed man-land ratios in the hills and the Tarai have significant implications for public policy: in land reform, in forestry, in animal husbandry, and, above all, in the overall land-use policy and regional development strategy which Nepal has adopted. Some of the current or potential adverse effects of undirected migration are: destruction of forest resources; environmental modification which will affect productivity over the long run; and increasing labour force which outstrips the opportunities for its productive employment, and aggravated tensions caused by competition for land, increased disparity in income distribution, and a growing class of landless labourers.

The migration of the hillsmen and of people from India into what used to be an area inhabited by indigenous Nepalis would indicate the building up areas of conflicting interests. There is apparent competition between the hill settlers and the local plainsmen, and also among those who have been resettled and those who have not. Why this competition has not resulted in sharp conflict is a complex story in itself not yet wholly told, but there appears to be a clear dominance of one or the other group in these areas.^{7/} How long this state of affairs will continue can only be guessed at. Should competition become inflamed, Pandora's box would have been opened and national integration thrown in jeopardy.

Although the destruction of forest resources and squatting by uncontrolled resettlement have caused a good deal of alarm, on the whole the "opening" of the Tarai for settlers from the hills has been welcomed by policy-makers, both because it promotes the integration of the Tarai region

with the rest of the country and because it (temporarily) relieves population pressure in the hills.^{8/} Some view the solution of the population problem of the hills, even temporarily, in terms of a massive resettlement programme in the Tarai.^{9/} Even if this were a sound policy in general, the question is how many people can be effectively resettled, and at what costs? It is unlikely that all the people pouring down from the hills could be properly accommodated in a resettlement programme. The resettlement programme is likely to cause disillusionment and discontent to many whose actual experience is far below their expectations, and tensions and conflicts between those who were resettled and those who were not.

Only a little over a third of the country's population, who live in the Tarai, produces almost two-thirds of its agricultural output and cereal grain surplus; the other two-thirds of the population in the hills produce only one-third of the crops and exist at a subsistence level. Some tend to be complacent with this situation because they see the problem as simply adjusting a situation of imbalance between population and arable land resources. Others even assume that the capacity of the Tarai to absorb settlers from the hills alleviates the population problem to such an extent that a policy to reduce the population growth rate need not be of a high priority at the present time. However, the problem involved is not only one of striking a harmony between the location of people and land resources in the country. Uncontrolled migration will undoubtedly cost us the loss of our forest resources, while the planned large-scale transfer of population will require organization and heavy public investments.^{10/}

Complacency is dangerous, because it does not take into account the Tarai's limited capacity to productively absorb settlers. Once that limit is exceeded, the irreversible imbalance in the population-resource base will seriously hinder development activities in the future. By then, in fact, His Majesty's Government will have been robbed of the policy alternatives it might possess at present. Moreover, complacency shifts attention away from the basic problems in the hills which have to be addressed if there is to be any real progress in our present regional development efforts. It should be noted also that the capacity of the Tarai to absorb settlers from the hills is reduced by increased immigration from India which is also a response to the "opening" of new opportunities in Nepal's southern "frontier."

Clearly, the ultimate solution to the problems of migration in Nepal is to reduce the growth rate of population. Resettling excess population from the hills has sometimes been viewed as a substitute for birth control as has been the case in other areas which have had substantial resettlement. But this substitution will not work, and there are significant differences between those two means of relieving population pressure. Even if a policy to reduce population growth were given top priority now, it will take a long time for it to have significant effects. Meanwhile, continuing population growth will result in a number of problems for the government. The longer it takes to eventually control population growth, the more serious these problems will become.

The Tarai is only a temporary safety-valve for the population problem of the hills. When this safety-valve will burst is anybody's guess, but given the current trend in migration, *ceteris paribus*, it would not be too far away. It will "bry" a few years of lessened population pressure in the hills. But if these years are not used properly to solve the population problem, they will have been wasted.

Although population has increased in the Tarai, this has not been accompanied by a decrease in the hills. Although the growth rate in the hills has decreased, the absolute number of people there has not. The problem of the hills is not solved simply by shifting people to the Tarai, because it is only the incremental population that would be shifted.^{11/} Moreover, experiences elsewhere indicate that the issue of resettlement or uprooting of families is very difficult and expensive. It requires large investments and it terminates with minimal benefits, if any, for the people of the region or country. Only young people, or very young families, can be successfully resettled and integrated in a different area. Thus, long range solution must be found within the hills where its people can become the best managers of its ecology. Besides, if the present trend continues, the Tarai will merely "fill up", absorbing part of the growth in the hills (as well as increased numbers of immigrants from India), without solving the basic problems involved.

Most of the increase in production in the Tarai over the past few years has been largely due to additional land brought under cultivation.^{12/} This has been accomplished usually at the expense of forest resources and not by

improved techniques of cultivation. Removal of forest cover and over-grazing of remaining forests will have deleterious results for agricultural production in the long run. One of the findings of the Tarai and Bhabar Development Committee regarding the adjoining Tarai region in Uttar Pradesh in India is that any attempt of deforestation in the Tarai region is likely to cause sheet erosion of a magnitude that it would have serious repercussions on the future well-being not only of the sub-montane tract but also of the plains below.^{13/} Moreover, ghee production, particularly in the Western Hills, depends on the use of the Tarai forests for winter pasturage. As forests are destroyed, the supply of fodder will decrease to the detriment of ghee production, the main source of cash income in many parts of the hills. This will result in further deterioration of the hill economy and stimulate out-migration.

With a vastly increasing labour force in the Tarai region, His Majesty's Government will be faced with a number of policy decisions to make. There must be maximum utilization of the labour force in the agricultural sector, while at the same time employing as large a portion as possible in expanding the industrial and services sectors in such a way that Nepalese manpower is enabled to displace Indian labour.

IV. Policy Implications

From the proceeding analysis certain policy implications emerge. It is obvious that migration is essentially human adjustment to prevailing differences in the utilization of land resources, in effective income opportunities, in regional prospects for development, and in the power to attract and absorb labour. This would imply that since land

resources cannot be transported, adjustment of population distribution to economic potential implies mobility of either labour or capital.

The inverse relationship between migration and distance has been noted earlier (chapter two). Distance seems to have acted as a proxy for a number of unaccounted variables, such as the climatic and agricultural differences between the Mountain areas and the Tarai.

The implication is that governmental policies for population redistribution that are intended to induce people to move away from stagnant areas with surplus labour to areas of better economic outlook, or to induce people to move into areas with underdeveloped land resources may not work unless the "distance" factor is considered. To give an example, a resettlement programme in the Tarai will not solve the problem of Tibetan refugees in Nepal. In other words, if a policy of resettlement is to be pursued, it should be based upon the existing links between various hills and Tarai regions, a resettlement scheme in Far Western Tarai to relieve the population pressure in the Eastern Hills is not likely to work.

As noted the main reason for migration out of the hills to the Tarai is the economic disparity between these areas. The evidence suggests that the "push" effect of the hills is more prominent than the "pull" effect of the Tarai in sending migrants from the former to the latter. This implies that well conceived regional development plans within the hills which provide satisfactory alternatives to labour migration might retain some of the potential future migrants.

In summary, the pressure of population in the Hills on cultivated land, agricultural production, and other resources seems to have contributed to out-migration. Any population redistribution policy to relieve population pressure in the hills will be marginal without long-range population policies aimed at the reduction of population growth. Indeed, high population growth over a sustained period is the crux of the problem. However, a country like Nepal is faced with formidable difficulties in limiting its population growth. Even if massive, effective population limiting campaigns were launched, it would take at least a generation to make a visible and substantial payoff.

Under these circumstances, one difficult question is to decide whether investments in the hills should be substantially increased in an attempt to reduce out-migration, or to allocate present resources the resettlement programmes in the Tarai in substantially amounts in order to absorb more migrants into these programmes, while conceding the likelihood of still larger immigration into this area? Alternatively, should resettlement be encouraged in order to relieve the population pressure in the hills as much as possible, or should the added resources required for these purposes be better allocated to the hills in order to increase their "holding capacity" by their own development programmes directly?

Or, should the family planning programme concentrate in those hill areas from which population pressure is likely to send settlers into the prime Tarai forests and use the resettlement programme in such a way that it directs the migration out of the hills away from these to the less useful forests and uncultivated wasteland?^{14/}

Obviously, these alternatives are not so clear-cut. Hill development will take years while the people will continue to drift down. It appears that resettlement schemes of whatever scale will fail to cope with the problem if the primary source of the migrants is not tackled. Thus, what seems to be a logical policy now is to expand resettlement programmes in selected areas and at the same time to make a major effort in hill development.

The answers to the above questions and others raised elsewhere before, are not easy to come by without an understanding of the exact nature of the causes of migration, its trends, its size and scope. Indeed, without understanding these factors regional development strategies would have to be formulated in blind ignorance of some of the vital aspects of development. That there is a big gap in knowledge in this area has been already noted - a point also recognized by the Fourth Plan. It is to fill these lacunae in available knowledge, at least partially, that this preliminary study has been undertaken.

1/ Dr. Harka B. Gurung, "Geographic Setting" in Nepal, A Profile. Kathmandu: Nepal Council of Applied Economic Research, 1970.

2/ This is the crux of the "Ukhada" problem, particularly in the Lumbini Zone.

3/ Ordinarily, it is a qualification or credential which is generally bestowed after some years of residence outside Nepal, particularly in the military service. High esteem is ascribed to a "lahure" because he usually holds a position of importance and respect in his village.

4/ Some even regard concentration of development projects in the Tarai, such as the construction of the East-West Highway, the catalyst for the migration into this area. See Prakash A. Raj, "The Role of Migration in Nepal", The Rising Nepal (Daily Newspaper), December 18, 1972.

5/ Ferdinand E. Okada, Preliminary Report on Regional Development Areas in Nepal. National Planning Commission, His Majesty's Government of Nepal, 1970, p. 80.

6/ Gunnar Myrdal, Asian Drama: An Inquiry into the Poverty of Nations. Vol. III. A Pelican Book 1968, p. 2140.

7/ At present, competition between these two groups is mainly in politics and business rather in acquisition of land, as most of the hill people are either settling on hill landlord's plots or reclaiming the "Bhabar" zone. The recent "Jhora Kanda" and series of similar incidences elsewhere in the Tarai is not between different groups of migrants but between the landless and the administration which is overwhelmed with large numbers of people that have to be resettled.

8/ cf. Bhek Bahadur Thapa, Planning for Development in Nepal: a Perspective for 1965-80. Unpublished Ph. D. dissertation. Claremont Graduate School and University Center, 1966. See particularly pp 37-40.

9/ Navraj Chalise, "Resettlement in the Context of Land Reform", Gorkhapatra (Daily Newspaper in Nepali), December 2, 1972.

10/ Myrdal, op.cit., pp. 2147-2149.

11/ Gurung, op.cit., pp. 5-16.

12/ Ratna Rana "Regional Variations in the Growth Structure of Crop Production in Nepal", The Himalayan Review, Vol. IV (1971), pp. 20-27.

13/ Lekh Raj Singh, The Terai Region of Uttar Pradesh. Allahabad: Pam Narain Lal Beni Prasad, 1965, p. 18.

14/ Pashupati Shumshere J.B. Rana, Nepal's Fourth Plan: A Critique. Kathmandu: Yeti Pocket Books Pvt. Ltd., 1971. pp. 32-33.

Chapter Five

Population Growth and Agriculture

By B.P. Dhital

I. Introduction

Nepal had a population of 11.5 million in 1971, which has been estimated to be growing since then at an annual rate of 2.16 per cent. If the present trend of increasing growth rate remains unchecked, by the year 2000 the annual population growth rate may reach 2.3 to 2.5 per cent and the total population from 22.3 million to 23.6 million. This means that while in the past it took six decades (1911-1971) to double Nepal's population from 5.6 million to 11.5 million, the future population will double in half of that time or three decades. Accordingly, the density of population will increase from the present 79 to nearly 169 persons per square kilometre in the year 2000. Like-wise, the size of the labour force will nearly double, from 6.5 million to 12.6 million to 13.3 million in the same period.^{1/}

If the past trend were to continue up to 2000, the expected GDP growth-rates and population growth-rates will be almost equal. Similarly, if the past trend of food-grains production, population and food demand growths were to continue, the present cereal surpluses would decline drastically and Nepal would be a net importer of food by the end of 1990, as indicated in Table 1.

Table 1. Extrapolation of Past Trends of Population,
GDP Growth-Rates and Cereal Production up to 2000

	1970	1980	1990	2000
1. Population Growth-Rates (Percentage per annum)	2.3	2.3	2.3	
2. GDP Growth-Rates (Percentage per annum)	2.4	2.4	2.4	
3. GDP Per Capita	0.1	0.1	0.1	
4. Total cereal production (Thousand metric tons)	3793	4359	5009	5813
5. Total Cereal Domestic Demand	3427	4302	5427	6879
6. Cereal Balance, Surplus +, Deficit -	+ 366	+ 57	- 418	-1066

The picture that emerges is one of a declining national economy, as the deficit cereal balance would seriously inhibit imports for future industrialization and aggravate the employment situation considerably.

11. Population Pressure on Agricultural Systems

The 1971 population census shows that 96.16 per cent of the total people were in rural areas. Of those who were 10 years and older, 94.37 per cent were in agriculture. By regions, the Mountains and Hills had 62.39 per cent and the Tarai had 37.61 per cent of the total population, while the distribution of cultivated land was 35.22 per cent in the

Hills (mountains included) and 64.78 per cent in the Tarai. Table 2 shows the distribution of cultivated land and population by regions.

Table 2. Cultivated Land and Population by Regions, 1971

Regions	Cultivated Land ('000 ha)	Population ('000 no.)	Households ('000 no.)	Per capita Cultivated Land (ha)	Per Household Cultivated Land (ha)*
Mountain	97 (4.86)	1,139 (9.86)	205	0.085	0.473
Hill	606 (30.36)	6,071 (52.53)	1,091	0.100	0.555
Tarai	1,293 (64.78)	4,346 (37.61)	794	0.297	1.628
Total:	1,996 (100.00)	11,556 (100.00)	2,090	0.173	0.955

Source: Central Bureau of Statistics; Highlights of National Population Census, op. cit., and for cultivated area: Ministry of Food, Agriculture and Irrigation, HMG, Nepal.

(The figures in parentheses denote percentages to respective totals)

The per capita differences in cultivated land between the regions is so glaring and these amply demonstrate the regional disparities. The pressure of population has reached beyond the carrying capacity of hill agriculture. Whatever development efforts will be made for the Hill people, in terms of nationally comparable minimum requirements, it is clear that there are more people than the Hills can support. Also, the increase sign of the harder economic life in the Hills. The 1971 population census shows that the population growth in the Hills had been 1.3 per cent a year, whereas it was 3.6 per cent in the Tarai.

* Per household cultivated land refers to entire, agricultural and non-agricultural population. In terms of per agricultural household the size of cultivated land will be slightly higher.

Apart from the imbalances in population and cultivated land distribution in the regions and heavy pressure of population on Hill agriculture, the disparity in the size of holding and the predominance of small farmers has been another indicator of pressure of population in Nepalese agriculture. The Farm Management Study conducted in 1968-69 by the Ministry of Food and Agriculture in selected regions of Nepal showed that 53 per cent of the total agricultural households in the Tarai had less than 0.7 hectares of land. In the Hills as many as 92 per cent of the agricultural households had less than one hectare each.^{2/}

Table 3 below shows that the economically active population in agriculture has increased both in absolute numbers and in percentage (figures in parantheses). This leads to the conclusion that the agricultural sector has been carrying the pressure of population and will have to become a reservoir to a large extent for future population increases as well.

Table 3. Economically Active Population in Various Sectors, 1950-1971 (In Thousands)

Year	Total	Agriculture	Industry	Services
1950	4,199 (100.0)	3,920 (93.30)	89 (2.12)	190 (4.53)
1960	4,385 (100.0)	4,140 (94.43)	90 (2.05)	155 (3.52)
1971	4,852 (100.0)	4,579 (94.37)	106 (2.19)	167 (3.44)

Source: The 1950 and 1960 information is from 1950-85 Labour Force Projections of ILO. The 1971 information is from Population Census 1971, Central Bureau of Statistics, Nepal.

In the period between 1950 and 1971, there was an addition of 653 thousand people in the total economically active population. In the same period, agriculture had 659 thousand people, exceeding the increase in the total population by 6 thousand people. The above information shows that the pressure of population on agriculture has been on the increase and its consequence on land use is evident. Despite the efforts to diversify the economy, agriculture still needs to provide employment to a vast majority of the population. If the present trend in the sectoral growth of the economy continues, there will be no substantial change in the sectoral distribution of the population. In the year 2000 there will be nearly 11.34 million engaged in agriculture in the total labour force of 12.6 million, assuming a 2.3 per cent annual population growth. If no new land is brought under agriculture, the present land will have to provide employment to nearly double the present agricultural labour force in the same area; the per capita cultivated land in the country will come down to 0.086 hectare which is comparable to the present precarious situation in the Mountains.

If the present rate of outmigration from the Hills to the Tarai is sustained, the likely situation will be a 1.3 per cent population growth in the Hills each year. In this situation, assuming 90 per cent of the total Hill people will be engaged in agriculture, there will be 9.18 million people depending on agriculture in 2000; this will be

increase of nearly 40.0 per cent over the 1970 situation of 6.54 million agricultural people in the Hills. In as much as no new land can be brought under agriculture in the Hills, which are already over-populated, it will be practically impossible to sustain that many people on Hill agriculture even at subsistence level.

III. Population Growth and Land Use

The implication of the above situation will be a tremendous increase of pressure on the Tarai land. In order to achieve the objective of reducing regional imbalances in the national economy and raising the standard of living of the majority of the population, a substantial outmigration will have to take place from the Hills to the Tarai. However, it should be recognized that this cannot be a permanent solution to the problems of development, if population growth is unchecked. The resettlement of Hill people in the Tarai will help provide a "breathing space" in the process of accelerated development in the future only if it is accompanied by an effective programme of population control.

The information available on actual landuse and the availability of new land for agriculture in a large part of Tarai is not up to date. A comparison of the population densities of the border districts of Nepal and the adjoining districts of India shows that the Indian districts are overwhelmingly more populated than the Nepalese districts. Of course the difference is also made possible by the more developed industrial and service sectors in those Indian districts. (Appendix A). The Tarai forest can absorb the population pressure of the Hills for some time, although accurate information for estimates is not available.

The resettlement activity in the new land in the Tarai increased speedily in the last decade. The ratios of population between the Hills and the Tarai has changed from 67.39 in the Hills to 32.61 in the Tarai in 1961, to 62.39 and 37.51, respectively, in 1971. The change in ratio has brought roughly 579 thousand additional people to the Tarai over and above its own natural growth. The Tarai land provided additional employment to nearly 235 thousand migrants in the last decade.

The estimates of the Resettlement Department, HMG/Nepal, show that in the period between 1961 and 1971 there were authorized and unauthorized settlements on 87,561 hectares of new land in the Tarai. Prior to this period, in the 1950's, there was another large resettlement programme in the Rapti Valley in Chitwan covering an area of about 45,000 hectares. With the expansion in cultivation in the older settlements, it is estimated that about 170,000 hectares of new land were brought under cultivation in the 20 years between 1951 and 1971 in the Tarai.

In the new settlement programme the average size of holding is estimated at 2.75 hectares per family. On this basis, only about 62,000 families were settled on the new land, which would have provided employment to about 250 thousand additional people in agriculture in the Tarai. As stated earlier, Hill agriculture is already over-populated, with about 10 people per hectare of cultivated land. Thus the bulk of 659 thousand economically active population added to agriculture between 1950 and 1971 (see Table 3) must have been engaged in Tarai agriculture. Granted that 250 thousand people were settled on the new land, the remaining 409 thousand people would be on the old land.

The effect of population growth on landuse is also seen in the reduction of the size of large holdings. The average size of holdings of the large landlords went down from 96.7 hectare to 34.3 hectare from 1961 to 1971.^{3/} Of course, the effect of land reform and family transfers of holding would also help to reduce the size of holdings. Nevertheless, the increase in population has affected landuse.

IV. Foodgrain Requirements and Constraints in Raising the Nutritional Level.

The FAO has made an estimate of available food supplies in 1970 and their values in terms of calories, total protein and fat, as shown in Appendix B. The supplies predominantly consist of cereals contributing nearly 83 per cent of the energy and protein supplies at the national level. National per capita supplies of calories were 2,126, which is 96 per cent of the estimated requirement of 2,200 calories per capita per day.^{4/} There are considerable food shortages in some areas of the country and among the lower income groups of the population. There is a serious situation in the Hills where the supplies are only 88 per cent of estimated requirements.

Table 1 above indicated^a that if the present trend of population and cereal production continued, Nepal will become a net importer of food by 1980. Although this may not be an implausible situation, an optimistic assumption of increasing cereal production by 3.0 per cent annually for the period between 1970 and 1990 is also made. Under this assumption, the production in the Tarai is estimated to grow at 3.3 per cent and in the Hills at 2.1 per cent per year for the same period. The annual rate of population

growth is assumed to be 2.3 per cent for the nation, 3.8 per cent for the Tarai, and 1.1 per cent for the Hills. If the Hill population is allowed to increase by only 1.1 per cent a year, the deficit in foodgrain supplies will go on increasing as shown in Table 4.

In spite of the assumed sizeable difference in population growth rates in the Hills and Tarai, the Hills will have nearly half of the total population of Nepal by 1990, and will need to import 337,000 metric tons of foodgrains from outside.

Table 4. Foodgrain Production and Requirements, 1970-1990
In the Hills (Thousand Metric Tons).

	1970	1975	1980	1985	1990
1. Production	1553	1627	1760	1871	2008
2. Requirements	1781	1874	2027	2208	2345
3. Balance	- 228	- 247	- 267	- 337	- 337

At present cereals provide nearly 83 per cent of the energy needs of the nation. The diet is deficit in better quality protein-rich food (meat, milk, fish and eggs), which comes to about 15 per cent of the total protein in-take. Table 5 on next pages shows the minimum and moderate requirements of some of the important food items and their estimated availability

Table 5. Requirements and Availability of Some Important
Food Items, 1968-69 and 1970-71
(Grams Per Capita Daily)

Items	Requirements ^{1/}		Available	
	Minimum	Moderate	1968-69 ^{2/}	1970-71 ^{3/}
1. Cereals	403	375	501	493
2. Meat, Fish and Egg	26	47	22.5	17.6
3. Oil and Fat	18	20	9.0	5.6
4. Fruits and Vegetables	137	158	55.6 ^{a/}	143.8
5. Milk	901	277	40.0	125.0 ^{b/}

a/ From local supply only.

b/ Includes milk for ghee also.

- Source:
1. Sukhatme, P.V., Food and Nutrition Situation in India, Indian Journal of Agricultural Economics, Vol. XVII, No. 3, July-Sept. 1962.
 2. Pathak, Leela, Food Consumption Survey in Nepal, Economic Analysis and Planning Division, Ministry of Food and Agriculture, HMG, Nepal, 1969.
 3. Appendix B.

The nutritional requirement estimates shown in Table 5 are for Indian conditions. They are adopted for Nepal while conditions may not be much different, although the requirements of the hill people may be higher than for those in warmer areas. It appears that in terms of the national average figure, Nepal is not deficient in cereal consumption. But in other items, particularly in protective foods, the

availability is much below the minimum levels. The situation is more acute in animal origin food.

Ironically, Nepal ranks among the highest in the world in regard to livestock population, with 5.8 heads of animals per household. Nevertheless the contribution of livestock to total GDP was only 15 per cent in 1970. This reflects the fact that livestock production has been traditionally a secondary activity to crop production. The size of human population and the corresponding claim on the agricultural land for raising food crops does not allow for diversification of land exclusively for the production of feed and fodder for livestock. The greatest problem is to produce sufficient agricultural commodities for human consumption, for export and for supply to agro-based industries. Insufficient and unbalanced feeding results in low animal production which limits the scope for improving human nutritional levels by increased supply of livestock products. Thus, not only human population but also livestock exert pressure on land. Reducing the livestock while increasing its productivity is as important as controlling the growth rate in human population, in order to reduce the pressure on land and increase nutritional levels.

V. Rural Employment

An analysis of rural and agricultural employment^{5/} indicated that on the average only 124 men-days per person per year of the agricultural labour force were required in agriculture in 1970 in identified activities of crops, livestock, forestry and fisheries. This excludes the man days spent on services connected with agriculture. Utilization of 250 man-days of work by an agricultural labourer in a year is

considered a full occupation. The first striking feature of the employment situation in Nepal is the prevailing high degree of underemployment, estimated at 50 per cent of "full employment". Along with the problem of employment in agriculture, the problem of rural employment on a whole is of a serious nature. The projections presented in Appendix C show that rural population in the Hills would increase from 6.7 million in 1970 to 8.0 million by 1990. In the Tarai it will double, from 4.17 million to 8.23 million, between 1970 and 1990.

The estimates for rural labour force show that the number of economically active rural population will increase from 4.565 million in 1970 to 6.68 million in 1990. This means an addition of 2.115 million people in the existing backlog of underemployed rural labour, who would need additional employment. In the Hills, there will be 0.452 million additional rural labour by 1990. Similarly, in the Tarai, there will be an addition of 1.663 million labour by that time.

The analysis further indicated that the present rate of 50 per cent utilization of labour force in 1970 could increase to the maximum of 64 per cent, including services connected with agriculture, if a 5.0 per cent growth in the economy is maintained by 1990. Even then there will be a need for creating additional employment opportunities in rural areas for about 2.225 million people by 1990. The breakdown for the Hills and Tarai for the same period would be 1.088 million and 1.137 million additional employment opportunities, respectively. Creation of additional jobs for these many people will require tremendous efforts on

the part of the Government and this will be of crucial importance in the process of socio-economic development in Nepal.

Despite the increase in agricultural employment from 50 per cent to 64 per cent in 1970-1990, it is clear that the agricultural sector alone cannot meet the needed increases in employment. The rapid expansion of the employment capacity of other sectors would become more necessary. The situation would also call for new policy approaches to the employment problem for the country as a whole, as well as for the particular problems of the Hills. An extensive programme of rural public works and an integrated rural development approach would need to be planned to offset seasonal unemployment and low incomes. With agricultural development as a core component of the programme, integrated rural development should include construction of feeder roads, irrigation works, schools, development of market towns, land reclamation, soil conservation and reforestation.

Apart from the problem of providing gainful employment to the increasing population, the need for increasing agricultural productivity and the dietary standard of the common people is very much related to the structures of production. In this connection the incentive factor plays a crucial role. Considering Nepal's predominantly land-based economy, incentives for higher production depends very much on the institutional structures of land. The present situation of tenancy and the arrangements for rental payments cannot be considered conducive to increased agricultural production. Similarly, the present ceiling on holdings should be reviewed.

Nepal cannot afford to maintain the present ceiling on land holdings. It will have to be reduced, the earlier the better. Secondly, establishing a peasant proprietorship is unavoidable if the twin goals of increasing the productivity and raising the level of living of the majority of the population are to be achieved.

VI. Conclusion

The increased rate of growth in population, in the absence of measures to control it, will outstrip the per capita availability of agricultural products, despite the envisaged growth in agriculture and increased migration to the Tarai from the Hills. There is a limit beyond which new land will not be available for agriculture. The population problem for Nepal is not only a race between food and people or between space and people. Employment itself is a population problem. The increasing rate of growth in population has much wider effects--on overall socio-economic development, health, education, housing, productive capacity of labour, human misery and degradation, and social unrest.

In the context of Nepal, unlike in food deficit countries, the problem of population growth vis-a-vis agricultural development is not only related to the availability of food. It is also concerned with the entire problem of economic growth. At present agricultural exports, mostly foodgrains, account for about 80 per cent of the export earnings of the country. Agricultural export surpluses will have to pay for the major share of development imports in the future as well. The increased rate of growth in population would leave no surplus foodgrains for export. Nepal will be importing food by 1985-1990, if the past trend of population and production growths continued.

It is necessary for Nepal to shape its agricultural development policy from the point of equitable distribution of food supplies at reasonable prices, the creation of additional employment within agriculture by restricting extensive mechanization, the adoption of higher-yielding technology for increasing per unit area yield and per labour unit productivity, the improvement of the nutritional level of the people. Nepal also has to adopt urgent measures to bring down the rate of population growth. What measures to adopt, "how much carrot and how much stick", is left open for discussion.

1/ Central Bureau of Statistics, HMG/ Nepal: Population Projections for Nepal, Kathmandu, 1974.

2/ Ministry of Food and Agriculture, HMG/Nepal: Farm Management Study in the Selected Regions of Nepal, 1968-69, Kathmandu, 1971.

3/ Ministry of Land Reform, HMG, Nepal.

4/ Calculation of the energy requirements and recommended safe levels of protein intake are based on the Report of a Joint FAO/WHO ad hoc Expert Committee on Energy and Protein requirements, 22 March-2 April 1971 FAO Nutrition Meetings Report Series, No. 52, Rome, Italy, 1973.

5/ A draft working paper on employment prepared for FAO Country Perspective Study for Nepal, memiographed, 1974.

Appendix A
Comparative Population Densities of
Border Districts of Nepal and India

Districts of Nepal ^{1/}		Adjoining Districts of India ^{2/}	
Name	Population Density (Sq. Km)	Name	Population Density (Sq. Km)
Darchula	37.63	Pithoragarh	43.47
Baitadi	72.16		
Dandeldhura	60.93	Naini Tal	104.40
Kanchanpur	48.27	Pilibhit	214.64
Kailali	44.94	Kheri	193.29
Banke	66.88	Bahraich	251.34
Bardia	65.53		
Dang Deokhuri	62.26	Conda	314.01
Kapilbastu	132.55	Basti	108.28
Rupandehi	205.04	Gorakhpur	481.03
Nawalparasi	117.88		
Chitwan	73.37	Chomporan	385.29
Parsa	159.60		
Bara	185.27		
Rautahat	292.50		
Sarlahi	196.84	Muzafferpur	617.59
Mahotari	274.44		
Dhanusa	290.74		
Siraha	286.75	Darbhanga	603.05
Saptari	225.66		
Morang	153.65	Purnea	357.93
Jhapa	171.75		
Ilam	90.91	Darjeeling	254.24

Source: 1/ CBS: 1971 Population Census.

2/ The Research and Reference Division, Ministry of Information and Broadcasting G.O.I.: India, a Reference Manual, 1973. Quoted in "Working Paper on Population Policy," National Planning Commission, Nepal, 1974.

Appendix B
1970 Food Consumption - per Capita Per Day

	Nepal				Hills				Tarai			
	g	Cal. no.	Protein		g	Cal. no.	Protein		g	Cal. no.	Protein	
			g	Fat g			g	Fat g.			g	Fat g
Cereals												
Wheat Flour	48	168	5.5	0.8	40.3	141	4.7	0.7	52.7	209	6.9	1.0
Rice, milled	260	933	18.6	2.9	151.0	541	10.8	1.7	435.9	1563	31.2	4.9
Maize	158	567	14.6	6.3	220.0	792	20.4	8.8	56.7	204	5.3	2.3
Millet Flour	24	83	2.4	0.7	36.2	123	3.6	1.0	5.3	18	0.5	0.1
Barley	1	12	0.4	0.1	3.0	10	0.3	0.1	3.5	12	0.4	0.1
Total		1736	41.5	10.8		1607	39.8	12.3		2006	44.3	8.4
Starchy roots & tubers	63.6	46	1.1	-	665.5	47	1.1		60.7	46	1.0	-
Sugar (cane)	11.5	24			6.0	13			21.0	45		
Pulses, nuts & Seeds	12.6	43	2.8	0.2	8.8	30	1.9	0.1	18.9	65	4.1	0.3
Vegetables	98.6	22	1.4	0.3	108.8	25	1.5	0.3	82.1	19	1.2	0.2
Fruits	45.2	20	0.2	0.2	49.0	21	0.2	0.2	39.2	17	0.2	0.2
Spices	33.3	10	0.2	0.5	1.9	6	0.2	0.3	5.7	17	0.4	0.9
Meat & Poultry	15.3	23	2.2	1.7	18.0	26	2.5	1.5	10.9	17	1.6	1.1
Fish	0.7	-	0.1		0.3				1.3	1	0.1	
Eggs	1.6	3	0.2	0.2	1.6	3	0.2	0.2	1.5	3	0.2	0.2
Milk	125.0	123	6.0	7.8	137.3	135	6.5	8.6	105.5	104	5.0	6.6
Fats & Oils	5.6	49		5.5	2.5	21		2.4	10.7	95		10.7
Total		2126	55.7	27.2		1934	53.9	25.9		2435	58.1	28.6
Animal		149	8.5	9.7		164	9.2	10.3		125	6.9	7.9
Vegetable		1977	47.2	17.5		1770	44.7	15.6		2310	51.2	20.7

Appendix C

Projected Rural and Agricultural Population, 1970-90

	1970	1975	1980	1985	1990
<u>Hill</u>					
Rural	6703	7063	7382	7752	7974
Urban	268	336	472	585	788
Agricultural	6539	6798	6969	7109	7181
Non-Agricultural	432	606	885	1228	1581
Economically Active:					
Rural	2814	2953	3062	3206	3265
Agricultural	2745	2842	2891	2939	2941
<u>Tarai</u>					
Rural	4172	4977	5929	7048	8335
Urban	167	235	353	530	823
Agricultural	3866	4673	5612	6657	7561
Non-Agricultural	473	539	670	921	1597
Economically Active:					
Rural	1751	2081	2459	2914	3413
Agricultural	1623	1954	2327	2753	3095

Assumption: 1.1 per cent annual population growth and 0.5 ag. population growth in the Hill by 1990.
Overall population growth estimated at 2.3 per cent per annum.

Chapter Six

Socio-Cultural Considerations for Family Planning

By Ferdinand E. Okada

I. Introduction

Since the repercussions of rapid population growth on the land and people of Nepal and on their social and economic development have been stressed several times in the past, not only at a previous CEDA seminar but also by a number of the people who are participating in this seminar, I do not wish to dwell too long on this aspect. I shall limit myself to a few details which will only reemphasise what has already been said in the past and go on to take an anthropological look at the problem of rapid population growth in the context of Nepalese culture and society.

I should like to make three points:

1. The annual population growth rate of Nepal is high enough to cause alarm among us;
2. This growth rate (assuming no large scale emigration or immigration) can be reduced by curbing the fertility rate, the number of live births per 1,000 women of fertile age (15 to 44 years); and
3. There are culturally acceptable ways whereby people can be induced to limit, or consider limiting, the size of their families. In other words, I am trying to get at specific ways to change attitudes.

II. Implications of Population Growth

According to the national census, Nepal's population was 9,412,996 (94 lakh) in 1961. In 1971 it was 11,555,983 (1 Crore, 15 lakh), a gain of over 2,000,000 (20 lakh) with an annual average growth rate estimated at 2.07 per cent. If this growth rate remains constant, Nepal's population will double in approximately 33 years*. Since the world population growth rate has been increasing, as has Nepal's (it was estimated to be 1.0 per cent between 1920 and 1930, and 1.8 per cent between 1941 and 1952), we may reach a 2.5 per cent growth rate in the near future. If the population growth rate is not reduced, some of us may yet see a population of 23,000,000 (2 Crore, 30 lakh). You can visualize for yourself the tremendous strain that such a population size would put on Nepalese society itself, let alone on the provision of services in health, education, social welfare, or in the provision of sanitation systems, housing and drinking water.

Of course, Nepal will not remain static during these years. In varying degrees it will attain economic and social development targets. But I should like to illustrate my first point by giving a couple of examples. One comes from Economics.

<u>* Annual population growth rate:</u>	<u>length of time for population to double:</u>
1.5 %	46.2 years
2.0 %	34.6 years
2.5 %	27.6 years
3.0 %	23.1 years

If the annual population growth rate remains at 2.0 per cent during a ten-year period, national income must be increased 22 per cent merely to maintain the existing per capita income. If per capita income is to be increased by 10 per cent at the end of a ten-year period, national income must go up by 34 per cent. For a 40 per cent increase in per capita income at the end of ten years, national income must increase by 71 per cent. Given a target of a specific percentage rise in per capita income within a fixed period, the necessary percentage rise in national income increases or decreases with the annual population growth rate. Thus growth rate plays a crucial role. In short, to drive the point into the ground, we must run fast merely to maintain the existing rate of social facilities and amenities; we must run faster if we are to extend and improve them.

Another side of the picture is this: in surveying a gaon panchayat area near Kathmandu, about six months ago, my survey team came across a ward with 43 families living in four localities within the ward. There were nine Tandukar families living in Donbu locality, 17 Shrestha families in Dharigaon, 10 Poudyal in Poudyalgaon and seven Khatri-Chettri in Khatrigaon.

Although it was suspected that the various groups would be similar, the Tandukar situation was not clear. Each of the other three groups, however, was composed of the descendants of one man and in each case he was the grand-father of the present generation of adults. Thus the land owned by one man in the first generation had been subdivided into various pieces (17 fragments in the case of the Shrestha families), almost too small to be really

economically productive, in the third generation. Further subdivisions of six or seven were anticipated for this year. Because of this situation, one Khatri-Chettri family had moved permanently to another gaon panchayat area and six individual men had permanent jobs elsewhere (two were in India and four in various parts of Nepal).

Over a hundred years ago, in Japan, similar pressures on farm families, caused by land scarcity, large families, and a traditional inheritance pattern, led to male infanticide. The situation was eased when industrialization, with a floreation of employment opportunities, became widespread. I suggest that the stresses felt by the people of Dharigaon or Padyaluen are not only economic but also social, that familial and community relationships are affected, and that this society in microcosm is certainly changing under the surface and perhaps breaking up.

The members of this ward may perhaps be more amenable to limiting the size of their families now. Perhaps it is too late for them. But what about the people who have been resettled in the Terai or those affected by land reform who are aware that they are going to face a similar problem? Are they more inclined to limit the size of their families?

Short of improbable mass massacres or enforced mass exile, the solution to controlling the population growth rate, and at the same time producing a favorable balance in terms of economically active population versus dependent population, is to control the fertility rate.

In testing mathematical models of stable population, where given sets of age-specific fertility and mortality rates were applied, dependency ratios were worked out. This

is the ratio of economically productive people (age 15 to 64) to those who are dependent on them (ages below 15, and 65 or over). It may be generalized that members of the dependent groups tend to need social services more, certainly in education and social welfare, and perhaps in health.

The tests showed that, with a low fertility rate and a low mortality rate, the dependency ratio of the theoretical population was .607; or, a hundred economically productive people supported 61 dependents.

In the table form, the findings may be summarized as thus:

<u>Fertility rate</u>	<u>Mortality rate</u>	<u>Dependency ratio</u>
Low	Low	.607
Low	High	.484
High	Low	.985
High	High	.796

It may be argued that no real population ever conforms to a mathematical model, but the principles derived are obvious, regardless of mortality rate. A high fertility rate makes for a larger proportion of dependents in the population and a low fertility rate makes for a smaller proportion.

In Nepal, the crude birth-rate has been estimated to be about 50 per 1,000 population, with a fertility rate of about 210 live births per 1,000 fertile women. The crude mortality rate is estimated to be about 27 per 1,000 population. Life expectancy at birth is probably about 40 years. These figures are not unique but they indicate a high fertility rate and a high mortality rate. The medical

services are working to reduce the mortality rate and I suggest there should be equal effort, at least, to reduce the fertility rate. This is my second point.

III. Controlling the Fertility Rate

I also suggest for my third point that there are several ways within the context of Nepalese culture that His Majesty's Government, using the concerted effort of various ministries and private organizations, including industrial and commercial organizations, can utilize to control the fertility rate. By culture, I not only mean the traditional but the modern. The following suggestions may induce people to seek advice to limit the size of their families and I offer them for your consideration. These suggestions are also inter-related and need eventual nationwide application to make them effective in terms of slowing up the fertility rate.

Land Reform. The effect of fragmentation of small land holdings have already been mentioned. While land reform undoubtedly brings social and economic benefits to the masses of the people, it must be backed up by sources of employment alternative to agriculture. I also suggest here that it makes the people more accepting of means to limit family size and that family planning should be emphasized in areas where land reform is taking place. This is a hypothesis which of course, may be disproved.

Pensions. One of the arguments advanced for having a large family is the necessity for financial security when, one grows old. A person needs children, particularly sons, to support him when he is no longer able to work. This is, of course, a very valid reason. My suggestion is that an organized system of pensions, adopted as national policy by

His Majesty's Government may remove one of the reasons for having large families. If a man knew that, after 15 or 20 or 25 years of faithful service, he would get a reasonable pension, he might decide to limit the size of his family.

To be effective, a system of pensions would need wide-spread coverage but perhaps a start could be made in the industrial and commercial sectors with HMG acting in conjunction with management and labour bodies. Nepalese are of course, aware of pensions; in fact, some people get pensions now, notably ex-army personnel. Thus such a system on a wider basis is acceptable to Nepalese and can, I think, be relatively easily planned in detail and established.

Family Allowances. I do not know the extent to which family allowances are given in Nepal to people in the service. I suggest, however, that allowances can be manipulated to induce smaller families especially if related to pension systems. Where allowances are based on the number of children, as they are in some countries, allowances can be limited to, say three children per family and no more. Or perhaps, the allowances could be successively decreased for each child after the first. If public housing is provided by industry or government, such housing could be limited in size so that the larger the family, the more cramped the quarters become.

These measures do not prevent a man from having a large family but they may make him think twice about the size of family he wants.

Reduction of Infant and Child Mortality. There is in Nepal a social and a religious necessity for a man to have sons. It is often claimed that Family Planning contradicts

this ideal. This is a somewhat false argument. Family Planning does not mean no children or no sons. I find that most of my friends are happy with one son or two sons. If these sons have survived beyond the age of four or five, most of my friends are not eager to have more. The present emphasis on reducing the mortality rate, especially infant and child mortality is therefore a factor in reducing the fertility rate in that the chances of a child's survival get better with improvement of medical services. It seems to me that a man with two sons, both aged five years or over, is relatively susceptible to Family Planning advice and, in any community, such a person is the one to concentrate on, not the man with no children or with daughters only.

Delaying the Age at Marriage for Women. The so-called "child marriage" is forbidden by law in Nepal. However, "child marriage" has been banned more as a social event than as a biological event. The ban on "child marriage" may have combatted a social evil but it has not reduced the fertility rate because Nepalese women still bear their child at a relatively early age, around 17 or 18 years, perhaps earlier in the more rural areas.

There is a class difference, however. Girls tend to marry later among families of higher socio-economic status and where they have easier access to educational facilities. The girls stay in school longer (partly so that they can make a better marriage) and thus delay the age at which they get married. Thus one answer may be the further extension of educational facilities to women. The 1961 Census of the United States showed that for every extra year a girl went to school, beyond the minimum years required, she had 0.08



child less than the girls who had the minimum compulsory schooling. Partly this was a function, I think, of delaying marriage age and partly of the lessening of ignorance, and partly of the raising of individual aspirations, socially and materially.

Age at marriage for women in Nepal can also be delayed by opening up more cash employment opportunities for women. A working girl or a girl in training for a job is more likely to get married at a later age. These jobs need not only be in industry, including tourism, but in shops or offices or in various capacities associated with health and educational services and so on. It makes a great deal of difference to a nation if its mothers have their first child at 20 or 21 years of age instead of at 17 or 18. At the very least, it means one child less per mother.

Increasing the Interval Between Births. It may be added that if a married woman is holding a job, the probability is that she would not want to get pregnant too often. One reason is that she often gets intellectual and emotional satisfaction which she cannot usually get if she is home-bound. Another is that she is bringing in cash income to the family, thereby reducing the necessity to have children who contribute to the household economically, whether directly or indirectly. Providing employment for married women does not necessarily delay the age at marriage but it tends to increase the interval between the birth of children, another very important factor in reducing the fertility rate. In societies where infants are breast-fed, there is a regulation of the length of this interval, which has both biological and cultural aspects; this situation is found in Nepal.

Increasing Practical and Specific Awareness of Family Planning and Methods. Women may be too modest to discuss their need for regulating and limiting the size of their families because of traditional up-bringing. Modern education, of course, brings certain attitudinal changes through increasing the awareness of women (and men, for that matter) of factors which lie beyond traditional culture. I should like to pose a question here. For those women who have, or have had, no access to modern education, is it possible to mobilize traditional ways of, shall I say, educating such women? The role to be played by an organization such as the Nepal Women's Organization can be great, indeed. But what about the Kaviraj or the Vaidya, or even the village jhankri and the village sudeni, or ex-servicemen's wives who have lived abroad?* Can they help in bringing knowledge to village women in order to bring about attitudinal change and to give access to family planning methods to those who so desire?

Encouraging a Nuclear Family Pattern. Among development policies which encourage the proclivity of people to live in nuclear families are land reform and resettlement, industrialization, and the creation of regional development centers including a hierarchy of growth centers. In the last, one of the objectives as I understand it, is to create a large number of small population concentrations (minor

* Kaviraj and Vaidya are indigenous medical practitioners who use herb and locally available materials in making medicine. Jhankri is a Nepalese name of witchcraft. Sudeni is a self-trained and unqualified midwife.

urban centers) rather than a small number of large population concentrations (major urban centers). The dispersal of industry, based on the regional development policy, with due consideration for available raw materials, accessibility to markets, provision of power, and so on, encourages the creation of small urban centers. The emergence of the nuclear family pattern is associated with urbanization, industrialization, and the provision of employment opportunities which take people out of subsistence agriculture.

Perhaps, for Nepal, the transfer of Government servants from post to post may also play a role. A CDO who gets assigned to Bajhang, three years later to Sindhupalchok, and then to Rautahat, is apt to drift away from a joint-family pattern!

Why would a nuclear family pattern lead to smaller families? It is argued that, as opposed to a joint-family pattern, a man does not marry until he feels capable of supporting a family and when he does, he is reluctant to have a large family because he bears the sole responsibility of providing for them. Also, as far as the wife is concerned, the more children she has, the more time she devotes to bearing and rearing them.

This point of view has two implications for Nepal. One is that the children born must survive and therefore, as mentioned earlier, medical services which help reduce infant and child mortality must play a role. The other is that some upward social mobility must be made possible; otherwise there would be not much point in conserving family energy and economic resources to be spend in avenues which bring no social recognition or prestige.

In a society based on agriculture, a joint family constitutes a strong economic unit in which even young children have economically productive roles to play, often indirectly. It also seems, however, that a joint-family pattern is more conducive to a high fertility rate, because of the necessity to strengthen the unit numerically, because women can pool their efforts to look after a large number of children and because a man incapacitated by illness or unemployed has an economic and emotional cushion to fall back on. He does not bear sole responsibility to support a large number of children in times of crisis. A joint family can gain social prestige and a certain political leverage when its numerous children form alliances with other joint families through marriage; and, thus, the argument goes, more children are desired.

There are other cultural aspects, for example, widow remarriage or divorce but, in sum in discussing some factors acceptable to Nepalese culture and society which can help bring attitudinal changes to encourage people to limit the size of their families, I submit that specific and effective ways can be found to bring about these changes. There is no need to hope that attitudes will change or to wait for them to change.

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Chapter Seven

Population and Development Policy*

Mohan Man Sainju

I. Introduction

Population experts are becoming increasingly alarmed by population growth rates throughout the world. On April 25, 1974 a group of food and population experts made a declaration on food and population, and presented it to the Secretary General of United Nations. The declaration points out that "hundreds of millions of people of the world are under-nourished. Population growth is adding 75 to 80 million more people each year, 200,000 each day. Within the next 25 years or so our present number of nearly 4 billion will be nearly 7 billion." The declaration further calls upon, "in the name of humanity, all governments and peoples everywhere, rich and poor, regardless of political and social systems, to act--to act together--and to act in time."

Nepal is not an exception. Its population has crossed the 12 million mark and is increasing by 2.07 per cent yearly. With this growth rate the population will not take even 35 years to double. The phenomenon has multi-faceted impacts on food, health, education, resettlement, etc. For example, the primary school age population in 1970 was 1,401,440 out of which only 31 per cent were in school and the teacher-pupil ratio was 1:25. Even to maintain this

* The help of Mr. Yadav Thapa in preparing this paper is highly appreciated. Without his initiative this paper would have remained incomplete.

existing level, the facilities and the number of teachers have to double if the population doubles. If we were to achieve 100 per cent primary enrolment within a given period of time, the investment in primary education must be increased tremendously. If we take the example of health, the existing doctor to population ratio is 1:40,125 (India 1:5,000). Based on the present stock of 338 doctors and a net addition of 25 per year, after 10 and 20 years the doctor-population ratio will be only 1:24,320 and 1:20,883,^{1/} respectively. The people's nutritional level is not impressive either. According to one expert, "if the people of Nepal are to enjoy a 2.0 per cent annual improvement in diet, measured in cereal production requirements, the cereal output will have to quadruple by AD 2000 even with minimum population increase."^{2/} Certainly, these examples do not present an optimistic view. There seems to be a growing awareness of population pressure, but the government of Nepal has yet no population policy except the government supported Family Planning Project. Until now no attempt has been made to examine the implications of existing laws and regulations for population growth. The existing laws and regulations as regards income tax, pregnancy leave, marriageable age for girls, etc. all seem to have not considered the effects of population growth.

In this article an attempt will be made:

1. to view population as a dependent variable in the development process-- a function of a large number of variables, such as reproduction, migration, employment, income situations, health care, education, social status of individual families, and

active participation of women in socio-economic life; this forms the basis for developing a concept of comprehensive population policy;

2. to possibly, identify determinants of family fertility which will, hopefully, be relevant in the Nepalese context; and
3. to indicate some of the prevalent cultural, social, and religious attitudes which may influence population and development policy.

II. Scope of Population Policy

In the existing literature much of the discussion on population policy has concentrated on mainly one aspect of population policy which is related to directly limiting population size and growth rate. This has resulted in the massive investment of money and energy in family planning programmes, but without satisfactory results. Some population policy proposals that went a step ahead from the mere provision of contraceptives by advocating positive and negative incentives are criticised on the ground that imposition of taxes upon the poor would depress their living standards even further, and economic rewards to induce people not to have children would make families with children poorer. A few countries, like Korea, Singapore, Hongkong and Taiwan, where fertility programmes have been successful, are distinctive in the sense that they were experiencing declining birth rate in varying degrees prior to the adoption of a national programme, and they are not under-developed areas but rapidly developing areas as characterized by rising per capita income, more education, improved employment opportunities, etc. There is hardly any evidence that fertility

limitation programmes have independently created a fertility decline.3/

This has led to the proponents of the theory of demographic transition to be scornful of the idea that organized family planning programmes might bring about a decline in fertility. The theory of demographic transition is often held to imply that "(a) until socio-economic development has reached a certain point, there is no possibility of decline in fertility, and (b) once this point has been reached fertility will fall on its own accord".4/

This suggests that in the total ecological context in which population problems arise, nothing less than substantial technological, social and economic changes can provide the condition under which the birth rate can be sufficiently reduced. These changes include industrialization, urbanization, and a modernized market. Urbanization and industrialization, as they are accompanied by a rising level of literacy, better communication, increased economic opportunities, improved health care, lower infant mortality rates, higher status for women, and higher cost of bearing and rearing children may be necessary to provide the incentives and the means to control the population growth. In these terms, a population policy is an overall social and economic development policy.5/

A broad definition of population policy may run the danger of including virtually all government actions. However, a Population policy may be classified in simple terms as: (1) policies that are intended to affect demographic events directly; (2) policies that are pursued primarily for other reasons, but with some consideration of demographic

factors; and (3) policies taken without explicit demographic intent but with non-trivial demographic consequences, actual or perceived.

III. Developmental Approach to Fertility Reductions^{6/}

The process by which decisions that result in a steady population state are made is a complex one and must be approached from the perspective of society, not merely from that of the service delivery system alone.

Examination of the politics of development and population control in Nepal, or in any society for that matter, should begin with the determinants of fertility and mortality in relation to family size. Population control by human means must concentrate upon births rather than deaths, and number of births is finally decided by families rather than nations.

Studies dealing with family size construe fertility to be a function of: (1) the economic and social utility of children to parents, (2) the ability of couples to control fertility, and (3) residual factors such as the biological ability of couples to bear children. The utility of children and the ability to control fertility are disaggregated in this way:

1. Social and economic utility of children is considered to be a function of family wealth or income, education of family members, family social status, the functional inclusiveness of the family, and the religion and religiosity of the family.
2. Ability to control fertility is regarded as a function of education, status of women, access to family planning programme, and residual factors.

Using this conception of family fertility as a guide, particular relationships in less developed countries with at least a fair degree of consistency and relevance with the present condition in Nepal, may be summarized in the following hypotheses:

1. The higher the economic status, the lower the fertility of the family.
2. The higher the social status, the lower the fertility of the family.
3. The more real the possibility of children and parents achieving higher status through education or other means, and the less significant the status of children as income earners, as children, or as supporters of parents in their old age, the lower the fertility of the family.
4. The higher the status of women as represented by labour force participation outside the home, income earned and such indicators as professional status, the lower the family fertility.
5. The less preference expressed for large families in traditional, cultural and religious precepts, and or the less the adherence by families to traditional precepts in favour of more modern values, the lower is family fertility.
6. The greater the availability of family planning services and the more prevalent official and unofficial support for anti-nationalist policies, the more likely is family fertility to be low.

Although generalizations suggested by the hypotheses above cannot be adopted indiscriminately by any society in formulating its population policy, the evidence assembled regarding the above relationship does serve to point out the way towards the type of exploration required to learn how to deal with the process of development and population control simultaneously.

The above hypotheses clearly show that changes in the status of families is a pre-condition for fertility decline. The changes in the status of families within the structure of society may occur in three ways: (1) by shifting from one position to another with little or no change occurring in the structure of society; (2) by shifting to a higher position in a new component of society created by growth; and (3) by basic changes in society itself creating new relationships among individual and families. Land reform and abolition of a caste system are examples of basic structural changes leading to changes in economic, political and social status.

To further complicate conditions, individuals are associated with several entities of society simultaneously in various capacities, e.g. head of a household and member of an ethnic group. Thus, status, disaggregates into and integrates multi-dimensional webs of human relationships. The net effect of any basic changes upon a single variable such as family size is difficult if not impossible to discern before hand.

In Nepal most families reside in villages, with the likelihood that most will continue to do so for many years

to come. This means that change in design must focus primarily upon villages, with initial emphasis upon reforms rather than growth. Some general contours of elements of reforms are discernible.

- a. Adhere to the full intent of the Constitution of Nepal.
- b. Carry out the intent of the Mulki Ain and Land Reform.
- c. Ensure that in any reform, attention is given to those details that will result in families deciding that it is in their self-interest to have fewer children.
- d. Provide for essential services, especially family planning and legitimize its open and widespread use.
- e. Consider innovative approaches such as incentives.

IV. Social, Cultural, and Religious Barriers

It may not be out of context to discuss some of the cultural social and religious barriers here, as the social, cultural and religious considerations count much for small family norms. Hindu religion is not against the use of contraceptive practices, but still favours large size family norms. Although there has been no research in Nepal to examine the impact of social or cultural variables on the importance of sons to daughters to have resulted significantly in large size families. Such preference is not based only on economic grounds but also social, and religious. According to Hindu religion, to have a son is a necessity to light the funeral fire at one's death and to attain salva-

tion in the next life. Not to have a child is a kind of social degradation for a couple. It is still a prevalent practice to wish somebody by saying "May your Progeny cover the hills" as a way of conveying a good wish. There are many trivial expressions or beliefs and attitudes such as these which reflect larger family size norms. These symptoms are reflections of how social, cultural and religious variables act as constraints.

V. The need of a Population Policy in the Fifth Plan

Population policy is not mentioned explicitly in the approach paper of the Fifth Plan. Yet, there is no doubt that population growth will be a constraint in achieving the desired objectives of the Fifth Plan cannot be denied. It is timely to consider what type of population policy should be formulated in order to contribute to achieving the three stated Plan objectives: (1) mass-oriented production, (2) maximum utilization of labour force, and (3) regional integration and balance.

These objectives specifically deal with issues relating to employment, distribution of population and social goals of the Plan. The operational translation of these objectives demand an explicit population policy. Any policy relating to the population problem will have to take into account not only population characteristics and distribution but also the social goals that the changed strategy of development has cherished. It is, of course, to be remembered that development and population control are closely interwoven, and that the "soft state" characteristics have got to be remedied with basic structural reforms in the

society. In addition to its effective procedure of migration, mobilization of local resources including labour, and implementation of the socio-economic reform measures need to be seriously pursued.

Footnotes

1/ See Nepal: A Country Profile, prepared as part of country health programming for Nepal, Kathmandu: 2 April, 1974 (Mimeographed) Section IV, p. 3.

2/ Stephen Enke "Projected Costs and Benefits of Population Control" proceedings of Seminar on Population and Development, Centre for Economic Development and Administration, Kirtipur, p. 19.

3/ Elihu Bergman, The Evaluation of Population Policy: Some Missing Links, prepared for the Rehovot Conference on Economic Growth in Developing Countries, Weizmann Institute of Science, Rehovot, Israel, September 1974.

4/ Alan Sweezy, "Recent Light on the Relation Between Socio-Economic Development and Fertility Decline" Caltech Population Programme Occasional Papers Series 1. No. 1. 1973.

5/ Population and Development Policy in Nepal: A Programme for Research and Action (An internal working document), 1972.

Various efforts to define population in a broader perspective have been made by various authors, Hauser observes that "...comprehensive policy...necessarily embraces policy in respect of mortality and migrations as well as fertility. Moreover, it involves evaluation of other programmes, social and economic, which may affect fertility,

mortality and migration... Population Policy in this sense, embraces social and economic development policy, and appropriately so. Hauser, "Non-Family Planning... "Rapid Population Growth: Consequences and Policy Implications by Study Committee of the Foreign Secretary, National Academy of Science Baltimore: The Johns Hopkins Press, 1971.

Berelson defines Population Policy as: "...government actions that are designed to alter population events or that actually do alter them...the actions must intend or effect a non-trivial alteration in order to qualify as population policy" (Bernard Berelson "Population Policy Personal Notes" Population Studies 25,2,1972).

6/ This draws heavily on Population and Development Policy in Nepal: A Programme for Research and Action, (An Internal Working Document), CEDA, Dec. 22, 1972.

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Chapter Eight

Policy Implications of Nepal's Population

By Jose V. Abueva

In the introductory chapter we promised to "present a summary and analysis of the varied measures recommended by the seminar and by others for coping simultaneously with the problems arising from the rapid increase in population and the need for accelerating development in Nepal." Initially we thought that, given the time pressures upon us, it would suffice to make a straight classification of the action recommendations generated by the seminar in relation to those proposed at about the same time by a National Planning Commission Task Force on Population Policy of Nepal. Two reasons seemed to justify this minimal intent in addition to the time factor. One was the contribution of several persons to both undertakings, directly as common participants or as authors of source materials for the Task Force Report. The other was that the Task Force Report may be deemed the authoritative, official output of the scholarly and professional inputs of the seminar. Moreover, some of the key contributors to both seminar and Task Force would also, as members of the National Planning Commission, finally shape Nepal's population policy to be incorporated in the Fifth Plan (1975-1980).

However, as we finished writing the first chapter, reviewed anew the 1971 seminar under the same title, and read related population studies and reports that blossomed in 1974, the U.N. Population Year, we thought that it would be worth-while attempting to present the policy implications of Nepal's population in a broader context that might aid

the country's policymakers and scholars in their continuing tasks of planning, implementation, evaluation and research.

It is noteworthy that in Nepal the academic seminar and the policy task force are being utilized by overlapping sets of officials and academics to investigate social and development problems and to design and review public policy. This has happened in the consideration of the population problem, regional development, land reform, mobilization of financial resources for development, road-building technology, and various aspects of development administration. In the case of population and development, the seminar in 1974 was a follow up of the one held in 1971, both efforts contributed to the work of the Task Force, and all are being used in formulating the population policy to be embodied in the draft Fifth Plan. The four-year lag from the first seminar to the drafting of Nepal's population policy in 1975, preceded by Nepal's Family Planning Program launched in 1966, indicates how long it takes, even with all the impetus to population planning converging from several directions, to begin to shape a comprehensive population policy self-consciously and in relation to other development goals and programs. The availability to Nepal of population policies and population studies from all parts of the world bespeaks the international concern for population policy, Nepal's worldwide contacts, and her potential for benefiting from, as well as contributing to, international know-how and experience in coping with population problems.

The speakers and discussants in the 1974 and the 1971 seminars were agreed that Nepal should both reduce fertility

and accelerate development. In other words, they recognized that demographic variables and development (growth plus change) in Nepal are so interdependent that a simultaneous attack on the two fronts was, and is, imperative. Their ideas for coping with population and development may be classified into two sets: (1) population-influencing policies and (2) population responsive policies (National Academy of Sciences: 86-87).

First, a word on our use of the term population policy, which will enable us to better appreciate the many and diverse policies that have been suggested. Following the United Nation's definition, as modified by the International Steering Committee of the National Academy of Sciences, population policy refers to: "measures and programmes designed to contribute to [or are likely to affect] the achievement of economic, social, demographic, political and other collective goals through affecting critical demographic variables, namely the size and growth of the population, its geographic distribution (national and international) and its demographic characteristics... (National Academy of Sciences, 1974)." Thus population-influencing policies are those aspects of national population policy that affect or are likely to affect critical demographic variables, whether manifestly intended to do so or not. It may be helpful to consider as a sub-set of population-influencing policy those which are expressly designed to have the effect of reducing fertility. This we may call a fertility reduction policy, defined by Ozzie G. Simmons and Lyle Saunders "as one that expresses an explicit intention to induce a change in fertility rates in a downward direction (the desired effect may be achieved directly or indirectly but the intent must

be explicit) through governmental measures that are specified and with appropriate resources that are committed, in order to realize one or more societal values or goals (1974:7)."

For its part, evidently reflecting expert international opinion, His Majesty's Government of Nepal has defined population policy as "being that portion of public policy which deals with laws, administrative regulations, and action programs having an effect directly or indirectly on population growth and distribution... in a manner consistent with identified national goals" (NPC Task Force, 1974:7). The definition then identifies four principal variables with which population policy must be intimately linked: (1) fertility, (2) mortality, (3) migration; and (4) population growth. "The purpose of a comprehensive and enlightened national population policy," says the Population Policy Task Force of the National Planning Commission, "should be to mobilize the full range of policy instruments available to the society and to orchestrate them so as (1) to modify... fertility behavior and (2) to modify migration patterns so as to effect balanced regional growth and integration."

Moreover, the Task Force regards responsible population policy formation "as a continuing process rather than the presentation of a finished product." This is what we mean by a growing self-consciousness in population planning. To quote the Task Force once more, its job was to initiate "the establishment of an institutional framework which will permit thoughtful policy-makers and administrators to systematically study, assess, try and apply a variety of policy instruments to combat the population problems in the years ahead."

Now let us return to our adopted two-fold classification of population policies, namely, those that are "policy-influencing" and others which are only "population-responsive." The former are included in our cited definitions of population policy which are either explicitly intended or are likely to influence population variables. On the other hand, population-responsive policies are designed to respond to the realities and perceived consequences of such population variables as size, growth, distribution and other population changes.

In turn population-influencing policies may be classified into six, and we shall list below under each of them the various policies (including actions or directions) suggested by the Population and Development Seminar of 1974 (PDS-74) and of 1971 (PDS-71) and by the NPC Task Force (NPC/TF). We have taken the liberty of designating as "policies" what are mostly explicit or implicit ideas for potential policies, although some of them are existing policies of His Majesty's Government of Nepal.*

Population-Influencing Policies

1. Policies that influence mortality and morbidity

PDS-71. Develop a whole group of paramedical personnel; utilize Nepali ex-servicemen from the British and Indian armies; increase the capacity of families and communities to provide health services, health education and social security; find ways of improving nutrition.

*The ideas from the 1974 Seminar indicate the participants who suggested them. It is not practicable to do this from the text of the 1971 Seminar and the NPC Task Force.

PDS-74. Impliedly, expand health personnel, facilities and services and distribute them more equitably among the different regions in order to reduce mortality and morbidity. Reduce infant and child mortality in order to limit family size and be selective in choosing targets of family planning advice (for example parents with sons, not those with no children or which have daughters only) (F. Okada). Improve food production and nutrition (B. P. Dhital).

NPC/TF. Impliedly increase the number of doctors, hospital beds and other health facilities and services. Create permanent staff positions for personnel of the Family Planning and Maternity and Child Health Program.

2. Policies that influence fertility directly.

PDS-71. Mobilize popular support for zero population growth. Give the Family Planning Program (FPP) more support, funds, personnel; and improve the quality of its services through better organization, integration, and coordination with other health services. Expand and decentralize the FPP and involve more people in the program through local panchayats, chief district officers, family planning festivals and voluntary organizations. Arouse the interest of village women by providing medical attention to their children.

PDS-74. Expand and improve the Family Planning Program. Reduce the population growth rate as soon as possible. Concentrate the Family Planning Programme in those hill areas in which population pressure is likely to send settlers to the prime Terai forests (R.S.J.B. Rana and Y.S. Thapa). Adopt a policy of population control in

order that programs of employment generation in industrial and service sectors, planned migration and settlement do not become transient panacea (H. Gurung). Family planning "must occur in the minds of the people" (Basu Shasi). Concentrate family planning in the hills (P. Timilsina). Provide legalized, safe abortion services to married couples on health grounds as part of their basic health needs (R. Thapa). Use incentives or disincentives such as pensions and housing only for small families, practical and specific awareness of family planning and birth control methods (F. Okada). Mobilize wider support for the FPP (B.R. Pandey).

NPC/TF. Expand and improve the Family Planning Program aimed at limiting family size, averting unwanted births and eventually lowering the fertility level. Provide maternal and child health services in the mountains. Implement the FPP intensively in the hills & the eastern Terai. Legalize abortion. Emphasize vasectomy and tubectomy. Extend sterilization programs to less accessible areas by using mobile teams. Raise output targets of family planning clinics from 200 to at least 500 per clinic per year. Develop a better information system for family planning and fertility control. Liberalize the law on abortion and increase the minimum age for marriage.

3. Policies that influence fertility indirectly

PDS-71. Provide population education to children. Increase the budget for education relative to other items in the national budget. Educate more females. Widen the power structure to include less-privileged and

discriminated groups in positions of influence and authority. Encourage the employment of women. Close the communication gap among various groups so that national policies, including population policy, can be understood and supported by the people.

PDS-74. Provide pensions to give financial security to workers in government and in the private sector, delay the age of marriage of women, extend education and cash employment opportunities to women, increase the interval between the birth of children, encourage a nuclear family pattern, promote regional development, transfer government employees regularly, provide employment outside of subsistence agriculture, allow more upward social mobility (F. Okada). Implement land reform vigorously (F. Okada, M.M. Sainju, R.S.J.B. Rana and Y.S. Thapa). Raise the social, cultural, economic and legal status of daughters (R. Thapa).

Reduce family fertility; by raising the economic and social status of families; by elevating the status of women through labor force participation outside the home, earned income and professional status; by enhancing the possibility of children and parents achieving higher status through education or other means; by making less significant the status of children as children, as income earners, or as supporters of parents in their old age; by reducing the preference for large families in traditional, cultural and religious precepts, and the adherence by families to traditional precepts in favor of more modern values; by fully implementing the Constitution of Nepal

and the Mulki Ain (Civil Code); and by innovative incentives to families that decide to have fewer children (M.M. Sainju).

NPC/TF. Enhance the status of women, including their participation in the labor force and their schooling; revise pro-natalist laws; experiment with community incentives in the form of providing schools, bridges and dispensaries linked to fertility control participation; introduce monetary savings schemes. Give higher priority to the unmarried in awarding scholarships.

4. Policies related to composition of population

PDS-71. Encourage more labor-intensive techniques to increase agricultural productivity and increase gainful employment of farmers. Reform the system of land ownership and land tenure to increase farm productivity and incomes, promote equality and weaken stratification. Reduce resettlement units from about seven to two or three acres. Encourage more farmers in the hills to engage in horticulture. Educate and employ more women. Give various ethnic groups opportunities for getting an education. Provide training to laborers. Improve public health nationwide.

PDS-74. Promote national integration through education and the recruitment of greater numbers of ethnic and caste groups in government as against the Brahmins, Chetris and Newars (R. Shaha). Reduce the individual land area for resettlement, use labor intensive techniques in farming as well as in roadbuilding, and organize rural cooperatives which would give greater

influence and participation to tenants and owner-tillers than to big landlords, thus changing the composition of the decision-making groups in Nepal (P.S.J.B. Rana). Generate employment in sectors other than agriculture (R.C. Malhotra and B.P. Dhital). Assure the masses minimum levels of food, shelter, health and education (P.C. Lohani). Institute free and compulsory elementary education and a minimum working age not lower than 13 (D.B.S. Thapa). Reduce the dependency ratio in the population, presumably through fertility control and by making people spend more of their idle time in productive labor, as in agriculture and rural development. Improve the status of women through education and employment outside the home.

NPC/TF. Enhance the status of women through education and their participation in the labor force. Reduce the dependent population by fertility control measures and by increasing the minimum age for marrying.

5. Policies related to population distribution (including urbanization).

PDS-71. Keep the people in the farms and rural areas through land reform, smaller farms, labor-intensive techniques, agricultural credit and marketing services, cooperatives and environmental protection. Improve the planning and management of resettlement schemes to help migrants, and develop the new settlements for greater productivity and satisfaction of the settlers.

PDS-74. Improve the economy of the hills by siphoning off part of the population to the lower density Terai and the infusion of a massive rural works program; large-

scale resettlement schemes in the Terai; reduce farm size in the Terai to induce high density population (H. Gurung). Expand resettlement programs in selected Terai areas; make a major effort at hill development; introduce well-conceived regional development plans; concentrate family planning program in the highest density hill areas; resettle in the less useful forests and uncultivated wasteland, not in the prime forests of the Terai; maximize the utilization of the labor force in the agricultural sector, while expanding employment in the industrial and service sectors (R.S.J.B. Rana and Y.S. Thapa). Resettle people from the hills in the Terai; initiate an extensive programme of rural public works and an integrated rural development program to offset seasonal unemployment and low incomes (B.P. Dhital).

NCP/TF. Encourage the growth of small urban centers in other areas in the hills and the Terai. Plan and control the migration from the hills to the Terai and from the rural to the urban areas. (Although not mentioned in the Task Force Report the National Planning Commission is committed to regional and rural development which would have significant implications for population distribution in Nepal.)

6. Policies that influence international migration.

PDS-71. The summary and conclusions omitted any suggestions to deal directly with the perceived problem of Indian immigration and economic competition, especially in the Terai, and simply noted that there would be fewer and inferior jobs open to Nepali immigrants to India. Compulsory birth registration suggested by Myron Weiner

was endorsed by the seminar for various reasons, including the identification and protection of Nepali citizens, and possibly the control of Indian immigration into the Terai.

PDS-74. Reduce or control Indian economic competition and domination by restricting immigration of Indians into Nepal, inducing higher density population in the Terai, employing Nepalis instead of Indians in the industrial and service sectors (P. Shaha, D.B.S. Thapa, R.S.J.B. Rana and Y.S. Thapa).

NCP/TW. Require foreigners to have passports, identification, or entry permits and to obtain work permits. Keep vital registration records on birth, death, marriage, divorce, citizenship, work permits of foreigners.

Population-Responsive Policies

Earlier on we said that population-responsive policies aim to respond or accommodate to population variables, rather than to influence them. Thus policies to provide education, housing, water, hospitals, electricity, roads and protection to the people wherever they may be are responding to their size, location, ailment, age, and so on. On the other hand, we have listed above various policies, such as fertility control, maternal and child care, education and employment of women, resettlement, and immigration control, which we called population-influencing because they tend to reduce or increase fertility, slow down population growth, channel or stop the flow of people within or into the country.

It was apparent in several of our examples that the distinction between the two kinds of population policies was not clear cut. Moreover, the policies each have more than one objective consequence. Still we believe that the distinction is useful, if only because it is too easy otherwise to assume uncritically that most population relevant policies, however indirectly they might influence fertility for example, would somehow together have the equivalent effect as specific fertility reduction policies in preventing or slowing down births. In fact, many of the policy ideas suggested in Nepal, as enumerated above, may or may not effectively influence fertility, population growth or composition, or migration, as the case may be. By sorting them out according to the kinds of demographic variables they are intended to affect or respond to, we may be better able to examine them critically and test their application or implementation, and their consequences in relation to their specific policy objectives.

Moreover, it is often believed that because population control and development have overlapping objectives and are interdependent, the realization of one would mean the fulfillment of the other. There are those who minimize population control measures by saying that the development of the country would cause the population growth rate to decline, just because development and low population growth are seen to occur together in many developed countries. Public funds are always scarce in relation to the needs of various programs, and competition over their allocation can obscure the relative value and usefulness of a population program, so-called development programs in relation to or vice-versa. Inasmuch as population policy is, like all other

public policies, the product of the political process, and the population sciences are in themselves underdeveloped as applied to many poor countries, scarce resources may be wasted in the confused pursuit of development goals and population control, to the detriment of those countries.

In the case of Nepal, as with any other country seeking to achieve development goals partly through reducing population growth and managing population distribution, it would be wise to regard the various policy ideas and the resulting policies as tentative measures whose ability to produce their intended results are to be tested in policy implementation and by evaluative research. Fortunately, several of the participants in the 1971 and 1974 seminars in population and development, the members of the Task Force, and the members of the National Planning Commission who will formulate Nepal's population and development policies are accumulating relevant knowledge and experience, and the awareness of the theories and methods of the population sciences in addition to those concerning other aspects of national development. Their continuing support of and cooperation with scholars in Tribhuvan University and elsewhere hold the promise that sound policies will be evolved because they are based on increasingly reliable knowledge, and that they will be effectively implemented to benefit the people of Nepal. The proposed establishment of a Population Coordination Board in the National Planning Commission and the setting up of a Center of Population Studies at Tribhuvan University or their functional equivalents, could push that promise closer to reality. The ultimate success of population policies, like those of other public policies geared to Nepal's development depends on the will and skill of the country's

5

leaders, civil servants, and the rank and file of the citizenry in their under standing, determined and vigorous pursuit of what they believe to be in their own & the country's interest in the race between population growth and the pace of development.

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Appendix No. 1

The following is the list of only those participants whose names have appeared in Seminar Registered Book:

Name	Designation	Address
1. R.P. Ghimire	Honorable State Minister	Information, Communication and Administration Ministry
2. Bhekn B. Thapa	Honorable State Minister	Ministry of Finance
3. Shushila Thapa	Honorable Assistant Minister	Ministry of Health
4. Pashupati S.J.B. Rana	Member	Rastriya Panchayat (National)
5. Prakash C. Lohani	Member	Rastriya Panchayat
6. Goraksha B. N. Pradhan	Member-Secretary	National Planning Commission
7. Govind P. Lohani	Member	National Planning Commission
8. Ratna S.J.B. Rana	Member	National Planning Commission
9. Harihar Jung Thapa	Acting Secretary	Ministry of Health
10. Bharat P. Dhital	Act. Joint Secretary	Ministry of Food & Agriculture
11. Bharat Raj Vaidya	Director General	Health Department
12. Nava Raj Chalise	Chief Economist	National Planning Commission
13. K.B. Acharya	Act. Director General	Central Bureau of Statistics
14. N.H. Dubedi	Under Secretary	Education Ministry
15. S.P. Shrestha	Joint Zonal Commissioner	Bagmati Zone
16. Soorya B. Shakya	Vice Chancellor	Tribhuvan University
17. Prachand Pradhan	Dean	Institute of IBACPA
18. Dhurba B.S. Thapa	Dean	Institute of Law
19. Prayag Raj Sharma	Dean	Institute of Nepal Asian Studies
20. Upendra Man Malla	Dean	Institute of Humanities and Social Science
21. Parthiheshwo Timilsina	Assistant Dean	Tribhuvan University
22. Jagat M. Adhikari	Registrar	Tribhuvan University
23. Reeta Thapa		Institute of Medicine
24. D.R. Dahal		Institute of Nepal and Asian Studies, T.U.
25. Rishikesh Shah		Kamal Pokhari, Kathmandu
26. Ram Chandra Malhotra		Baneshwor, Kathmandu

Appendix No. (Contd. 2/)

<u>Name</u>	<u>Designation</u>	<u>Address</u>
27. Radheshyam Bista	General Manager	Rastriya Samachar Samiti
28. Krishna P. Sigdhyal	Reporter	Rastriya Samachar Samiti
29. G.P. Pokhrel	Editor	Gorkhapatra Corporation
30. Dwarika P. Shrestha	Reporter	The Rising Nepal
31. Shyam Bahadur K.C.	Reporter	The Rising Nepal
32. Meena Acharya	Economic Advisor	Nepal Rastra Bank
33. Bashudev Ram Joshi		Nepal Rastra Bank
34. K.P. Acharya		Statistic Department
35. S.R. Srivastab		Statistic Department
36. K.B. Singh		Family Planning Project
37. Nilkantha Rao Paddy		Ministry of Education UNESCO Department
38. Badri Raj Pandey	Deputy Chief	Nepal FP and MCM Project
39. Vidya Bir Singh	Geographer	Tribhuvan University
40. Juddha B. Shrestha		Meera Home, Kathmandu
41. Jagdish Sharma		Baneshwor, Kathmandu
42. Sarad Shah		NEMO PARQUET
43. Rashu Shashi	Secretary	Family Planning Association
44. Jagadish B. Mathema	Treasurer	Family Planning Association
45. Jagadish Ghimire	Field & Branch Chief	Family Planning Association
46. T.M. Vaidya		Family Planning Association
47. Vishnu P. Dhital	Senior Officer	IAO of the U.N.
48. Krishna Man Manandhar		USIS, Kathmandu
49. Govind Ram Agrawal	Act. Director	Centre for Economic Development and Administration (CEDA)
50. Nanda Lal Joshi	Visiting Professor	CEDA
51. Pushkar B. Reejal	Senior Officer	CEDA
52. Khem Bahadur Bista	Senior Officer	CEDA
53. Daya C. Upadhyaya	Senior Officer	CEDA
54. Durga Prasad Ojha	Senior Officer	CEDA
55. Mahesh Banskota	Senior Officer	CEDA
56. Bhim Dev Bhatta	Acting Senior Administrative Officer	CEDA

Appendix No. (Contd. 3)

Name	Designation	Address
57. Beena Pradhan		CEDA
58. Rameshananda Vaidya	Asst. Senior Officer	CEDA
59. Shiva Raj Suresha	Consultant	CEDA
60. Kaushal C. Sharma	Administrative Officer	CEDA
61. Prabhu Thacker	Publication Officer	CEDA
62. Giri B. K.C.	Research & Training Officer	CEDA
63. Binayak Bhadra	Research & Training Officer	CEDA
64. Vallab Raj Sharma	Research & Training Officer	CEDA
65. Suresh P. Sharma	Research & Training Officer	CEDA
66. Bharat P. Devkota	Research & Training Officer	CEDA
67. Deepak R. Thapa	Research & Training Officer	CEDA
68. Arjun Jung Shah	Research & Training Officer	CEDA
69. Brishna R. Khadka	Research & Training Officer	CEDA
70. Prabhut S.J.B. Pana	Research & Training Officer	CEDA
71. Durga Ghimire	Research & Training Officer	CEDA
72. Deepak Giri	Research & Training Officer	CEDA
73. Padma Nath Tiwari	Research & Training Officer	CEDA
74. Devendra K. Gurung	Research & Training Officer	CEDA
75. Ram Nath Poudyal	Research & Training Officer	CEDA
76. Surendra P. Wagle	Research & Training Officer	CEDA
77. Puspa Man Joshi		CEDA
78. Y.E. Kim	Representative	WHO, Kamaladi, Kathmandu
79. John Stockel		US/AID, Ravi Bhawan
80. John W. Bardick		US/AID, Ravi Bhawan
81. David Smith		UNDP
82. Robert Cook M.S. Wible	Deputy Director	USIS
83. Innayatulla		Family Planning Association
84. Ferdinand E. Okada	Consultant	UNICEF Country Programme
85. Carol Peaseley		US/AID, Ravi Bhawan
86. Lee Bomberger	Consultant	US/AID, Ravi Bhawan
87. E.J. Trusk		United Nations, New York
88. D.E. Lockwood		UNDP, Kathmandu
89. C. Polyn Y. Kana		University of Hawaii

Asian and World Population Data*

Region or Country ¹	Population Estimate Mid-1975 (millions) ²	Birth Rate ^{2,3}	Death Rate ²	Rate of Population Growth (annual, percent) ^{2,4}	Number of Years to Double Population ⁵	Population Projection to 2000 (millions) ²	Infant Mortality Rate ⁶	Population under 15 Years (percent) ²	Median Age (years) ²	Life Expectancy at Birth (years) ²	Dietary Energy Supply (kilocalories per person per day) ⁷	Per Capita Gross National Product (US\$) ⁸
WORLD	3,967	31.5	12.8	1.9	36	6,253	98	36	22.4	55	2,470	940
MIDDLE SOUTH ASIA	838	41.7	17.0	2.4	29	1,501	138	43	18.3	48	2,070	120
Afghanistan	19.3	49.2	23.8	2.5	28	36.7 (182)	44	17.4	40	1,970	80	
Bangladesh	73.7	49.5	28.1	1.7	41	144.3 (132)	46	16.7	36	1,840	70	
Bhutan	1.2	43.6	20.5	2.3	30	2.1	-	42	18.5	44	-	80
India	613.2	39.9	15.7	2.4	29	1,059.4	119	42	18.8	50	2,070	110
Iran	12.9	45.3	15.6	1.0	23	66.6 (139)	46	17.0	51	2,300	430	
Maldives Islands	0.1 (46)	(23)	2.0	35	0.2	-	(44)	-	-	-	-	90
Nepal	12.6	42.9	20.3	2.2	32	23.2 (169)	42	18.8	44	2,050	80	
Pakistan	70.6	47.4	16.5	3.1	22	146.9 (132)	46	16.6	50	2,160	130	
Sikkim	0.2 (48)	(29)	2.0	35	0.4	208 (40)	-	-	-	-	-	80
Sri Lanka	14.0	28.6	6.4	2.2	32	21.3	45	39	19.9	68	2,170	110
SOUTHEAST ASIA	324	42.4	15.4	2.7	26	592	106	44	18.0	51	2,070	150
Burma	31.2	39.5	15.8	2.4	29	54.9 (126)	41	19.6	50	2,210	90	
Indonesia	136.0	42.9	16.9	2.6	27	239.5 (125)	44	18.0	48	1,790	90	
Khmer Republic	8.1	46.7	19.0	2.8	25	15.8 (127)	45	17.2	45	2,430	120	
Laos	3.3	44.6	22.8	2.2	32	5.7 (123)	42	18.9	40	2,110	130	
Malaysia	12.1	38.7	9.9	2.9	24	22.1 (95)	44	17.7	59	2,460	430	
Philippines	44.4	43.8	10.5	3.3	21	89.7 (78)	46	17.0	58	1,940	220	
Portuguese Timor	0.7	44.3	5.2	1.6	43	3.1	20	33	22.1	70	-	1,300
Singapore	2.2	21.2	2.0	2.1	33	1.1 (184)	42	18.9	40	-	-	110
Thailand	42.1	43.4	10.8	3.3	21	85.6 (65)	46	16.9	58	2,560	220	
Vietnam (Dem. Republic of)	23.8	41.4	17.9	2.4	29	43.1	-	41	19.1	48	2,350	160
Vietnam (Republic of)	19.7	41.7	23.6	1.8	38	32.7	-	41	19.3	40	2,320	170
EAST ASIA ⁹	1,006	26.2	9.8	1.6	43	1,369	50	33	24.0	62	2,220	420
China (People's Republic of)	822.8	26.9	10.3	1.7	41	1,126.2 (55)	33	23.5	62	2,170	160	
Hong Kong	4.2	19.4	5.5	1.4	50	5.6	17	32	23.2	70	-	980
Japan	111.1	19.2	6.6	1.3	53	132.9	12	24	30.4	73	2,510	2,320
Korea (Dem. People's Republic of)	15.9	35.7	9.4	2.6	27	27.5	-	42	18.6	61	2,240	310
Korea (Republic of)	33.9	28.7	8.8	2.0	35	52.0 (60)	37	20.4	61	2,520	310	
Macau	0.1 (31)	(8)	1.7	41	0.4	(78)	(38)	-	(58)	-	-	150
Mongolia	1.4	38.8	9.4	3.0	23	2.7	-	44	18.1	61	2,380	180
Taiwan (Rep. of China)	16.0 (24)	(5)	1.9	36	21.8 (28)	(39)	-	(69)	-	-	-	490

* From 1975 World Population Data Sheet. The Population Research Bureau, Inc., Washington D.C.

Program Schedule for the Seminar On
"Population and Development"

INAUGURATION

- Welcome speech from the Director, CEDA
- Inauguration from Honorable Prime Minister
Date : August 1, 1974
Time : 8:00 - 8:30

FIRST SESSION

Topic : Population Aspects of Development
Speaker : Harka Gurung
Honorable Vice Chairman,
National Planning Commission
Commentators : 1. Rishikesh Shah
2. Ram Chandra Malhotra
Chairman : Pashupati S.J.B. Rana,
Honorable Member,
Rastriya Panchayat
Date : August 1, 1974
Time : 8:45 - 10:45

SECOND SESSION

Topic : Population Growth and Agriculture in Nepal
Speaker : B.P. Dhital
Joint Secretary,
Planning and Evaluation Division
Ministry of Food, Agriculture and Irrigation
Commentators : 1. Prakash Chandra Lohani
Honorable Member,
Rastriya Panchayat
2. Parthiveshwor Timilsina
Assistant Dean,
Tribhuvan University

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Chairman : Lal Bahadur Khadayat
Honorable Minister
Ministry of Food, Agriculture and Irrigation
Date : August 1, 1974
Time : 11:00 - 13:00

THIRD SESSION

Topic : Population Growth and Social Service in Nepal
Speaker : F.E. Okada
Commentators : 1. Rita Thapa
Institute of Medicine,
Tribhuvan University
2. Pashupati Giri
Family Planning Association of Nepal
3. Badri R. Pandey
Deputy Chief
Nepal FP/MCH Project

Chairman : Sushila Thapa
Honorable Assistant Minister
Ministry of Health
Date : August 1, 1974
Time : 14:00 - 16:00

FOURTH SESSION

Topic : Population Migration and Development
Speakers : 1. Ratna S.J.B. Rana
Honorable Member
National Planning Commission
2. Yadav Thapa
Commentators : 1. Bidya Bir Kansakar
2. Jagadish Sharma
Chairman : Bhekh Bahadur Thapa
Honorable Minister of State
Minister of Finance
Date : August 2, 1974
Time : 8:00 - 10:15

FIFTH SESSION

Topic : Population and Development Policy
Speaker : Dr. Mohan Man Sainju
Rector,
Tribhuvan University
Commentators : 1. Pashupati Shumshere J.B. Rana
Honorable Member,
Rastriya Panchayat
2. Govind Prasad Lohani
Honorable Member,
National Planning Commission
3. Dhruva Bir Singh Thapa
Dean,
Institute of Law
Tribhuvan University
Chairman : Soorya Bahadur Shakya
Vice Chancellor,
Tribhuvan University
Date : August 2, 1974
Time : 10:30 - 12:30

SIXTH SESSION

Topic : Concluding Remarks
Speaker : Govind Ram Agrawal,
Act. Director
CEDA
Chairman : Prachanda Pradhan
Dean,
Institute of Business Administration,
Commerce and Public Administration,
Tribhuvan University
Date : August 2, 1974
Time : 12:30 - 13:00.

ABUEVA, Jose V. (b. 1928) B.A., University of the Philippines; M.P.A. and Ph.D., University of Michigan; Professor and Assistant Dean, College of Public Administration, University of the Philippines; Visiting Professor, City University of New York (1966-67), and Yale University (1969-70); Secretary of the Constitutional Convention, (1971-73) Filipino Government; Executive Director of the Joint Executive Legislature Local Government Reform Commission; Executive Secretary, the Metro Manila Councilors Assembly; Ford Foundation Advisor to CEDA (May 1973); and presently Project Specialist on Asian Studies, In-Charge of the Ford Foundation's Southeast-Asia Fellowship Programme in the Social Science and Humanities, Bangkok. Author/ Co-author of 18 books published in Asia and the USA, including Ramon Magsaysay - A Political Biography; Foundations and Dynamics of Filipino Government and Politics; Administrative Reform and Innovation in Asia; Political and Administrative Development; The Political Economy of Development; Development. Administration in Asia; Perspective in Government Reorganization.

DHITAL, Bharat Prashad (b. 1937) B.Sc. Agriculture (Hons), Poona University, India; M.Sc. Agricultural Economics IARI, New Delhi; and Ph. D., Iowa State, USA Working in the Ministry of Food and Agriculture, HMG, Nepal for the last 14 years in various capacities, chiefly in agro-economics, planning, programming and research. Chief Economist, Economic Analysis and Planning Division, Ministry of Food and Agriculture; Act. Joint Secretary, Ministry of Food, Agriculture and Irrigation; and presently Executive Director, Agricultural Project services Centre. Various articles on Agricultural development.

GURUNG, Harka B. (b. 1939) Ph. D., Edinburgh. Research Fellow School of Oriental and African Studies, London, (1964-66); Lecturer, Tribhuvan University (1966-68); Member, National Planning Commission (1968-72); and presently Vice-Chairman, National Planning Commission (1972-). Author of Annapurna to Dhularigi; Graduates in Nepal: A Diagnostic Study; Regional Development Planning for Nepal; and several articles on regional development planning and maps of Nepal.

OKADA, Ferdinand E. (b.); Ph. D. Cultural anthropology, Columbia University, New York; with US/AID to Nepal, Washington, Kenya, Colombia, (1959-66); Research and Evaluation Advisor, Ministry to youth, Corporatives and Social Development Advisor (U.N.) National Planning Commission, H.M.G./Nepal (1968-72); and Country Program Consultant (UNICEF), Department of Remote Areas and Local Development, Ministry of Panchayat, HMG/Nepal (1972-74).

RANA, Ratna S.J.B. (b. 1941). B.A., Tri-Chandra College; M.A., Patna University; M.S. University of Hawaii; and Ph. D., University of Pittsburg. Lecturer, Tribhuvan University. (1961-63); Teaching Fellow, University of Pittsburg, (1965-66); Research Assistant, South Western Pennsylvania Regional Planning Association and GSPIA, Pittsburgh (1967-68); Chief Specialist, CEDA (1969-71); Asst. Prof. Southern Illinois University, Carbondale (1971-72); Deputy Director, CEDA (1973); Director, CEDA (1974); and presently Member, National Planning Commission. Author of An Economic Study of the Area Around the Alignment of the Jhanagadi-Dandelhdhura Road, Nepal; (1971) and various articles on development.

SAINJU, Mohan Man (b. 1940) B.A. Banaras Hindu University; M.A. Economics, Tribhuvan University; B.L. Nepal Law College; and Ph. D., University of North Carolina at Chapel Hill. Officer on Special Duty, Ministry of Economic Planning, (1963-64); Director, Department of Land Reform (1964-66); Chief Director, Department of Land Reform (1966-67); Act. Joint Secretary, Ministry of Land Reform, Food and Agriculture (1967-68); Policy Analyst, Research Triangle Institute, N.G., USA (1972); Chief Specialist and Head of Policy Studies, CEDA (1973); and presently Rector, Tribhuvan University, (November 1973-). Decorations: Gorkha Dakhin Bahu and Tri Shakti Patta. Author of Comparative Study of Land Reform Implementation (1968); and various articles on Development.

THAPA, Yadab S. (b. 1945) M.Sc. Statistics, University of Kerala; and M.S. Hygienes Demography, University of Pittsburgh Lecturer in Statistics, Tri-Chandra College (1969); Research and Training Officer, CEDA (1970-75); part time lecturer in Statistics, Tribhuvan University (1971); and presently Act. Senior Research Officer (1975-).

UPADHYAYA, Daya Chandra (b. 1937) B.A. and M.A., University of Lucknow; M.S. University of Missouri; Executive Development Training University of the Philippines; Advisor, Foreign Language Press, People's Republic of China (1963-65) Senior Instructor and Training Chief, Panchayat Cadre Training Centre, Jhapa (1966-67); Chief, Women Training Centre, Lalitpur (1968); Chief, Training and Research Division, Panchayat Training Centre, Rampur (1971); Senior Officer and Chief of the Executive Development Program, CEDA (1972-). Several Articles on cooperative development, community development, panchayat development and land tax, Pueblo Indians of New Mexico, USA; and Co-director of the Research Project on Foreign Advisors and Their Host Country Counterpart Role Relationship jointly sponsored by CEDA, US/AID Washington, DC. and OECD, Paris.

NEPAL

DISTRIBUTION OF POPULATION
(1971)

1:1,000,000
Scale
1:1,000,000
Scale
1:1,000,000
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Scale

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