

**Country Study
for
Development Assistance
to
the Kingdom of Nepal**

March 1993

**Country Study Group
for Development Assistance to the Kingdom of Nepal
Japan International Cooperation Agency**

IIC
JR
93-54

JICA LIBRARY



1116061111

国際協力事業団

26873

This paper is based on the discussions and findings of the Country Study Group for Development Assistance to the Kingdom of Nepal organized by the Japan International Cooperation Agency (JICA). The views expressed in the paper are those of the members of the Study Group and do not necessarily reflect those of JICA.

Additional copies of this report are available upon written request
from the Institute for International Cooperation (IFIC),
the Japan International Cooperation Agency (JICA),
10-5 Ichigaya, Honmura-cho, Shinjuku-ku, Tokyo 162, Japan.

First Printing March 1993

Preface

The Kingdom of Nepal abolished its national isolation policy and opened its doors to the world upon the restoration of monarchical rule in 1951. Nepal, governed under the direct administration of the king, undertook its First National Development Plan in 1956 and subsequently made efforts to develop both its economy and society through successive National Development Plans.

Many Japanese presume Nepal to be a beautiful country set deep in the Himalayas, but in reality, we must say, it is one of the least developed countries of the world. In addition to the rugged terrain and the handicaps of being a landlocked country, Nepal also faces political and economic constraints by virtue of the fact that it is encircled by two superpowers, India and China. Development efforts have lagged, and around half the people still live below the absolute poverty line.

The democratization movement spread rapidly early in 1990, resulting in the abolition of the direct administration by the king through the Panchayat system. In November of that year a new Constitution was promulgated, setting forth democratic principles such as popular sovereignty, constitutional monarchy, parliamentary government, and multiple political parties. Under this new Constitution, a general election was held in May 1991 after a 32-year blank, producing a new regime headed by Mr. G. P. Koirara. This regime has actively wrestled with economic and social development through the Eighth National Development Plan, the main goal of which is poverty alleviation, and by phasing in economic liberalization measures.

Japan gives high priority to Nepal in its Official Development Assistance (ODA) Programme. Taking into consideration Nepal's difficult situation, Japan has positively tried to assist it to address its broad economic and social needs. As a result, Japan has been the top donor of bilateral aid to Nepal every year since 1980 with the exception of 1988. It will be necessary to continue to provide active support in the future while urging Nepal to redouble her efforts to stand on its own feet. It will also be necessary to examine effective assistance measures that would respond to changes in Nepal's domestic political and economic conditions.

This Study Group was set up in March 1992 under the commission of the President of the Japan International Cooperation Agency (JICA) to improve the effectiveness and appropriateness of Japanese aid for Nepal. The Group

held eight meetings, including a public hearing, conducted field surveys, including interviews with Nepalese government personnel and other knowledgeable people of that country, and submitted this report, originally in Japanese, to the President of JICA, in March 1993, for his consideration. The report begins with giving broad premises in which to set the mid and long term objectives of Nepal's development (Ch.1), then discusses what these objectives are likely to be (Ch. 2), and gives an account of some of technical problems faced by Japan's ODA (Ch. 3). The part of A Local Townsh Programme (Ch. 2, 2-1) may be regarded the core of the report. Some of the recommendations will take considerable time to bring about. Therefore, it will be desirable to undertake continuous and long-term cooperation, and carry out more detailed surveys when necessary. It is our wish that this report will contribute to the formulation and effective implementation of future policies for the development of Nepal, and, by doing so, strengthen the friendship between the two countries.

This report was made possible through the cooperation of the knowledgeable and experienced members of our Group and the Task Force attached to it. We were also greatly assisted by the staff of the Ministry of Foreign Affairs, Government of Japan. The Japanese Embassy and the JICA Office in Nepal, and the experts engaged in technical cooperation in that country, provided us with very generous assistance in the course of the field surveys. Thanks are also due to all the government officials, scholars, and others from Nepal who spent long hours discussing with us, the problems of our common concern. We would like to take this opportunity to pay our respects to an those men and women who are making efforts on the front lines of international cooperation activities.

It would not be out of place to mention here that some of the experts, Japan Overseas Cooperation Volunteers, and staff of the JICA Office in Nepal were involved in a Thai Airways accident near kathmandu in July 1992, as well as some people of Nepal who might have been able to render their help concerning our work. We sincerely pray that their souls may rest in peace.

March 1993

Hiroichi YAMAGUCHI
Chairperson
Country Study Group for Development
Assistance to the Kingdom of Nepal

Contents

Chapter 1	Considerations in Examining Development of and Assistance to Nepal	1
1.	Current Conditions and Constraints on Nepal's Development	1
1-1	Features of a Low-income Agricultural Country	1
1-1-1	Geographical and Topographical Conditions	1
1-1-2	Social Conditions	3
1-1-3	Rapid Population Increase	3
1-1-4	Relationship with India	4
1-2	Transitions in National Development Plans	6
1-2-1	The First (1956/57-1960/61), Second (1962/63-1964/65) and Third (1965/66-1969/70) Development Plans	6
1-2-2	The Fourth (1970/71-1974/75) and Fifth (1975/76-1979/80) Development Plans	7
1-2-3	The Sixth (1980/81-1984/85) and Seventh (1985/86-1989/90) Development Plans	8
1-2-4	"Programme for Fulfillment of Basic Needs" and the Eighth Development Plan (1992/93-1996/97)	9
2.	Changes in the International Climate Affecting Nepal	10
2-1	Changes in the Economic Conditions of Neighbouring Countries	10
2-1-1	Trends Toward Economic Liberalization in South Asian Countries	10
2-1-2	Economic Growth of Southeast Asian Countries	11
2-2	Emergence of Global Environmental Problems and Impact on Nepal	12
3.	Considerations in Examining Assistance Policy to Nepal	14
3-1	Consideration of Nepal as an LLDC	14
3-2	Trends in Japanese Aid to Nepal and Japanese Aid Policy in General	15
3-3	Lessons Gained from Other Aid Agencies and NGO Activities	17
3-4	Support for Democratization	18
Chapter 2	Desirable Goals in Nepal's Development	20
1.	Developmental Issues and Proposed Measures	20
1-1	Stable Food Production and Creation of Employment Opportunities	21
1-1-1	Improvement of Food Production and Agricultural Productivity	21
(1)	Increasing Grain Yields	22
(2)	Expansion and Improvement of Irrigation Facilities	23
(3)	Effective Use of the Agricultural Input	24

1-1-2	Securing of Proper Food Distribution (Stable Supply) System	25
1-1-3	Commercialization of Agricultural Products (Raising Farm Income and the Creation of Employment)	26
(1)	On the Tarai	28
(2)	On the Hills and Mountains	29
1-1-4	Marketing of Agricultural Products	30
1-1-5	Elimination of Social Injustices Related to Property Ownership	31
1-1-6	Soil Conservation and Agro-Forestry	32
1-2	Population Control and Provision of Health Care Facilities	33
1-2-1	Family Planning	33
1-2-2	Medical Services and Public Health	34
(1)	Improvement of Local Medical System	34
(2)	Review of Present Medical System	35
(3)	Development of Sewage and Water Systems and a Shift to Preventative Medicine	36
1-3	Improvement of Balance of Payments and Structural Adjustment Policy	36
1-3-1	Tourism	37
(1)	Present Situation and Challenges	37
(2)	Specific Measures	38
(3)	Tourism Development and "Eco-tourism"	40
1-3-2	Industries (Manufacturing)	40
(1)	Encouragement of Growth of Manufacturing and Development of Cottage Industries	40
(2)	Contribution of Manufacturing to the Balance of Payments	41
1-3-3	Energy (Large-scale Hydroelectric Generation)	42
1-3-4	Agriculture	43
1-3-5	Structural Adjustment Policies	44
(1)	Implementation of Structural Adjustment Policies	44
(2)	Administrative and Financial Reforms	45
1-4	Human Resources Development	46
1-4-1	Formal Education	46
(1)	Primary Education	46
(2)	Science and Mathematics Education	47
(3)	Vocational Training	47
1-4-2	Non-formal Education	48
1-5	Development of Basic Infrastructure	49

1-5-1	Energy	49
(1)	Reduction of Firewood Consumption	49
(2)	Development of Renewable Energy Sources	50
(3)	Small-scale Hydroelectric Power Generation and Local Electrification	51
1-5-2	Transport and Communications Infrastructure	52
(1)	Construction of Inland Road Networks	52
(2)	Development of Domestic Airline Networks	52
(3)	Development of Communications Networks	53
2.	Development Strategies for Different Topographical Regions	54
2-1	Strategies for Development of Hills and Mountains Centred Around A Local Township Programme	54
2-1-1	Importance of the Development of Hills and Mountains	54
2-1-2	Local Township Programme	56
2-1-3	Selection of Local Townships	57
2-2	Strategies for Development of the Metropolitan Area (Kathmandu Basin)	59
2-3	Strategies for Development of the Tarai	60
Chapter 3	Japanese Assistance in the Development of Nepal	62
1.	Recommendations for Japanese Assistance to Nepal	62
1-1	Recommended Approach to Assistance	62
1-1-1	Establishment of an Efficient Role for ODA in Role Sharing	62
1-1-2	Establishment and Development of Human Resources in Rural Areas	63
(1)	Establishment of Human Resources in Rural Areas	63
(2)	Development of Human Resources in Rural Areas	63
1-1-3	Cooperation with NGOs	64
1-1-4	Emphasis on Local Participation in Assistance Projects	65
1-2	Recommended Methods and Systems for Implementing Assistance	66
1-2-1	Assistance from a Long-Term Viewpoint	66
1-2-2	Appropriate and Flexible Implementation of Grant Aid	66
(1)	The Problem of Local Costs	67
(2)	Implementation of Appropriately Sized Projects	67
1-2-3	Reinforcement of Preliminary studies and Evaluation	68
(1)	Improvement of Preliminary Surveys and Accumulation of Data and Information	68

(2) Quantitative Evaluation and Evaluation of Projects Implemented by Other Donors	69
1-2-4 Training of Personnel for Aid	69
(1) Training of Aid Personnel from Local Governments and NGOs ...	70
(2) Dispatch of Experts Familiar with Local conditions	70
(3) Staffing of Local JICA offices with Experts in Local Development and the Dispatch of JOCV Teams	71
2. Recommended Development Projects for which Japan is Considering Provision of Cooperation	72

List of Members of the Country Study Group
for Development Assistance to the Kingdom of Nepal
Members of Task Force

Chapter 1 Considerations in Examining Development of and Assistance to Nepal

1. Current Conditions and Constraints on Nepal's Development

1-1 Features of a Low-income Agricultural Country

Nepal's GDP was 2.89 billion US dollars and per capita GNP was 170 US dollars as of 1990. The country is classified as a low-income agricultural country as more than 90 percent of the population is engaged in agriculture. Over 60 percent of all households are said to live below the absolute poverty line. Social indicators such as average life expectancy, infant mortality, and literacy rate are all low among developing countries, making Nepal one of the least developed countries in the world. The main reasons why it has lagged behind in development can be seen in its fundamental features.

1-1-1 Geographical and Topographical Conditions

Nepal is a small country extending 193 kilometers from north to south and 885 kilometers east to west at the southern foot of the Himalayas. The total land area is approximately 147,000 square kilometers. The country is usually divided into three regions on the basis of altitude: the Tarai Plains (hereafter called the Tarai) are less than 300 meters and form an extension of India's Ganges Plains; the hill areas (hereafter called the hills) where altitudes range from around 300 to 2,500 meters; and the mountainous areas (hereafter the mountains) which are higher yet. These belt-like regions are aligned from south to north in the order of the Tarai, the hills, and the mountains and occupy around 23 percent, 42 percent and 35 percent, respectively, of the country. This topographical division is widely used to delineate not only Nepal's ecological but also social characteristics. In terms of development, however, the Kathmandu basin in the hills is often classified separately as it encompasses a relatively large flat area of ground and serves special functions as the capital district in Nepal. Because the mountains are thinly populated and production activities limited, however, they are often viewed in combination with the hills and termed the hills and mountains. Many classifications hence divide Nepal into two regions: the Tarai and the hills and mountains.

Despite its small size, Nepal is blessed with diverse climatic features.

The climate changes along with higher latitudes from the subtropical zone, the temperate zone and the Alpine cold zone, more or less in accordance with the above-mentioned topographical divisions. The climate also varies from east to west; the eastern district receives much monsoon rainfall whereas the western district is relatively dry. With the exception of some mountainous areas with cold alpine climates, the country's climate is more or less suited to agriculture.

A major topographical factor which has constrained production in Nepal is the rugged terrain, as exemplified by the steep Himalayan mountains. The range of crops which can be cultivated on the steep slopes is limited and productivity suffers. The steep terrain has also posed a major obstacle to the development of transport, which has been further compounded by the difficulty in developing east-west traffic channels posed by rivers flowing south from the mountains to the Tarai. These physical features have divided the country, prevented the transport of products and formation of markets, created pronounced regional disparities, and forced the people to perpetuate closed, self-supporting economies, particularly in the hills and mountains. But the steep terrain and rich supply of water derived from the melting Himalayan mountain snow also yields bountiful water resources which potentially can be utilized in hydroelectric power generation and irrigation. These resources have not been effectively developed due to technical and financial constraints. In regard to mineral resources, Nepal has almost nothing in the form of rare metals or mineral resources which can be used as industrial raw materials apart from lime, the raw material of cement. This has also been a factor behind the delay of development.

Another serious topographical constraint to the country's development is the fact that Nepal is a landlocked country. The primary disadvantage of being a landlocked country is the absence of harbors for foreign trade and the resultant dependence on other countries for trade routes, a significant handicap in terms of transportation costs. The fact that Nepal is encircled by India and China, which are far more politically and economically powerful, has further complicated and aggravated the problem. Trade with China has been limited because the Himalayas form a natural obstacle at the borders. Although there was much trade with Tibet in the past, it has been dampened by the political repercussions of China's invasion of Tibet, among other factors. At present, trade activities have dwindled to the transfer of livestock and limited barter trade with Tibet. Hence, the economic relations with China have been

limited. In comparison, Nepal's relationship with India has been very close. This is because borders with India are so-called open borders which allow freedom of movement for people, products and assets. The political and economic relationship Nepal has maintained with India has had a great impact on its current present state of development. This factor will be examined as a constraint in a later section. It should be mentioned that the 1990 GDP of India and China were 88-fold and 126-fold, respectively, of that of Nepal.

1-1-2 Social Conditions

Many ethnic groups (broadly divided into those speaking Indian-language and Tibetan-language families) with their own cultures live in this small, yet topographically and climatically diverse country. Nepal's society is composed of multiple small societies. This fragmentation of Nepalese society, coupled with the geographical divisions, has hindered social mobility and the consolidation of the nation. Because of these divisions, the country seems to be a collection of small and heterogeneous economic zones lacking an integrated domestic market. This situation has also prevented the development of the manufacturing, industry and commerce. Moreover, the caste-like order maintained by the Indian language peoples has reduced mobility within that particular ethnic group and has affected economic development significantly. Nevertheless, Nepal should be lauded for the absence of religious conflict (communalism) which is frequently seen in India and its ability to maintain political stability and public peace and order. It is important that future development in Nepal is undertaken in a way that preserves these positive aspects.

One problem caused by this multiculturalism is linguistic diversity. This is a major factor behind the low literacy rate in Nepalese, the official and only written language. It is also an obstacle to the expansion of education, which is important in terms of both national integration and human resources development. The shortage of technocrats, particularly at the local and the mid-level bureaucratic levels, is a major factor hindering the promotion of development in close association with local areas.

1-1-3 Rapid Population Increase

The population increased by an average 2.66 percent a year in the 1970s and 2.06 percent in the 1980s. The economic growth rate during the same period was around 3 percent, meaning that the population increase virtually

offset the economic growth. It is estimated that the population in the hills and mountains exceeded the natural ecosystem's carrying capacity in the first half of the 20th century. The development of the Tarai plains, which were originally covered with subtropical jungles and uninhabitable, was made possible through the success of the malaria eradication programme undertaken in the 1960s and the introduction of modern equipment and materials. A large number of people moved from the mountains to the Tarai and the Tarai temporarily absorbed a considerable portion of the population which could no longer live in the hills and mountains. Today, however, it is believed that the size of the population has exceeded the environment's carrying capacity, in view of the difficulties of further expanding the Tarai farmland and partly because of the thresholds of traditional agricultural methods, which are fundamentally dependent on rainwater.

Population pressures have not only led to the logging of forests for the expansion of arable land, but have turned areas mainly in the hills and mountains into inferior and inappropriate arable land. This has had the effect of reducing agricultural productivity, both in terms of land and labour productivity. The expansion of inappropriate arable land has resulted in the erosion of fertile soil due to the increase of soil attrition and in the destruction of the farmland itself. This has generated a vicious circle; reducing not only productivity but agricultural output itself. The shift to modern agricultural technology aimed to improve land productivity, such as new irrigation facilities, high-yield varieties and chemical fertilizers, is not easy because of the financial difficulties of many farmers.

The population increase, an employment structure dependent on agriculture and a mode of agriculture whose productivity is not improving have all retarded economic growth and created many poor strata. According to the preliminary 1991 census report, Nepal had a population of around 18.4 million. The annual 2 percent increase in population is approximately equal to the size of the capital, Kathmandu.

1-1-4 Relationship with India

As mentioned above, Nepal depends on India not only for transportation routes for its trade but in relation to almost all aspects of the economy. Economic differences between the two are often settled politically to India's advantage in a reflection of its overwhelming political and economic supremacy.

Such problems have been described as not so much those of a landlocked country but those of an "India-locked" country. Another often-mentioned problem is the fact that Nepal's sole border with China is the Tibet autonomous region, which has been slow to undertake development. On the Indian side, Nepal adjoins provinces such as Bihar and Uttar Pradesh, which are poor, have high population densities, and have been slow to develop. This implies that Nepal's economy may have developed more if it had borders with more developed regions.

A systemic framework for economic relations with India was formed under the Treaty of Trade and Commerce, signed in 1950. Although its name was subsequently changed to the Treaty of Commerce and Transit and it was split in two (1978) and even suspended (1988-1990), overall it has been renewed and remains in effect to this day. This agreement prevents the development of Nepalese industries and deepens Nepal's economic dependence on India. This is achieved by prescribing numerous restrictions on Nepalese trade with other countries and setting a floor on local content in Nepalese exports to India under the pretext of preventing illegal imports via Nepal into India, which has maintained a strict policy of import control. The imposition of many restrictions on Nepalese trade with third countries has not only hindered distribution from meeting the actual demand and supply balance, but has made it difficult for Nepal to implement its own economic policies to protect domestic industries or promote exports. Moreover, the fact that Calcutta is prescribed under the agreement to be the sole doorway of Nepalese trade with third countries via India has created a host of problems such as of having to transfer cargo between different gauge railways.

Another equally troublesome problem in the economic relationship with India is the fact that the border between the two countries is substantially open. Nepalese who live on the Tarai are both ethnically and culturally close to India and often marry people from across the border. In addition, the Tarai economy has inevitably been more closely connected with the Indian economy than that of the hills and mountains of Nepal as a result of the ease with which products and capital can move across the border. This has hampered national economic integration. Also, the disparity in economic power between the two countries has often resulted in cases in which the limited development investment poured into Nepal is used to create more benefits for Indians, as in the case when Indian capital moves into Tarai, allowing India to profit by utilizing Tarai's resources and infrastructure.

1-2 Transitions in National Development Plans

Nepal's institutionalized national development policy commenced with the First Five-Year Plan starting in FY 1956 (Nepal's fiscal year begins in July and ends in June). It has since been implemented in successive increments of five years generally. The Eighth Five-Year Plan formulated in July 1992 is the first development policy to be undertaken following the birth of the democratic regime. The present state of development of Nepal can be understood in part from the trends and transitions in its development policies.

1-2-1 The First (1956/57-1960/61), Second (1962/63-1964/65) and Third (1965/66-1969/70) Development Plans

This period was marked by the promotion of national unification and integration following the establishment of monarchical rule in 1951 following the overthrow of the ancient regime. Large-scale economic and social infrastructure projects such as roads, communications networks and power-generating facilities were given high priority. These large-scale projects were financed mainly by India during the 1950s, and by both India and China during the 1960s, when these countries began to compete to provide official assistance to Nepal as a corollary effect of the China-India conflict.

While the road construction plan ostensibly served as the foundation of national integration, it also reflected political designs on the part of donors, India and China. To be sure, there were technological and financial reasons for constructing roads in the Tarai rather than the mountains, but with the exception of the Kodari Road between Kathmandu and China, many roads were built primarily for the purpose of connecting Nepal with India. A typical example is the Kathmandu-Birganj Road, which is a reflection of such Indian political manoeuvring. Those roads were mostly built from the Indian side. As a result, with the exception of the capital city of Kathmandu where infrastructure development was undertaken separately, some cities in the Tarai became front line bases for construction of routes from India to Nepal and acquired market and other functions. The basic infrastructure for present-day Tarai cities, which is based primarily on commerce and industry, was largely formed during this period. At the same time, the Tarai was destined to establish close economic ties with India under this initial nation-building plan.

1-2-2 The Fourth (1970/71-1974/75) and Fifth (1975/76-1979/80) Development Plans

The distinguishing feature of this period was the self-initiative Nepal showed in formulating development plans and its focused attention on regional development. Four north-south "growth axes" were set up to connect the developed cities of Tarai with those on the hills and mountains. Roads were constructed along these axes, and "growth centres" were set up on them. These growth centres were intended to lure concentrated investment and become active distribution and market centres. At the same time, they were expected to provide nearby residents with many kinds of social service facilities.

Four "development regions" set up under the Fourth Plan by dividing the country vertically along growth axes were intended to become the focus of development plans. They were named the Eastern, Central, Western and Far Western development regions. The Fifth Plan also set up "regional centres" in each development region. The fact that these were all located in the hills and mountains indicates an awareness of and desire to eliminate the economic disparity between the Tarai and the hills and mountains. The aim of regional development undertaken in this period was to promote economic integration between the fast-developing Tarai and the hills and mountains, and to encourage the movement of products, services and people between these two areas, thereby vitalizing the economy of each development region as a whole. Additionally, an unprecedented and ambitious strategy of nationwide economic integration and development was set out under an east-west highway connecting these four development regions. The plan proposed two trans-regional roads; one was the East-West Highway in the Tarai which was already under construction with Indian assistance, and the another was planned in the hills.

The huge amount of development funds required to enhance the economic infrastructure, particularly roads, was beyond Nepal's capacity to finance itself, given the country's weak economic state. Factors such as the slowdown in assistance from India, formerly the main donor, owing to the third India-Pakistan conflict which began in 1971, and the war's effect in delaying the supply of equipment and materials for development via India, plus rising equipment and material costs resulting from the worldwide oil shock applied further pressure on the tight development budget. As a result, only a small portion of initially planned projects were carried out during this period, and the economic growth rate remained at around 2 percent. The plan itself was

said to have been partly accountable for the failure to reach initial goals. Economic growth targets were set at a unrealistically high levels, for example. In addition, the strategy of regional development, which was the main theme of the development programme, relied heavily on the trickle-down effect from the developed Tarai to the hills and mountains, but this scheme was not realized enough. Nevertheless, the idea of growth axes connecting the northern and southern parts of the country is still considered as appropriate and it is even more appropriate, under the current conditions. We have tried to make use of this idea in our recommendations.

1-2-3 The Sixth (1980/81-1984/85) and Seventh (1985/86-1989/90) Development Plans

The agricultural sector was given top priority during this period for two major reasons. First, none of the previous national development plans focusing on infrastructure development had achieved their objectives. Therefore, investment was shifted and turned to be concentrated on the production sectors, namely agriculture and industries. Secondly, because of the weakness of the agricultural base, much time was required to recover from damages of the drought in 1982, which included plummeting agricultural production and severe shortages in foodstuffs and living necessities.

Under the newly oriented development plan, Nepal was able to achieve targeted economic growth of over 4 percent a year. However the slump in export of primary products due to factors such as the depression abroad aggravated the trade balance. Nepal's current account balance was also in deficit. Since highest priority was placed on production activities which provided immediate returns, investment was concentrated on the Tarai and the Kathmandu basin where production efficiency was estimated to be high. This resulted in retarding development of the hills and mountains and further exacerbated the economic disparity between the two regions.

The Far Western development region where development lagged farthest behind was divided into Midwestern (eastern half) and Far Western (western half) development regions. While the previous concepts of regional development had mainly emphasized narrowing the north-south regional disparity between the Tarai and the hills and mountains, this new concept demonstrated the country's strong awareness of the economic disparity between the east part and west part.

1-2-4 "Programme for Fulfillment of Basic Needs" and the Eighth Development Plan (1992/93-1996/97)

The "Programme for Fulfillment of Basic Needs (1985-2000)" was unveiled in December 1986 prior to the installation of the democratic regime. Its objective was to raise the level of food, clothing, housing, health and medical care, education and public order to the average level of other Asian countries by the year 2000. This plan reflects the present living standards of the Nepalese people and sets forth the future direction and targets of national development along with the Eighth Plan.

Despite some problems regarding the feasibility of its target levels and the lack of specific policies for achieving those targets, the Programme deserves credit for setting poverty alleviation, a problem besetting the majority of the Nepalese people, as a policy objective. The Eighth Plan also sets out poverty alleviation as a priority issue. The Plan seeks to increase personal incomes and create employment through the intensive development of rural areas where poor people are concentrated. It also seeks to raise living standards of local residents by improving the basic living environment. This policy is also designed to curb the huge inflow of people from local areas into cities and to absorb the explosive population growth in rural areas. We have given great consideration to this point in our recommendations.

While the Eighth Plan sets forth policies designed to raise social standards as a whole, as exemplified by the policy to alleviate poverty, it also aims at such facets of economic development as improving the balance of payments and promoting exports through structural adjustment policy. It should also be noted that environmental conservation is a major priority issue.

2. Changes in the International Climate Affecting Nepal

As seen in the first section, the present state of Nepal's development indicates that various constraints make it difficult for the country to promote industrialization. Meanwhile, it appears that although Nepal remains an agrarian country, the agricultural sector is not fully developed. In examining whether agriculture or industry should become the key sector of development in the future, it will be necessary to take account of the international climate which could affect policies in these sectors.

2-1 Changes in the Economic Conditions of Neighbouring Countries

2-1-1 Trends Toward Economic Liberalization in South Asian Countries

Sri Lanka and Bangladesh introduced economic liberalization policies in the late 1970s. In contrast, superpowers such as India and Pakistan have been cautious about foreign investment, mainly as a result of their intent to develop their domestic industries. India, traditionally the slowest to embrace economic liberalization, initiated policies to promote exports and liberalize the economy, subsequent to Pakistan, including such measures as substantially devaluing the Indian rupee and permitting foreign investor ownership of up to 51 percent in joint ventures under the P.V Narashimha Rao Government, which was installed in June of 1991. This was due in part to the aggravation of India's economy on account of factors such as the growing deficit in the balance of payments. Nepal announced economic liberalization policies in July 1992 in concert with India's liberalization policies. These fell in line with World Bank and IMF structural adjustment policies.

Since the main constraint to Nepal's industrialization is its indivisible economic relationship with India, the future trends and ramifications of India's economic liberalization are sure to greatly affect the Nepalese economy. It is difficult to determine whether these changes will work to Nepal's advantage or not. We can only predict some possibilities below. Should Indian products become more competitive or more Indian capital and products flow into Nepal, with having a influence of a substantial devaluation of the Indian rupee, it would be possible for Indian products to overwhelm the Nepalese market. Or

should the Indian government stop subsidizing fertilizer, the price of which is adjusted in Nepal to that in India for policy reasons, prices in India would leap and Nepalese fertilizer could flow out to India across the open borders. There is yet another possibility of Nepal increasing its exports of agricultural and industrial products to India. This possibility will be examined later.

The Treaty of Commerce and Transit with India which has strongly constrained the Nepalese economy and is grounded on the Indian trade policy of strictly restricting the inflow of foreign products, could be eased in line with India's economic liberalization policies. Even under such conditions, it is hard to find factors which could quickly work to Nepal's advantage in its economic relations with India, given the difference in the two countries' economic power. However, if the constraints placed on Nepalese trade with third countries are eliminated, Nepal can reduce its economic dependence on India and formulate its own foreign economic policies without constraint. At any rate, Nepal will be expected to formulate appropriate economic policies and make efforts to strengthen its economy under the current state of affairs when it is not possible to determine the effect of India's economic liberalization policies on Nepal.

2-1-2 Economic Growth of Southeast Asian Countries

Although the direct impact from the growing economies of Southeast Asia will not be as strong as that from India and other South Asian countries, it should be considered when examining Nepal's future economic policies. Various factors lie behind the successful economic growth of the Southeast Asian countries. Not only products but capital and technology are transferred among Japan, the Asian NIEs and ASEAN countries from advanced areas to nearby countries in search of low production costs. This has promoted industries in neighbouring areas and these, in turn, have shifted from import-substituting to export-oriented industrialization. This model of production and trade demonstrates how differing phases of economic development effectively function in these areas. There appears little likelihood that the wave of economic growth will spread readily to Nepal and other South Asian countries in the future. However, if economic liberalization and stability are achieved and economic infrastructure expanded, it is conceivable that capital from the ASEAN countries may flow into production bases in Nepal in the near future.

Recent statistics show a growth in the number of tourists going to Nepal from ASEAN countries. Increases in personal income and the proximity of

these countries make them good prospects as tourist sources for Nepal. Direct flights to Nepal operate from Hong Kong, Bangkok and Singapore. Although the direct impact will be small since Nepal does not border the Southeast Asian countries, this also means that constraints on political and other relations are few. Consequently, it would be beneficial if future economic policy does not merely draw tourists, but seeks the establishment of profitable economic relations selectively, for example, in relation to the expansion of the market of Nepalese products.

2-2 Emergence of Global Environmental Problems and Impact on Nepal

As can be seen from the U.N. Conference on the Environment and Development (UNCED) held in Brazil in June of 1992, environmental issues have become matters of global concern and interest. The environmental problems of a single country can have international ramifications. At present Nepal has many environmental problems such as deforestation due to logging of firewood for fuel, over-expansion of farmland and soil erosion. These problems not only threaten Nepalese agricultural productivity, but also have the potential to incite international trouble. Deforestation in the Himalayas, in particular, is said to have a causal relationship with flooding of the Ganges River downstream in Bangladesh, partly because the four major Nepalese rivers (from east to west the Kosi, Bagmati, Gandak and Karnali) all flow into the Ganges, which crosses national borders. Environmental conservation organizations primarily from developed countries have strongly appealed for the necessity of conservation of the delicate natural ecosystem in the Himalayas. Nepal's development policies, particularly in agriculture, could be subject to some sanctions, not just by neighbouring South Asian countries, with which there may be direct conflicts of interest, but also by the international community, if deforestation in the Himalayas accelerates in the future. But there is also the possibility of the country obtaining international support and assistance to cope with these environmental problems and preserving the environment, including the Himalayas.

Because of the diverse climatic zones created by altitudinal differences, Nepal boasts a much wider variety of vegetation than other countries. The importance of conserving biological diversity (biodiversity) was confirmed at the UNCED and negotiations were held to draw up a treaty regulating the

proprietary rights of biodiversity. If the rights of the countries which produce genetic resources are established in the future, Nepal could utilize such rights to acquire foreign currencies. This applies not only to genetic resources. In the future, high value is expected to be placed on useful and scarce natural resources, so Nepal should make efforts to refrain from damaging its natural resources, one of the few areas in which it has comparative advantage. It should also implement policies to develop and put to effective use these scarce natural resources in an effort to contribute to economic development.

3 Considerations in Examining Assistance Policy to Nepal

3-1 Consideration of Nepal as an LLDC

Nepal has been designated a least less developed country (LLDC) for reasons such as income levels and another social indices. An examination of its economic condition reveals that it has few internationally competitive export products and a weak economic and financial base because agriculture, which is almost completely dependent on rainwater, accounts for around 60 percent of its GDP. Low economic growth and persistent deficits in its financial and trade balances in recent years have left Nepal with very limited resources for development funds needed for nation building. At present it depends on assistance from Western developed countries, neighbouring countries such as India and China, and multilateral organizations for around 60 percent of its development expenditures. It will be difficult over the short term for Nepal to outgrow its dependency on such assistance, given the small likelihood of a quick improvement in economic conditions and in light of the size of its development needs. The fundamental principle guiding the implementing assistance to Nepal should be to encourage self-help efforts by the people, a matter to be mentioned in the recommendations to follow. However, arrested development is often due to obstacles which cannot be overcome solely by the Nepalese. Hence, it will be necessary for developed countries to take the initiative over the short term in providing necessary support for economic and social development. And in implementing such support, it should be kept in mind that special considerations for Nepal and other LLDCs are necessary to enhance the effects of assistance.

As in the case of other developing countries, Nepal is often unable to make proper use of aid. Nepal has been criticized for its failure to initiate its own independent development plans, which results in a failure to utilize the huge amounts of assistance to implement systematic and effective development. Another criticism is that the Nepalese do not adequately allocate necessary domestic budgets for foreign aid projects. For instance, sometimes a donor pledges to fund a development project on the condition that government of Nepal allocates necessary local costs for the project, but local cost allocations are insufficient because such funds have been budgeted for other replicating projects. These problems are primarily due to an inability to initiate independent development plans or to coordinate foreign assistance. However, it will not be easy for Nepal to gain independence, given the extent of its dependence on

foreign assistance for over half of its development expenditure. In dealing with countries such as Nepal, it will be necessary for donors to fully coordinate assistance with other donors and discuss aid policies and specific action plans in advance as much as possible to promote Nepal's autonomy and ensure that limited development expenditures are effectively distributed. Naturally, many points can be improved on the Nepal side. The inefficient nature of the administrative system is typical of those problems. It will be necessary for donors to directly and indirectly support the administrative and financial reforms now being promoted in Nepal.

It was agreed in the Ninth UNCTAD Special Trade Development Board Resolution (TDB Resolution) of 1978 and at other international forums that LLDCs require special support and some kind of debt relief measures to eliminate the difficulties associated with debt repayment. It was also agreed that aid should generally be extended in the form of grants. In general, it is desirable to provide special consideration to LLDCs. However, Nepal should not be overly optimistic about the potential for having its huge development fund requirements for large-scale infrastructure adequately met. This is because donors, with the exception some international development financing agencies, are cautious about moving beyond grant aid to full-fledged loans, and such loans are necessary to encourage large-scale fund flow. Donors should adopt a flexible approach in supporting LLDCs, taking into consideration development needs as well as financial considerations. This does not necessarily mean we will emphasize the construction of large-scale infrastructure in our recommendations, however.

3-2 Trends in Japanese Aid to Nepal and Japanese Aid Policy in General

In considering future Japanese assistance for Nepal, it is necessary to take account of the features of past aid to Nepal and the general trends in Japan's aid policies.

Japanese assistance for Nepal has steadily increased in step with its quantitative expansion of overall official development assistance (ODA). In terms of bilateral aid for Nepal, Japan has been the top donor almost every year since 1980, and no doubt Nepal has considerable expectations of economic assistance from Japan. In addition to the sizable scale of funding, Japanese

aid to Nepal has taken a variety of formats, especially in terms of technical cooperation, including development studies and the dispatch of experts and Japan Overseas Cooperation Volunteers (JOCV). Moreover, the assistance has covered a wide range of areas ranging from basic human needs (BHN) to economic infrastructure. Examples include an agricultural development project in Janakpur, the establishment of the Teaching Hospital at Tribuvan University, the provision of loans for the Kulikhani power plant and the development of communications networks through the expansion and development of the telephone network. Japanese assistance can be expected to bring more fruitful results in the future if use is made of its accumulated experience and various aid schemes such as grant aid and dispatch of experts and JOCV volunteers are effectively combined. Japanese assistance, with its differentiated approach combining multiple aid schemes effectively, is expected to effectively meet Nepal's need for human resource development and development funds amid the trend among many donors other than international development financing agencies to shift from financial assistance toward technical cooperation.

Several points should be taken into consideration in examining future aid for Nepal vis-a-vis the environment surrounding Japan aid policy and aid policy itself. One is Japan's policy of emphasizing the aid for the environment, pronounced at the Paris Summit in 1989. Forest conservation and afforestation were set out as global environment priority areas, while soil conservation and disaster prevention were singled out as environmental problems associated with developing countries. In this sense, Japan's future aid priority areas and Nepal's development issues coincide.

Another point is the growing recognition among the Japanese public of the need for participation by NGOs and local governments in ODA. Such participation has been steadily expanded through recent improvements in ODA implementation systems. NGOs from Japan and many other countries are already active and producing good results, particularly in Nepal. It will be necessary to thoroughly examine this issue in depth, as coordination with and support for NGOs is an important factor in optimizing the effects of aid. Also, now that the Nepalese government has made the development of local areas a priority of development, Japanese local government know-how, such as that of Nagano Prefecture, which has been carrying out regional development in mountainous districts, can be applied. Strengthening coordination with Japanese local governments in ODA will be extremely useful in planning and implementing future assistance to Nepal.

3-3 Lessons Gained from Other Aid Agencies and NGO Activities

Today, evaluation has been recognized in Japan as an important means of ensuring effective implementation of aid. Japan's "ODA Charter" adopted by the Cabinet in June 1992 also set forth the need for evaluation. In considering future aid for Nepal, it will be necessary to carry out post-evaluations of Japanese assistance and incorporate the recommendations of these evaluations in its aid policies. Many aid agencies have tried to take diverse and highly progressive approaches to overcome the difficult conditions constraining development in Nepal. We should evaluate and examine the activities of other donors and NGOs adopting effective methods and incorporate these recommendations into our own policies.

At present, our evaluation systems for projects implemented by other aid agencies are inadequate. Although individual projects have not been fully studied, the evaluation of some of the "Integrated Rural Development Projects (IRDP)" jointly implemented by Nepal and donors provides many suggestions. While the importance of local development has come to be recognized in Nepal, many constraints have combined to hinder development, especially in rural areas. Under these circumstances, many donors have adopted an integrated approach to rural development in various parts of Nepal. The necessity and efficiency of this approach has been recognized, but there have been severe criticisms in the evaluations of the integrated rural development projects implemented thus far. Many of the problems originate in ineffective bureaucratic organization and operation in the execution phase. They include the difficulty of coordinating relevant government agencies in local areas due to administrative sectionalism; ambiguous definition of the respective roles of these agencies; the Local Development Ministry and Panchayat (local administration system); the lack of expertise and financial management skills among local organizations; and the absence from the site or quick turnover in Nepalese officials or counterparts who should be instructed technical know-how.

However, there are also problems associated with the policy and programme of each development project. This means that the donors, who play a central role in project planning, cannot shirk responsibility for these problems. Common policy problems include failure to fully set up specific goals in each implementation phase; diminished impact stemming from failure to adequately represent the needs of the local residents or the area's special characteristics in

projects planned under the initiative of donors; and the aggravation of income differentials between residents by programmes placing priority solely on sector-by-sector productivity. The problem of income differentials is not solely due to programme planning of integrated rural development. It cannot be solved until the Nepalese government carries out drastic reforms of the land ownership system which creates landed farmers. As for problems regarding the absence of Nepalese personnel such as the designated Nepalese counterparts at project sites, the donor is also expected to make efforts to train manpower in local areas. Many of the problems hence cannot solely be ascribed to one or the other side. It will become more important to study past integrated rural development projects as the importance of local development increases and place special consideration on matters such as the burden of maintenance costs and the length of assistance prior to turn over.

3-4 Support for Democratization

The democratization movement rapidly progressed in Nepal early in 1990. In May of 1991, a multiparty general election was held after a 32-year blank, and the Nepalese Congress Party which promoted democratization won a majority in the parliament. At present, the Cabinet headed by Prime Minister G. P. Koirala is making efforts to establish democracy.

The Development Assistance Committee (DAC) has reached an agreement regarding the importance of "Good Governance" (GG) for sustainable development in developing countries, and member countries have agreed to positively support this principle. Japan also regards active support of democratization as an important diplomatic issue. Japan has provided expertise support for Nepal's democratization through its provision of materials and information regarding the provisions and enactment of the Constitution of Japan at the time the new democratic constitution of Nepal was being drafted in November 1990. It has also lent direct and active support to Nepal's democratization by providing the Nepalese Election Administration Commission with necessary equipment.

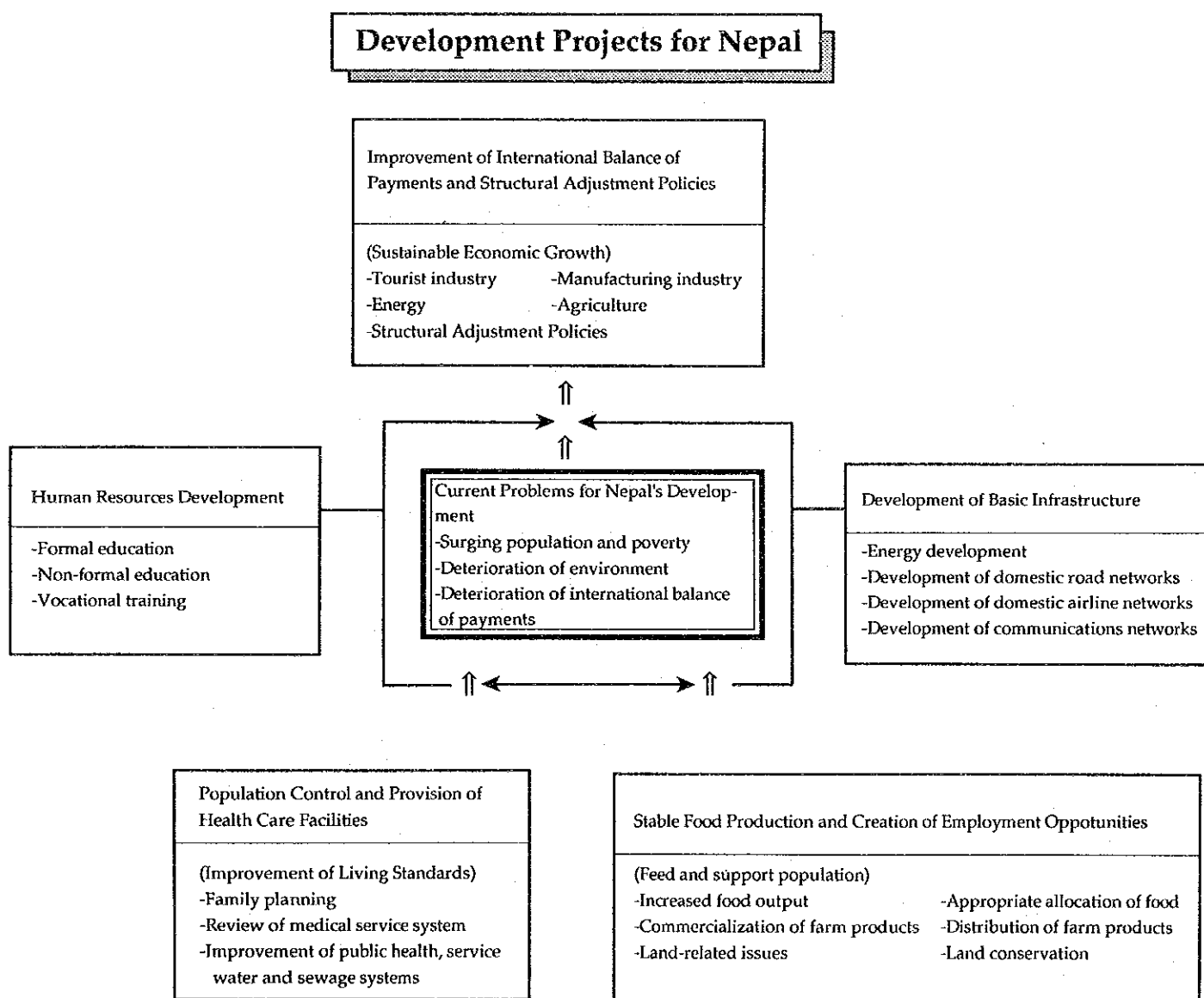
At present, Nepal has adopted democracy in an institutionalized sense. From the viewpoint of development, however, it will be desirable for the Nepalese government to build and expand the basic elements of "Good Governance" further in its society in the future. To achieve this, it has introduced democra-

tization policies in the Eighth Five-Year National Development Plan and has begun to implement the programme. In providing future assistance to Nepal, it will be necessary to take sufficient account of the basic elements of "Good Governance" and to make positive efforts to ensure they are secured. One of the basic elements for formulating "Good Governance" is the policy of eliminating interregional economic and social disparities through the aggressive development of local areas. This is one of the priorities of the present Five-year Plan which advocates "decentralization." It will be necessary to actively support this policy in the future after studying what types of economic cooperation measures contribute most to the achievement of this goal.

Chapter 2 Desirable Goals in Nepal's Development

1. Developmental Issues and Proposed Measures

This Chapter first discusses five issues considered to be most important in the medium and long-term development of Nepal. This discussion will be largely in terms of different sectors of the economy. It will be followed by a discussion of development strategies for the different topographical regions of the country. The relationships of these five issues is shown below.



1-1 Stable Food Production and Creation of Employment Opportunities

The main issue here is how to secure enough food and create enough employment opportunities to meet the rapid growth of the population. Manufacturing cannot be expected to provide much employment over the short term given Nepal's present employment structure and the state of its industrial sector. Hence, our analysis will focus on agriculture necessarily. The agricultural sector as a whole (including stock breeding) will be addressed here.

1-1-1 Improvement of Food Production and Agricultural Productivity

As mentioned in section 1-1 of Chapter 1, in light of Nepal's high dependence on agriculture, sustainable economic growth cannot be achieved without improvement in this sector. Yet this sector's growth rate has been low, and the annual rate of increase in output of major crops in the last 20 years has remained only 1.4 percent. Food production barely meets domestic demand. As this situation shows, achieving a stable food supply first requires increasing production. Past increases in production of major crops have come about mainly through the expansion of arable land in the Tarai plains which had previously been covered with tropical forests. While the annual growth rate in the output of major crops in the last 20 years has been 1.4 percent, the average rate of expansion of arable land during the same period has been 1.9 percent, indicating a stagnation or decrease in the average yield per unit area. The reason for the inverse relationship between stagnating yield and increase in total irrigated land, the introduction of high-yield varieties, and rising sales of chemical fertilizer can be traced primarily to the expansion of cultivation to marginal lands in the hills and mountains and the decline in fertility. Nepal is not expected to be able to increase agricultural production by expanding arable land. It will be difficult to increase food production in line with the population growth under the present falling productivity trends. If the present encroachment upon marginal land continues, there is a great danger of a further decline in fertility and the threat of soil erosion and environmental deterioration, inciting a vicious circle of further declines in agricultural production.

It is crucial to set forth clear strategies for improving agricultural land productivity and to implement specific policies to boost food production. Improving the productivity of Nepal's agricultural sector will require considera-

tion of various factors, such as the differences in the topography, climate and altitude of various regions, as well as the unique features of different ethnic groups, including their eating habits and preferences. Here are our recommended strategies and policies for improving productivity in the agricultural sector:

(1) Increasing Grain Yields

The topography and climate on the Tarai, which has become Nepal's prime granary, encourages the active cultivation of grains such as rice, wheat and minor grains. Irrigation facilities are relatively well developed here compared to other regions of the country. The land is efficiently used, and rice is harvested twice a year. Increasing yield of rice on the Tarai will primarily require ensuring higher yields by improving indigenous varieties and developing those less vulnerable to blight and insects. It will also be necessary to expand irrigation facilities, maintain them appropriately, and review crop rotation systems with a view to maintaining soil fertility.

The hills and mountains inevitably rely on the production of minor grains, such as millet, maize and barley rather than rice. This is due to not only climatic constraint but also the difficulty in developing irrigation facilities because of topographical constraints and because of the existence of large numbers of people in the low-income bracket. However, rice is more nutritious, easier to store, and more readily marketable than other grains. Additionally, there has been a tendency to switch from minor grains to rice as a food staple as can be seen by the fact that it is being transported from the Tarai to distant mountainous areas. It would be advisable to encourage rice cultivation wherever possible. For this purpose, cold-resistant varieties need to be developed, a suitable crop rotation system should be determined, and appropriate technology must be found to install irrigation facilities on the slopes.

It should be stressed here, however, that we are not necessarily advocating a complete conversion from minor grains to rice. Increasing the output of minor grains and potatoes is equally important in view of their adaptability to the topographical and climatic conditions, lower risks, lower production costs, and their necessity in local food production. As finger millet, the principal minor grain, helps maintain terraces when cultivated on the slopes, it may be better to grow it in combination with rice. As these examples show, it is necessary to reevaluate the value of indigenous varieties and cultivation meth-

ods even when promoting rice cultivation in general. As for rice cultivation per se, we do not necessarily consider it desirable to introduce high-yielding varieties (HYVs) in the hills and mountains. Rather, it would be more appropriate to improve on and expand the use of indigenous varieties which do not require large doses of chemical fertilizer and insecticides. Such strains place much less burden on foreign exchange reserves, are environment friendly, and produce large quantities of straw.

(2) Expansion and Improvement of Irrigation Facilities

Expansion of irrigation facilities is indispensable to increasing agricultural productivity. This is clear from the fact that food production during the last ten years has fluctuated considerably in accordance with the weather. Irrigated land currently accounts for 15.0 percent of the mountains, 17.8 percent of the hills, 53.1 percent of the Tarai, and 35.7 percent of the country as a whole. Irrigation clearly lags behind in the hills and mountains. However, according to the Ministry of Water Resources, the proportion of the irrigated areas under cultivation to the whole area under cultivation which can be irrigated is around 57 percent for the mountains, 51 percent for the hills and 54 percent for the Tarai. Topographical and technical problems are not completely insurmountable in the expansion of irrigation. It may be assumed that financial constraints are another major factor.

It has been pointed out that efficiency of large-scale irrigation facilities on the Tarai have been hampered by problems with the maintenance. To make the best of limited funding resources, priority should be given to the rehabilitation of existing irrigation facilities over the construction of new ones. In many cases, small irrigation facilities are more effective because of they can take into account the needs of the local residents and also because farmers and communities, the end users, will ultimately be accountable for their maintenance.

Funding is the ultimate bottleneck in the construction of new irrigation facilities or the rehabilitation of existing ones, large or small. It will therefore be important to enhance the role of the Agricultural Development Bank of Nepal (ADB), the financial institution responsible for agricultural development. Since large-scale irrigation facilities can expect financing from public agencies, foreign countries, and from well-to-do farmers, the ADB should finance ordinary peasants and their organizations and expand minor loans covering the construction of small irrigation facilities. It is currently financing

small farmers through its Small Farmers Development Programme (SFDP). However, the number of beneficiaries is limited, and the system is not being fully utilized in rural areas. Many in rural areas are still engaged in traditional agriculture which is aimed to meet their own needs only and are not familiar with the concept of taking loans. The potential need for such financing, however, is perceived as high. The ADBN should, as a public agency, not only relax financing conditions and simplify loans procedures for illiterate people, but actively offer its services to potential borrowers through promotional and other edifying activities.

It will be meaningful to make use of the irrigation facilities by cultivating freshwater fish in irrigation ponds, as has already been attempted in the Tarai. Some people and ethnic groups are disinclined to eat fish, and because fish poses problems in transportation and storage, it may not become a marketable commodity throughout the country. However, fish is presently sold in considerable quantities at the city markets in the Tarai. Although still an area-specific commodity, fish provides not only a means of acquiring cash, but is also useful in improving nutrition.

(3) Effective Use of the Agricultural Input

In addition to the introduction of superior varieties and expansion of irrigation facilities, increasing the application of chemical fertilizers is an important factor in raising productivity, as demonstrated in the Green Revolution. Chemical fertilizers are easily accessible for individuals in terms of cost and handling and have a sure effect. Use has increased annually in Nepal. But despite the high demand, chemical fertilizers entail many problems. The Agricultural Input Corporation oversees distribution of these fertilizers, but a result of inefficient management, it is often difficult to secure necessary quantities. Sometimes fertilizers are not distributed in time of need. And since the borders with India are open, the prices have to be fixed bearing in mind prices in India. The Nepalese government will have to solve many of these problems. Since fertilizer does not produce the desired effect unless combined with irrigation and appropriate agricultural techniques, promotion of fertilizer use alone will not solve the problems. Chemical fertilizers are primarily used on the Tarai and near Kathmandu due to difficulties related to prices and availability. They are rarely used on the hills and mountains. Some research indicates that chemical fertilizers sometimes cause soil deterioration and do not necessarily

lead to height yield.

In the realization that dependence on compost, a kind of organic fertilizer, alone is not very realistic, efforts will have to be made to find a way to more effectively combine compost with chemical fertilizer and spread this knowledge. This would involve a review of the way agriculture is managed particularly by marginal farmers in rural areas, and also of the manner in which agriculture has been traditionally combined with animal husbandry.

1-1-2 Securing of Proper Food Distribution (Stable Supply) System

A glance at the supply and demand position of edible grains in Nepal indicates that despite a slow but steady growth in total output of grains (rice, wheat, maize, barley and finger millet), demand has barely been met. Because most agricultural products rely almost exclusively on rain water, food production cannot meet demand in years of unfavourable weather. Nepal's food supply, therefore, is very unstable. Even when supply and demand are well balanced on the national level, there are considerable regional disparities in the supply and demand position. While there are generally surpluses on the Tarai, there are always shortages on the hills and mountains. In terms of development regions, there are surpluses in the Eastern, Central and Western regions where development has progressed. But the Midwestern and Far Western regions, where development lags behind, are not able to meet demand. It may be assumed that regions with chronic deficits are also in a state of chronic food shortages, due to undeveloped distribution system.

Greater efforts are, therefore, required to increase food production as discussed in section 1-1-1. An equally important issue is the strengthening of systems to ensure the appropriate distribution of food and the stockpiling of surplus grains. It will not be possible to ensure stable food supplies, even if the country as a whole grows more food, until these systems function effectively. The Nepal Food Corporation (NFC), established for this purpose, has been criticized for not functioning efficiently enough. It would be desirable to cover the shortages on the hills and mountains with surplus from the Tarai. In reality, however, considerable amounts of rice and other food crops flow illegally into India because of the lack of purchasing power (cash income) on the part of people on the hills and mountains and as a result of high transport costs. Clearly the problem will not be solved until farmers on the hills and mountains acquire purchasing power. There is a limit to what the government

can do about this problem, since government intervention may run counter to basic market economy principles.

Given the reality that distribution networks (i.e., roads, communications and other infrastructure) cannot be completed easily it may be important to try to establish self-supportive supply systems in rural areas. It may be effective, for example, to build food warehouses where they can function most effectively. The NFC has a major role to play in establishing such a self-supportive system. If the NFC cannot function effectively, as suggested earlier, the village community could be put in charge of food stocks and ADBN could provide funding under favourable conditions to build small warehouses.

The solution to this problem will require consideration of the long-term issue of developing distribution networks through improvement of infrastructure and market conditions. An even greater issue will be how to give people of the hills and mountains purchasing power. This issue will be discussed below.

1-1-3 Commercialization of Agricultural Products (Raising Farm Income and the Creation of Employment)

Sections 1-1-1 and 1-1-2 primarily discussed the issue of stable supply of grains. Under Nepal's present economic structure, agriculture will have to be Nepal's key industry if the country is to aim for sustainable development. The major issue in inducing large-scale capital formulation in agriculture will be determining how the peasants, who have largely been forced to pursue marginal farming in rural areas, may acquire the means of cash income. This involves a switch from self-sufficient agriculture to agriculture as a business, which in turn requires intensive farming, the cultivation of horticultural products, (vegetables such as peas and beans, radishes, turnips, carrots, cabbages, cauliflower, Chinese cabbages, cucumbers, watermelons, tomatoes, green peppers, potatoes, onions, Welsh onions, Shiitake mushrooms and eggplants, and fruit trees such as oranges, chestnuts, apples and peaches) and cash crops (such as tea, spices and herbs), and animal husbandry. Such measures will aid in the commercialization of agriculture, transformation of agricultural management, and creation of new employment opportunities. Diversified agricultural production and changing food preferences have already been witnessed to some extent.

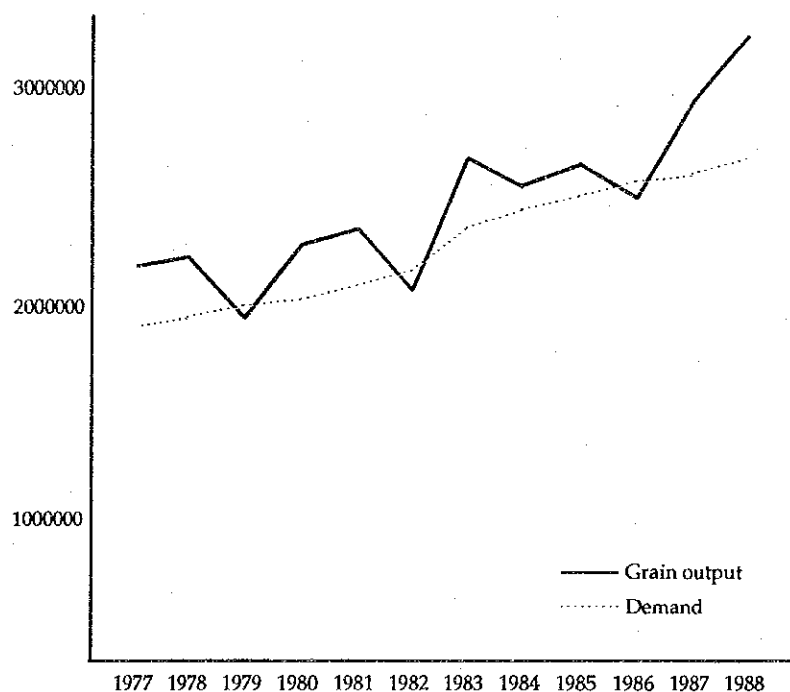
Supply and Demand Balance for Foodstuffs

(in tonnes)

FY	Annual Output of Edible Grains	Demand	Difference
1975/76	2470895	1912670	+558225
1976/77	2352641	2000951	+551690
1977/78	2246900	1935474	+511426
1978/79	2302320	1990610	+511710
1979/80	2000142	2034147	-34005
1980/81	2409347	2060551	+548796
1981/82	2508593	2247624	+560969
1982/83	2196526	2307468	-110942
1983/84	2742491	2499335	+243156
1984/85	2594853	2499857	+94996
1985/86	2752229	2578859	+173370
1986/87	2588823	2652468	-63645
1987/88	3005939	2726214	+279725
1988/89	3417569	2921249	+496320

Note: Annual Output of Edible Grains: The output of edible rice, maize, wheat, barley, finger millet (excludes seed rice and bran)

Source: Statistical Pocket book, Nepal, 1990
Statistical Year Book of Nepal, 1991



Owing to the lack of local traders and the domination of trade by Indian merchants, it will be necessary for farmers to organize for the purposes of promoting agriculture through the introduction of horticultural and other cash crops and to increase their income. This forms an important issue, along with product development.

Diversification of production is not only expected to aid in the development of agriculture, but also to add variety to the people's diet, improve their nutritional levels, and create a healthy work force.

(1) On the Tarai

The cultivation of wheat, jute, sugar cane, and oil seeds, such as rapeseed, (in addition to rice) brings in considerable agricultural income on the Tarai. While rice yields have been relatively stable, it will be necessary to boost them further. If agricultural production is to grow more stable in the future, it will also be necessary to avoid excessive dependence on cash crops, such as jute, for which international prices fluctuate considerably, and to diversify into other cash crops.

Rapid population increases have led to the development of cities on the Tarai. Since demand in cities is stable and traffic networks are relatively advanced, a new type of agriculture, adapted to meet the cities' consumption requirements, is likely to emerge on the outskirts of these urban centres, where vegetables, fruit trees and other horticultural products and animal husbandry will be in demand. Some of those crops are highly labour intensive in the cultivation, harvesting and processing stages. New employment opportunities can be created via innovative crop rotation that would come in step with crop diversification.

Livestock is important to farmers in many ways. More than a source of milk or meat, they also serve as beasts of burden for plowing and transport, supply compost and fuel, and serve as liquid assets in case of emergencies. As cattle also have religious significance, farmers are not prone to regard them as a means of production. In many cases, cattle are set loose to wander where they like. However, farmers on the Tarai have shifted to capitalistic farm management to a considerable degree, so while religious precepts concerning cattle still hold, their perceived value as work animals and assets is gradually decreasing. Therefore, high expectations can be placed on the development of

modern dairy and poultry farming management methods that meet the demand of consumers in the cities.

(2) On the Hills and Mountains

Due to reasons of topography and economics, many of the hills and mountains farmers cultivate minor grains, which provide minimum yields necessary for subsistence, even on barren land and under difficult conditions. Since almost all the population, exceeded the natural eco systems' carrying capacity, are engaged in agriculture in the limited arable space, this type of agriculture is carried out on extremely small scale. Efficient management would be difficult even with more capital and technology. And since the minor grains have little commodity value, investment would not produce commensurate returns, regardless of increased output. As mentioned earlier, the first priority for these areas is food security. While the conversion to rice cultivation is ideal in the long run, given its superior rating as foodstuffs and high commodity value, topographical considerations make it unrealistic to grow rice extensively. It will be necessary to consider ways for farmers to secure food supplies and cash income in areas where rice cannot be grown. Fortunately, Nepal's mountainous areas have diverse climatic features and rich vegetation. It would be valuable to study the cultivation of crops that can be grown here which possess comparative advantage and high commercial merits.

The most effective step in places with road links to cities would be to grow horticultural crops to meet urban demand. These would include fruits which flourish under various climatic conditions, such as oranges, deciduous tree fruit, such as apples, grapes, chestnuts and persimmons and vegetable whose harvest time diverges with crops grown on the Tarai. However, the lack of roads and other traffic infrastructure in many areas serve to boost costs and time required for transport. Given the negligible likelihood of a quick improvement in these respects, the demand for development of high value-added and lightweight crops or preservable farm products remains high. Cultivation of herbs, spices and tea, sericulture, bee culture, and seed production of radishes, turnips, carrots, and so on are climatically and technologically feasible. The main problem revolves around commercialization efforts, such as market development. It is, however, possible to transport these products from the hills and mountains to the Tarai or export them to the north Indian plain once access is gained.

Simple primary processing techniques, such as drying of products into commodities suited for transportation can enhance value and create new employment opportunities.

1-1-4 Marketing of Agricultural Products

The greater metropolitan area of Kathmandu, namely the Kathmandu basin, has basically gained admission into the global market. It possesses facilities to supply its residents and tourists with goods and services. However, the metropolitan population represents less than 10 percent of Nepal's total population and does not fulfill the functions of a nationwide supply base for imported goods or a cargo forwarding base for exports. Dependence on imports has increased because a system to supply the metropolitan area with produce from outlying areas has not yet been well developed. This is primarily blamed on delays in road building and other infrastructure. A secondary reason stems from the fact that distribution has been mainly in the hands of Indian merchants, with the exception of some networks.

The Tarai region, which is inhabited by over 45 percent of the population, has close economic ties with northern India. Merchandise flows both ways. In general, however, industrial products and processed farm products come from India, whereas raw farm products flow out of Nepal. Some of the goods from India are transported to the hills and mountains to the north. The development of transportation networks on the Tarai has helped stimulate the movement of goods within the area. Shops and markets in the cities and shops and markets opened periodically (Haat bazaars, mainly found in eastern part of Nepal) in the villages serve as primary distribution systems. Whereas the shops mainly handle industrial and processed products. On the contrary, it is worthy of attention that the markets serve as the main distribution channels for primary agricultural products and as centres for cargo forwarding within regions and to other regions as well. Distribution in the Tarai, however, is controlled primarily by Indian merchants also.

Distribution and exchange systems are conspicuously underdeveloped in the hills and mountains, where another 45 percent of the population lives. Trading plays an important part in the lives of some ethnic groups in these areas who have thrived on trade connecting Tibet and the Indian plain via north-south trade routes. Farmers in surrounding villages gained entry into these networks. The economy of the hills and mountains came to be connected

primarily with the south, however, once such trade declined after the deterioration of Indo-Chinese relations in the 1960s. Since the 1960s, markets which are opened periodically accompanied small shops have sprouted in various areas of eastern part thanks to administrative encouragement and stimulation by tourism. Some have developed quite rapidly. In contrast, small shops have developed to some degree in the west, but there are few periodically held markets. As noted earlier, shops and markets have different distributive functions. Local products are actively exchanged in areas where markets have developed. In the hill and mountain markets, however, cargo-forwarding functions are still underdeveloped, resulting in a virtual one-way flow of goods from the south to the north.

The absence of a trading community and inadequate study on the promising commodities can be singled out, together with underdeveloped basic infrastructures, as the main causes of the stagnation of trade. Integrated regional development bases are needed to alleviate this situation. It would be desirable to stimulate regional exchange of goods through these bases, develop goods that bring to fore the distinctive features of the mountain regions, and develop a forwarding and distribution system aimed at markets in the south. These steps will be discussed in depth later.

1-1-5 Elimination of Social Injustices Related to Property Ownership

In principle, the state owns all land in Nepal, and secondary ownership is extremely complicated and stratified. The actual state of land ownership is difficult to grasp on account of the absence of a land registration system. Consequently, it is difficult to collect revenue based on land taxes. Over two-thirds of Nepal's farmers are either marginal or small farmers owning less than one hectare of land, and the total area owned by them is under one-fifth of all the land under cultivation. In contrast, only 3.4 percent of all farmers own over five hectares of land, but the land owned by them is around one-third of all cultivated land. In other words, land ownership is beset by great inequities.

To put it simply, increased population pressures and the practice of dividing inherited land equally among survivors has, in many cases, resulted in the parceling of land on the hills and mountains to extent of marginal ownership. Farmers excluded from even marginal ownership are said to be moving

out. In contrast, a large portion of the land on the Tarai which had been covered with undeveloped subtropical forests until the 1960s was owned by nobles. Even after cultivation, the system of large-scale ownership has, by and large, remained intact despite some subdivision of land and changes in ownership. These landowners have been joined by cultivators from the hills and mountains and from India, all of whom have become owner-cultivators or tenants. In short, despite the relatively high ratio of landed farmers in the hills and mountains, in reality many of them are engaged in agriculture to aimed to support their families only. Great inequities separate the large landlords, landed farmers, landless tenants and agricultural workers on the Tarai.

This section has taken up various measures for developing Nepal's agricultural sector. The success of these measures, however, depends on whether the government can offer incentives to peasants. The development of Nepalese agriculture will hinge of the establishment and implementation of a system which gives tenants the opportunity to purchase land and become owner cultivators. The Nepalese government has promoted such measures as a protection of tenancy rights, ceilings on land ownership, and redistribution of surplus land in accordance with the terms of the Land Act of 1964, but these measures have not been exhaustively pursued. It is hoped that the present democratic regime will review the system of land ownership and take new legal administrative steps to create a class of owner cultivators.

It appears more difficult to motivate peasants and promote development on the hills and mountains despite the relatively small importance placed on the landlord-tenant relationship there. Many peasants do not regard farming as a business. This type of farming will be difficult to pursue, even if it is successfully introduced conceptually, given the present volume and prices of marketable surplus. Therefore, incentives require careful consideration. For example, well-to-do and influential farmers with more land than needed to support themselves could be provided technical aid to cultivate horticultural and other cash crops. Once they succeed in getting cash income by this means, others will follow suit. At any rate, the key to developing farming on the hills and mountains is helping farmers establish an effective managerial unit.

1-1-6 Soil Conservation and Agro-Forestry

Soil erosion, one of Nepal's most serious environmental problems, can be traced to various causes. Apart from natural disasters, the felling of trees for

fuel and fodder, expanded cultivation on mountain slopes and marginal land, and excessive grazing can be cited. In other words, the peasants' farming activities themselves sometimes greatly impair productivity. Organic fertilizer is useful in combating soil erosion, as has already been pointed out, and peasants on the hills and mountains, in particular, depend on it for economic reasons, but it has become difficult to obtain due to the loss of forest.

Poor peasants have been forced to expand cultivation on marginal land. Although cattle and smaller domesticated animals are used as beasts of burden in the farming process and considered precious liquid assets, their numbers should be adjusted so as not to tax available fodder resources in overgrazed areas. At the same time, agriculture in the hills and mountains should be carried out in a manner that balances human, animal, forest and land resources. Agroforestry represents an important element of such activities. It will be equally important to introduce wood-processing techniques and is worthwhile to bear in mind that village communities have their own traditional methods of forest management.

Due to the topographical conditions of the country, soil erosion often triggers natural disasters, such as river turbulence (water-induced disaster), which are the causes of heavy damage. It would be useful to transfer Japan's river and erosion control and soil and forest conservation technologies, given its similarities in topographical features with Nepal.

1-2 Population Control and Provision of Health Care Facilities

Population growth needs to be curbed as much as possible because, as mentioned earlier, rapid population growth has virtually offset economic growth in Nepal. It is vitally important to lower the birth rate by reducing the death rate, particularly the infant mortality rate. This process requires effective family planning, and better medical services and public health.

1-2-1 Family Planning

The World Bank has recognized the significance of family planning in alleviating poverty. It estimates that lowering the rate of population growth to the reasonable level requires reducing the number of children borne by Nepalese women in their lifetime from the current 5.7 to around 3. This will require

reducing the present infant mortality rate, which is very high against the global average, at least to a level on line with that of the Southeast Asian countries as quickly as possible. As families in the lower-income bracket perceive children as an additional source of income, it is not easy to persuade them to accept family planning. Birth control is also hindered by the emphasis in Hindu society on giving birth to boys.

Since Nepal's literacy rate is among the lowest in the world, one problem facing family planning is determining what methods to adopt in educating people of its importance. It would be effective to incorporate family planning into non-formal education, such as adult education and literacy programmes, or WID (Women in Development) activities aimed to improve women's social status. An important consideration in this regard is determining how to deal with the difference in languages. It will not be desirable to pursue such educational activities solely through any one language.

1-2-2 Medical Services and Public Health

(1) Improvement of Local Medical System

The Nepalese government plans to expand primary health care (PHC) and develop local medical systems through the establishment of health posts throughout the country. But it will take time to achieve this goal due to constraints on manpower and funding.

Existing health posts are also plagued by problems. Pharmaceutical supplies are often exhausted during the first few months of the fiscal year, forcing the posts to virtually close down for the remainder of the year. In some cases, posts are located on mountain ridges not easily accessible to patients or in unsanitary places and there are difficulties in properly storing pharmaceuticals without refrigeration. Ensuring the efficient functioning of existing posts will require year-round delivery of pharmaceuticals and other medical supplies, improvement of health posts' surroundings and accessibility, and provision of residences for medical personnel.

In view of this state of affairs, it has been argued that the mere construction of health post's buildings is meaningless. We do not subscribe to this view. Even though medical service may leave much to be desired, the tendency of people to gather at these facilities makes them ideal bases for spreading knowledge of family planning and preventative medicine.

The present conditions demand a fundamental review of the medical referral system, which exists more in form than substance, on the basis of research in to the state of district hospitals throughout the country. Theoretically, health posts are linked with district hospitals, the highest medical institutions in the district, by the referral system, but in reality, this system is often dysfunctional. Local medical services can be improved by expanding guidance by district hospital physicians during their tours of health posts and by immediately referring patients whose needs exceed the capacities of health posts to district hospitals. A key element in raising the effectiveness of the referral system is the installation of telephones and wireless radios at health posts on a priority bases to facilitate communication with district hospitals. Reinforcing the links between the health posts and district hospitals in this way will greatly help to build the people's confidence in the health posts.

Other serious problems facing the medical care system are the shortage in medical facilities and personnel, their disproportionate concentration in the metropolitan area, and a strong aversion among doctors, in particular, to posting to local areas where living conditions are not up to the metropolitan standard. To remedy this situation, it will be necessary to make living conditions in district headquarters, where district hospitals are located, more attractive. This problem does not apply to doctors alone.

(2) Review of Present Medical System

The budget allocated to health and medical care is far from sufficient. It will be necessary to review the present medical fee system and look for ways of improving the profitability of medical institutions. It may be a one of ideas to introduce a flexible fee system in which different fee scales are applied to areas with little cash income and areas where people can afford to pay more.

In Nepal, doctors at public medical institutions usually leave the hospital at around 2:00 PM, or so, to practice at their own private clinics. Consequently many hospitals are more often than not mere accommodation facilities for in-patients. This situation needs to be fundamentally altered. Some reform in medical administration is required to alleviate the shortages of medical personels in local areas. One suggestion would be to require doctors to work in local areas for a certain number of years and to provide bonus incentives for such services. It would be valuable for both doctors and medical administrators to

become more familiar with conditions in local areas. It would also be useful from the long-term point of view to expand training for medical personnel from Kathmandu, where training is currently concentrated, to regional and zoned hospitals.

(3) Development of Sewage and Water Systems and a Shift to Preventative Medicine

Apart from reforming the medical system, it is vitally important to encourage a shift to preventative medicine. Most diseases found in Nepal are infectious and can be prevented by developing service water and sewage systems, providing safe drinking water, creating a hygienic environment, and building latrines, which will substantially reduce the infant mortality rate and bring down the total fertility rate. Service water supplies are quite substandard in local areas and even in urban areas demand for service water has not been able to keep pace with urbanization, resulting in a declining trend in diffusion rates.

Diffusion of service water will not only improve health conditions, but will also relieve women and children of the burden of transporting water from wells, particularly in the hills and mountains. Freeing women and children from this labour will enable them to use this time for other productive activities or learning or to recover health impaired by harsh labour.

Lowering the high infant mortality rate requires upgrading of health services for mothers and children through immunization and maternity care, among other steps. As in the case of family planning, public health education should be incorporated into adult education and literacy programmes. Other useful measures are promoting health education in primary and junior high schools and on radio (and eventually television).

1-3 Improvement of Balance of Payments and Structural Adjustment Policy

Nepal has posted a chronic deficit in its trade and current account balances in recent years, and these deficits rose even higher in FY 1990/91. Foreign exchange earnings have not grown as much as expected while the debt service ratio has grown steadily (17.2 percent in 1989). Sustainable economic develop-

ment will require an improvement of the balance of payments position through the acquisition of more foreign currency via the processes of economic liberalization and internationalization. This section will examine the potential of the tourism, manufacturing, and energy sectors in contributing to the improvement of the balance of payments. It will also examine the agricultural sector from the same perspective.

This section will also address the need for structural adjustment policies in promoting economic liberalization and sustainable economic growth in light of their capacity to free and improve the efficiency of economic activity.

1-3-1 Tourism

(1) Present Situation and Challenges

The tourist industry is one of the few sectors in which Nepal holds a comparative advantage. Some 20 percent of Nepal's foreign currency earnings is obtained from this sector. The tourist industry is dependent, to a large extent, on external factors, such as the Gulf War and the recent international recession. Hence, it would be extremely risky to stake the country's economy on this industry alone. But since no other industries are expected to develop rapidly, further efforts should be made to promote the tourist industry as the primary source of foreign exchange earnings.

Although few tourists tended to visit Nepal during the summer, which coincides with the rainy season, today large number of Indians visit in the summer to escape the heat and humidity of the lower plains. Perhaps because of the relative proximity, tourists from the NIES and ASEAN countries have gradually grown and now outnumber American and European tourists, whose numbers have leveled off in recent years. These are promising signs for the future which should be followed up.

The promotion of tourism is very useful for regional development as it stimulates the businesses of hotels, restaurants and tea shops, as well as souvenir production and other peripheral industries. It also enhances demand for vegetables and other horticultural produce, dairy products and processed meat. In a word, tourism has far-reaching economic effects and creates many employment opportunities. In Kathmandu, the manufacture and sale of souvenirs are presently overseen mainly by people from Kashmir, one of the states of India

which has a longer tradition of tourism than Nepal. It would be very beneficial, both in terms of foreign exchange earnings and job creation, if Nepal succeeded in creating its own souvenir industry. Nepal's most sought after tourists sites are the Himalayas except Kathmandu. Tourism will help increase the cash incomes of the people in the Himalayas other than alpine guides, who have not generally benefited much from tourism thus far. Comprehensive policies for developing the tourist industry are required to make it a key sector in the development of the hills and mountains of Nepal.

(2) Specific Measures

(a) Planning and Information Services

The effectiveness of tourist industry promotion can be measured in terms of the number of tourist and the amount of money they spend. As the tourist business essentially markets dreams and images, it is important to plan alluring tourist products and advertise them well. Almost without exception, developing countries with successful tourist industries have put much effect into planning and information service. Since the Himalayas represent a powerful allure for tourists, thus far, Nepal's tourist industry has developed not so much through Nepal's own efforts as under the initiative of Western countries. The Himalayan region has become a popular destination for the average tourist, as can be seen from the fact that the prime source of income in alpine tourism has shifted from climbing fees paid by climbing parties to trekking fees. Aggressive promotional activities are needed to attract more tourists. Similarly, infrastructure needs to be built to accommodate them. In order to ensure that as much of the profits from tourism remain in the country, Nepal will have to take the initiative in these efforts, be it through the government or private-sector.

(b) Development of Domestic Airlines and Communications Networks

In view of the fact that most tourist spots are found in remote areas, the top priority in enhancing the basic infrastructure for tourists is the improvement and expansion of the nationwide transportation and communications networks. These improvements are important, not only for the tourist industry, but other industries as well, and the construction of such a network is one of the major tasks confronting Nepal. The establishment of a domestic airlines and communications network, however, is particularly important to the tourist industry.

The development of domestic airlines networks, which involves the purchase of more airplanes and the construction of more local airports, will be a long-term issue because of financial constraints. However, the difficulty in booking domestic flights from abroad and the tendency for domestic flights to not operate on schedule are more immediate issues which stand in the way of attracting tourists from abroad. Although some of these problems can be attributed to inclement weather and other factors behind human control, many of them can be solved through improved management, foreign technical cooperation, and improved booking procedures through the introduction of computers. And since the tourist business sells dreams, the spate of fatal air crashes around Kathmandu in 1992 had a disastrous effect of Nepal's image. Top priority must be given to ensuring the safe operation of airports.

(c) Development of Local Tourist Bases

The need for a network of towns functioning as bases for tourists will accelerate as their numbers increase. Tourists visiting Nepal are generally in search of undeveloped natural beauty, so many of them want to spend simple but nature-harmonious life. Tourist bases need not extravagant facilities but basic infrastructure. Service water facilities for safe drinking water, medical facilities for emergencies, and a minimum level of social infrastructure such as communications networks are needed. These services also represent the basic human needs of residents and providing a means to promote tourism.

Nepal has a wealth of tourism resources other than the Himalayas such as streams suitable for rafting, wild animal habitats (safaris) and sacred sites. However, given our belief that the Himalayas represent the greatest attraction for tourists, it is our view that the local tourist bases discussed above should be developed in the hills.

(d) Training of Guides and Other Employees in the Tourist Industry

Attracting more visitors from abroad will also hinge on efforts to boost the safety and pleasure of trekking, now the mainstay of tourism in Nepal. Specifically, trekking guides should be trained to prevent accidents, deal with illnesses and other emergencies and satisfy the diverse needs of tourists. Efforts are already under way to train and increase the number of competent guides. A system of guide training involving a licensing system or training schools should be considered either by the government or private sector to en-

sure that quality guides are available in plentiful numbers.

(3) Tourism Development and "Eco-tourism"

Tourism development is known to cause destruction of the environment and generate friction with local people. Such problems are beginning to surface in Nepal. Under Nepal's present economic circumstances, however, it will be necessary to continue to develop tourism in the future. It will not be practical to try to conserve the environment by closing tourist sites. A way must be found to somehow simultaneously promote tourism and conserve the environment.

At present, most trekkers go to either the Sagarmatha zone of the Solukumbu area, where Mt. Everest is located, or to the Annapurna area near Pokhara. Viewed from the twin objectives of tourism promotion and environmental conservation, it will be necessary to reduce the environmental burden in these two areas by diverting tourists to other regions which have been hitherto less well known or relatively inaccessible.

In this connection, it would be meaningful to introduce the concept of "eco-tourism", or environment-friendly tourism, and develop a tourist promotion programme based on these principles. Tourist awareness of environmental problems will be heightened if a fixed proportion of income from climbing fees is set aside for conservation of the environment. Meanwhile, if local residents are able to enjoy the benefits accruing from tourism, they may come to realize that conservation will improve their own living standards. At any rate, tourist promotion in Nepal should go hand in hand with regional development and environmental conservation.

1-3-2 Industries (Manufacturing)

(1) Encouragement of Growth of Manufacturing and Development of Cottage Industries

Generally speaking, the manufacturing industry has a high capacity to absorb labour and can be expected to create the most employment opportunities. In Nepal, however, those employed outside farming in the manufacturing and services sectors account for less than 10 percent of the work force and their numbers are growing at a very slow rate. Many difficulties beset manufactur-

ing, including the lack of industrial raw materials, capital and technology, and the proximity of India and China, which export many cheap industrial products. The industry has virtually no comparative advantages over neighbouring countries, and can hardly be expected to develop rapidly over the short term.

Present conditions are not conducive to the growth of large scale manufacturing requiring substantial investment. This fact, taken together with the necessity for regional development, is why we feel efforts should be made to nurture labour-intensive cottage industries first. Promotion of cottage industries in local areas will make it that much easier to assimilate the growth in the work force on the spot. Specific projects should be considered to support cottage industries. These could provide assistance to improve the quality of traditional industrial goods and special local products and make them widely marketable. Although high transportation costs are an impediment to industrial development, encouraging the cottage industry to meet local demand only will make it price-competitive over products imported from other countries once the initial investment has been made. This plan would require expanded financing system for cottage industries.

(2) Contribution of Manufacturing to the Balance of Payments

The manufacturing industry has had little impact on the balance of payments of the country. Domestic production of soap and synthetic fiber manufacturing was expected to supplant the need for imported Indian products. However, these products' market shares have not grown as expected for reasons of quality and prices. Also, Nepal's industries do not have much impact on the conservation of foreign exchange because many industries depend on imports for most of their raw materials.

A few products are exported by Nepal's manufacturing industries. But even carpets and garments, currently the main export items, are dependent on imported raw materials and are not particularly price-competitive on the international market, making their contribution to foreign currency earnings relatively small. However, heightening the value of these products through market research or improved designs will help raise the competitiveness of these exports.

The building of export-oriented industries may be hampered by such difficulties such as the lack of industrial raw materials, the handicap of being a landlocked country which cause high transportation costs, and the abundance

of cheap labour in Bangladesh and India. The development of electricity-consuming industries which, would make use of Nepal's rich hydraulic power resources (the only area in which Nepal has an advantage over neighbouring countries apart from its tourism resources), involves many problems such as funding, technology and markets.

Recently, detergents used in the final processing of carpets were found to cause allergies, prompting Germany, the main importer, to ban imports of Nepalese carpets. Incidents such as this impair the reputation and image of other Nepalese products and have a detrimental influence on the balance of payments. Although it is not necessarily a technical problem, it demonstrates the need for Nepal to improve its quality control standards and introduce an inspection system for its exports to prevent a recurrence in the future.

1-3-3 Energy (Large-scale Hydroelectric Generation)

Nepal's abundant hydraulic resources are one of the few resources in which the country has a comparative advantage. Latent generating capacity is estimated at 83,000 megawatts. Since demand for power is currently limited only to urban areas, tourist spots and areas around power stations, it has been easily met. But supplies are not expected to meet the increased demand in the near future as urbanization progresses. Indeed, the Kathmandu basin is chronically short of power during the dry season from November to May, and there are blackouts in the evening when consumption is highest. Over the past one to two years supplies have failed to keep pace with demand. The key to a stable power supply throughout the year is the procurement of supplies during the dry season when the volume of flowing water drops dramatically. Some maintain that large hydroelectric power plants capable of seasonal adjustment would admirably serve the purpose. Although the benefits of such plants cannot be denied, they are problematic in that they require enormous initial investments, including the cost of distribution networks. In light of their enormous anticipated impact on the natural and social environment, careful studies will be required before pursuing such projects.

Nepal's electricity shortage can be traced to several factors. Some of them are natural precipitation has decreased in recent years and the water-retention capacity of the hills and mountains has also deteriorated due to overlogging of forests. Meanwhile, the government has adopted a policy of not

constructing new thermoelectric power plants and technological shortcomings resulting in losses during distribution also greatly impair power generation efficiency.

The alleviation of power shortages will require the solution of some of the problems mentioned above. In the future Nepal may be able to acquire foreign currency and improve the balance of payments by selling surplus electricity from hydroelectric power plants to India. But this proposition will be greatly influenced by political relations with India, and much will depend on future negotiations between the two.

Small-scale hydroelectric power generation will be discussed later.

1-3-4 Agriculture

As noted in the section on agriculture in the hills and mountains, there is great potential for the cultivation and processing of cash crops derived from Nepal's diverse and rich vegetation. The problem of high transportation costs may be solved by linking up with foreign markets by air. Agriculture thus has the potential to be an important foreign exchange earner. Neighbouring Bhutan, which has similar vegetation, has been exporting matsutake mushrooms to Japan via Bangkok. Everything depends on market development and whether product quality and standards can be raised to internationally competitive levels. This is what has been lacking most in Nepal. Take the case of saffron exported by Nepal. Most of it is currently exported to India, but there is a great demand for it in Japan and Western countries. Nepal should be able to meet this demand by developing the market and improving quality. In another example, none of the foreign airline companies flying into Kathmandu apparently purchase any food or horticultural products in Nepal. This situation results from nothing short of Nepal's lack of effort to develop markets. Nepal should seriously consider expanding exports to countries other than India which have greater economic merit in terms of prices and obtaining hard currency.

However, as noted earlier, Nepal should also consider the possibility of exporting farm products to India, particularly the states of Uttar Pradesh and Bihar, with which Nepal has common borders. While these two states fall in India's poverty zone known as the Hindi Belt, they are India's largest and second largest states population-wise. The growing urban middle class in those states represents a promising market for the distinctive horticultural

products from the hills which do not exist in India. In this way Nepal can convert the handicaps of being a landlocked country into a great advantage.

At present, the growing global attention to biodiversity and the recognition of the rights of proprietors of genetic resources may well work to Nepal's advantage. Research and market development of agricultural products which can be used as foreign exchange earners, such as seed-collection, will have growing importance in the future.

1-3-5 Structural Adjustment Policies

(1) Implementation of Structural Adjustment Policies

Nepal has been carrying out economic stabilization policies under the guidance of the World Bank since 1985 to cope with the deterioration in its financial condition. Retrenchment policies have helped reduce the budget and current account deficits.

However, Nepal adopted a growth-oriented structural adjustment policy in 1987 under the guidance of the World Bank and IMF in an effort to bolster sluggish economic growth and dwindling foreign exchange reserves. The structural adjustment programme encompasses reforms of the tax system, public sector (through privatization of public enterprises), financial sector and trade system, all of which are designed to ensure the success of economic liberalization policies. These measures, however, have had some detrimental effects on the lives of the people, and the poor people in particular, by levying higher public utility charges for electricity and water charges.

The success of the privatization of public enterprises will not only play a major role in determining the success of overall structural adjustment policies, but will also be an important factor in generating economic growth in light of the changing perceptions of economic liberalization held by neighbouring countries. The question of whether or not to pursue privatization is, needless to say, a matter of Nepalese government policy. However, it would be useful to request assistance for the smooth transition to privatization, or to encourage stable operations after transition. Such assistance will largely centre around managerial technology. The Nepalese government will have to help develop management and consulting resources, while donors should send advisors to the Ministry of General Administration and other offices of the Nepalese gov-

ernment and provide technical assistance to educational institutions such as the Nepal Administrative Staff College.

Generally, Japan limits the recipients of its ODA to government agencies and public enterprises. In this sense, Japan should take a more flexible attitude toward the promotion of privatization by lending assistance only during the initial privatization period to enterprises (excluding those sold to specific capitalist groups) which serve the public good. In such cases, it may be worth considering the dispatch of Japanese private-sector skilled experts.

(2) Administrative and Financial Reforms

Given the substantial role the Nepal government retains in policy-making, financial measures and the implementation of development projects, it needs to carry out tax system reform and other types of financial reforms, not only for sustainable economic growth and the enhancement of the effectiveness of economic development, but to improve fiscal health in conjunction with structural adjustment. At the same time, administrative reform to ensure efficient implementation of these policies will be called for.

Nepal's continuing dependence on foreign aid for much of its development expenditures is unavoidable. Some donors trace the failure of aid to produce desired effects to a lack of high morale and self-help efforts on the part of Nepal's bureaucratic officials. Nepal's inability to absorb aid has also been blamed on administrative inefficiency, which explains why the amount of foreign aid has failed to increase in recent years. Another outstanding issue that requires immediate attention is the levying of taxes on the well-to-do and high income groups. It should be kept in mind that aid is not intended to induce dependence by the recipient country, but, on the contrary, to encourage the recipient country to stand on its own feet. Local development, an important policy of the new democratic government, will require a review of the relationship between the central government and local administrative agencies. The Eighth National Development Plan clearly states that districts and municipalities should be given prime responsibility for local development and calls for the transfer of various powers from the central government. The important issues will be the devolution to the districts and municipalities and the strengthening of their financial bases. Since departmental sectionalism among central agencies tends to obstruct the proper functioning of local bodies, the local development policies of different government departments must be carefully coordinated at

the central level itself.

1-4 Human Resources Development

Nation building is grounded on the development of human resources, or education in the broad sense of the term. The educational sector in Nepal, however, leaves much to be desired both in terms of quality and the opportunities for education. This failure of the educational system to function adequately has left a large proportion of the growing population in poverty. The major issue here is how to give them the opportunity to receive an education.

1-4-1 Formal Education

(1) Primary Education

The need to emphasize primary education is underscored by various social indicators and the low literacy rate in particular. The Nepalese government has formulated a "Basic and Primary Education Project (BPEP)" and given this top priority in its education policy. The large number of dropouts and low school enrollment rate among girls are often cited as major problems in Nepal's primary education. Both can be traced to underlying social and economic problems and are not, therefore, likely to be solved quickly. However, the government has been trying to alleviate these problems through measures, such as provision of free textbooks and scholarships for girls. It is necessary to investigate ways in which Japan could provide assistance in this area in the future.

Other areas requiring attention include the revision of the school curriculum to make it more interesting for pupils, and the training of competent teachers. The primary school curriculum includes some sensitive political issues which will effectively bar donor countries from becoming directly involved in revising the curriculum. However, the importance of providing basic instruction in public health, methods of improving the quality of life, and environmental conservation from the earliest stages of primary education and having pupils acquire such knowledge through practice cannot be overemphasized.

Meanwhile, the time and effort required to commute to school is often cited for the high dropout rate. This problem could be overcome by building more schools in rural areas and thereby improving accessibility. It will be

necessary to increase the number of schools with materials and equipment assistance from donor countries. At the same time, surveys using the census and other data should be undertaken to determine appropriate locations for new school buildings. As in the case of the health posts, school buildings in local areas serve as places for wide range of community activities.

(2) Science and Mathematics Education

Sustainable economic development also depends on the training of technocrats through improved science and mathematics education at the secondary school level. The current weakness in these areas is attributable to the shortage of teachers and the lack of effective teaching methods. And contrary to the situation in primary education, donors can easily apply their own experiences in these areas and provide effective assistance with respect to curriculum and teaching materials. Since science and mathematics teachers in Nepal do not require special qualifications but are rather qualified on the basis of their educational background, an effective means of assistance would be on-the-job training for those who are already teaching. Specifically, newly appointed teachers should be required to go through training, and a system of refresher courses for those who have served a certain number of years should be introduced. Facilities and instructors will be provided for this purpose. Incentives such as allowances or promotions should also be considered to raise the efficacy of these training programmes.

(3) Vocational Training

In many cases, the traditional technologies of Nepal have been handed down from father to son on the basis of the caste system. This has acted as a social impediment to the diffusion and improvement of technologies and the introduction of new technologies. For this reason, Nepal has lagged behind its current social needs in terms of increasing the number of engineers and developing new technologies. Despite the advent of large-scale manufacturing on the Tarai, leading engineers in factories are predominantly Indians who have come across the open borders. Although this situation can often be traced to Indian capitalists employing their kinfolk, another reason is the shortage of highly competent Nepalese technicians.

Nepal has established vocational schools at the secondary school level and above. There are 10 vocational schools throughout the country at the

junior high and senior high school level and college levels, and plans to set up more in future. We visited the Uttarpani Technical School in the eastern hill area built with British aid. While these schools are not problem free, they play an important role in the overall enhancement of the technical level of this country. In the future, vocational schools should promote agriculture, cottage and local industries in base towns in the countryside and the surrounding areas. It is often pointed out that few people are inclined to apply to these school as vocational school graduates have difficulties finding employment despite their training. This situation reflects the need to revise the curriculum in these schools in order to turn out engineers with specialties in areas of greater demand. At the same time, the national qualification system for engineers should be reviewed and made more arduous. Meanwhile, the only possible way to stem the exodus of vocationally trained individuals to the cities is to make agriculture more attractive as a vocation, particularly in the hills. We will return to this issue later.

1-4-2 Non-formal Education

The problems with primary education, namely, the large number of drop-outs and low enrollment rates among girls must, in principle, be handled within the framework of school education. The targets of non-formal education, however, are the people who dropped out or could not attend school. Since non-formal education falls outside the bounds of the school system, it can take a more flexible approach and reach out to more people, for instance, by holding classes outside normal working hours.

Non-formal education is aimed primarily at women in rural areas and adults who could not participate in school education. It will thus be mainly focused on literacy education. But it will also be possible to train these people to become important instruments of development by teaching them practical skills in vegetable cultivation, handicraft making and environmental conservation. In this sense, adult education is somewhat akin to vocational training. Training in handicraft making and sewing provides women with employment opportunities and is thus welcome from the viewpoint of WID (women in development) activities as well. Incorporating guidance on public health, including preventive medicine and nutrition, and family planning into literacy education will have a synergetic effect.

One problem in undertaking non-formal education is finding facilities to

hold classes. At present, the most realistic step is to use primary school buildings in the evening. But as lighting will be required for this purpose, it will be desirable to use fluorescent lamps to save electricity.

1-5 Development of Basic Infrastructure

It is self-evident that industrial development is dependent on infrastructure building in areas such as energy and roads. In Nepal's case, however, the country's topographical divisions bring into even greater relief the need for infrastructural development to foster national integration and to improve the living conditions of people living in rural areas.

Construction and maintenance of infrastructure places a heavy burden on public finance. In countries such as Nepal where development funds are limited, the selection of infrastructure projects should be based on the careful application of criteria regarding their effects and cost, and the chosen projects should be implemented systematically. Emphasis in Nepal should first be on the development of basic infrastructure which will contribute to higher living standards of people in the countryside and to the improvement of the economic level through such regional development.

1-5-1 Energy

The overlogging of forests for fuel has become a major environmental problem. But it cannot be denied that raising the standard of living will inevitably push up the level of energy consumption. Altering the present pattern of firewood-dependent energy consumption is essential, both in terms of environmental protection and the improvement of the standard of living of people living in rural areas.

(1) Reduction of Firewood Consumption

The expansion of land under cultivation and illegal logging for domestic fuel are the major causes of forest loss. Firewood accounts for 75 percent of the total energy consumption in Nepal. It goes without saying that forest must be utilized. However, the annual rate of forest loss is approximately 1 percent of the total land, and it can hardly be said that forests are being used in a sustainable way. Nor can it be said that the mountains of Nepal are well

protected. Despite the fact that illegal logging is strictly prohibited and distribution of firewood is managed by the Timber Corporation of Nepal, which falls under the Forest Department of the Ministry of Forests and Environment, around 90 percent of all firewood consumed is thought to be gathered illegally by local residents. This situation gives an indication of the seriousness of the problem. Since women are primarily responsible for felling and transporting trees, they should be targeted to receive environmental education and technologies related to forest conservation. This point has already been taken up in the section on education.

Petroleum, coal and propane gas are possible alternative sources of energy. But since these fuels are imported, they are expensive and outside the reach of people living in the countryside with little cash income. While efforts are being made to reduce consumption of firewood by promoting kitchen ranges with higher fuel efficiency, they do not mesh with traditional lifestyles. Further efforts may be required to improve ranges and to advertise them.

The planting of trees promptly and extensively is important not only in terms of providing domestic fuel but also in conserving soil and preventing water-induced disasters. In some cases, fastgrowing trees will have to be planted. However, efforts should be focused on restoring the biodiversity of the forests.

(2) Development of Renewable Energy Sources

Renewable energy sources, such solar heat, hydraulic power, wind power and biogas are currently being studied as replacements for imported fossil fuels. In some cases, they have been put to use. But these energy sources have not yet spread much due to problems of cost and technical difficulties. These alternative sources are environment-friendly and are welcome all the more because of the absence of competing energy sources, and also because local energy supplies must be adapted to the country's diverse topographical conditions. At present, the Research Centre for Applied Scientific Technologies of Tribuvan University is researching energy development. It will be necessary to promote further research on alternative energy sources with foreign cooperation and assistance.

The popularization of biogas and solar cell energy may be impeded more by the cost of initial investment than technical problems. At present, ADBN