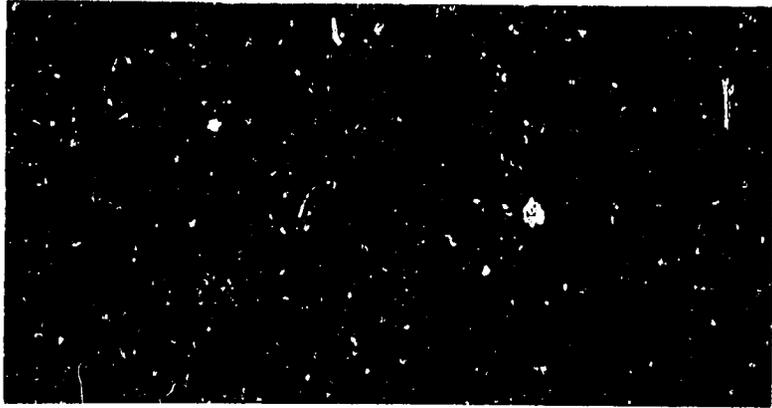


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THE POTENTIAL FOR  
ALTERNATIVE SOURCES FOR FINANCING  
FOR HEALTH SERVICES IN NEPAL

A Report Prepared By:  
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"It is the Nepalese people on whom  
lies the main burden of development.  
It is only fair, therefore, that the  
fruits accruing from it be distributed  
evenly to all the people."

-His Majesty King Birendra

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- David Dunlop, Boston University, for his critical comments on and encouragement of the author's research on issues of the financing of health sector activities in Nepal.
- Thomas Achard of SATA, Andrew Cassels of BNMT and Charles Oliver of the Peace Corps for their comments and suggestions with respect to the draft of this report.

The author takes full responsibility for any remaining errors in this report. It is her sincere hope that the report will be of use to those who are concerned with developing program interventions which improve the health and quality of life of individuals in Nepal and which may be ultimately sustained by the people of Nepal.

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## ABBREVIATIONS

ADB	- Agriculture Development Bank
AHW	- Auxillary Health Worker
AID/W	- Agency for International Development, Washington, D.C.
BDS	- Bhojpur Drug Scheme
BNMT	- British - Nepal Medical Trust
CEDA	- Center for Economic Development and Administration, Tribuvan University
CHL	- Community Health Leader
CHP	- Community Health Project, Lalitput Distribut
CRS	- Commercial Retail Sales
CSS	- Compulsory Savings Scheme
DDS	- Dolakha Drug Scheme
DHC	- District Health Committee
DHO	- District Health Office
DHS	- Department of Health Services
FP	- Family Planning
FPAN	- Family Planning Association of Nepal
GDP	- Gross Domestic Product
GNP	- Gross National Product
HDS	- Hill Drug Scheme
H/FP	- Health/Family Planning
HMG	- His Majesty's Government
HPC	- Health Post Committee
HPC	- Health Post In-Charge

HPU - Health Planning Unit  
 HT - Himalayan Trust  
 ICHSDP - Integrated Community Health Services Development Project  
 IHAP - International Human Assistance Program  
 IHDP - Integrated Hill Development Program  
 IOM - Institute of Medicine, Tribuvan University  
 IRH/FP - Integrated Rural Health/Family Planning Project  
 KHARDEP - Kosi Hill Area Rural Development Project  
 MCH - Maternal and Child Health  
 MO - Medical Officer  
 MOF - Ministry of Finance  
 MOH - Ministry of Health  
 MSH - Management Sciences for Health  
 NMEO - Nepal Malaria Eradication Organization  
 NPC - National Planning Commission  
 NRB - Nepal Rastra Bank  
 NSSCC - Nepal Social Services Co-ordinating Council  
 PBHW - Panchayat-Based Health Worker  
 PDLT - Panchayat Development Land Tax  
 RD - Royal Drugs Limited  
 Rs. - Nepalese Rupees, Rs. 11.90 = US \$1 at the time of field research, Spring 1981  
 SATA - Swiss Association for Technical Assistance  
 SCF,U.K.- Save the Children Foundation, United Kingdom  
 SCF,U.S.- Save the Children Foundation, United States

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- SFDP - Small Farmer Development Project
- SMO - Senior Medical Officer
- TA/DA - Travel Allowance/Daily Allowance
- TMP - Traditional Medical Practitioner
- UMN - United Mission to Nepal
- UNFPA - United Nations Family Planning Association
- UNICEF - United Nations Children's Fund
- VHW - Village Health Worker
- WHC - Ward Health Committee
- WHO - World Health Organization
- WN - World Neighbors
- USAID/N - United States Agency for International Development,  
Nepal

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## THE NEPALI AND GREGORIAN CALENDARS

Dates from the Nepali Calendar are referred to frequently in this report. The correspondence between the Nepali and the Gregorian calendar appears on the following page.

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MONTHS

YEARS

Nepali  
Months

Gregorian  
Months

Nepali  
Years

Gregorian  
Years

<ul style="list-style-type: none"> <li>- Baisakh</li> <li>- Jestha</li> <li>- Asar</li> <li>- Srawan</li> <li>- Bhadra</li> <li>- Ashoj</li> <li>- Kartik</li> <li>- Marg</li> <li>- Paush</li> <li>- Magh</li> <li>- Phagun</li> <li>- Chaitre</li> <li>- Baisakh</li> </ul>	<ul style="list-style-type: none"> <li>- April</li> <li>- May</li> <li>- June</li> <li>- July</li> <li>- August</li> <li>- September</li> <li>- October</li> <li>- November</li> <li>- December</li> <li>- January</li> <li>- February</li> <li>- March</li> <li>- April</li> </ul>	<ul style="list-style-type: none"> <li>- 2035</li> <li>- 2036</li> <li>- 2037</li> <li>- 2038</li> </ul>	<ul style="list-style-type: none"> <li>- 1978</li> <li>- 1979</li> <li>- 1980</li> <li>- 1981</li> </ul>
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## CHAPTER I

### INTRODUCTION

#### A. Description of the Problem

Worldwide, the financing of health services for the poor is problematic. Developed as well as less developed countries have difficulty obtaining public funds sufficient to ensure that primary health care (PHC) services can be provided to their entire populations. Various global economic factors (e.g. recent increases in the price of petroleum and increased pressures on governments to control inflation by reducing government expenditures) have recently led to reductions in the public revenues available for PHC. To sustain existing programs and to continue movement toward the humanitarian goal of "Health for All by the Year 2000," increasing attention is being focused on exploring alternative ways to finance the delivery of health services and on the design and selection of interventions which improve health status in the most cost-effective manner.

#### B. Purpose of the Report

The purpose of this report is to review documented information of relevance for those considering the potential alternative sources of financial support for health services in Nepal. Specifically, the report reviews:

- Background information about Nepal's geography, history, political organization, and economy and its population and their wealth/income and health status.
- Information about the health services provided by both the private and public sectors.
- Data on the sources and quantity of revenues available for support of health sector activities in Nepal. The sources considered include: central and local government revenues, donor grants and loans, and personal expenditures including donations of labor.
- Data on the costs of providing His Majesty's Government of Nepal (HMG) rural health services.
- Information about fee-for-service, insurance, and public/private sector drug and contraceptive financing schemes, to assess whether these financing schemes are (1) meeting their financial objective; (2) having any impact on the

utilization of services (particularly on those with relatively less access to cash, i.e., woman and children); and (3) have any potential for significantly contributing to financial resources for the national rural health service system.

The above information contributed to the development of recommendations as to what support or other activities HMG, donor agencies and other organizations in Nepal might provide with respect to dealing with the financial constraints on the development or maintenance/sustainability of health sector activities in Nepal.

A summary of the data reviewed and the recommendations appear in Chapter 5.

### C. Methods

The information in this report represents research undertaken at various times since the author's first trip to Nepal in 1979. At that time many were concerned about the problem of financing primary health care (PHC) activities in Nepal. The author prepared a proposal to the Office of Health of the Agency for International Development (AID/W) to study community financing schemes in Nepal and the field research for this paper and an in-depth analysis of health post-based health insurance schemes<sup>1</sup> was carried out during May and June 1981. Data collection consisted of collecting documentation and interviewing several HMG officials and private voluntary agency representatives in the Kathmandu Valley (see Appendix A). Although the author had planned to visit four of the financing schemes, this did not seem appropriate owing to (1) the short time available to her in Nepal; (2) two of the schemes had recently prepared evaluation reports which could be utilized; and (3) it was unknown whether the other schemes were still in existence. Letters of inquiry were sent to these latter programs requesting information on their current status and replies were received in late 1981, after the author's return to the United States. Information from all of above sources has been included in this report.

1. Donaldson, D.S. An Analysis of Health Insurance Schemes in the Lalitpur District, Nepal, Seattle: University of Washington, 1982, master's thesis, 161 pp.

## CHAPTER II

### BACKGROUND INFORMATION ABOUT NEPAL

To assess the feasibility of mobilizing additional governmental, community, or individual resources for the support of Nepal's health sector it is necessary to understand the geographic, demographic, historic, social, and political factors which have contributed to Nepal's current macro-economic situation and the micro-economic behavior of Nepali households.

#### A. Geography

Nepal is a landlocked country between China and India comprising 145,797 square kilometers. There are three principal topographic regions: the Himalayan mountains in the north, the Terai (part of the tropical Ganges plain) in the south, and a hill region between these elevation extremes (see Figure 1). Three rivers -- the Kosi, Gandaki and Karnali -- divide the country from north to south, forming a second set of physical boundaries which isolate one part of the country from another.

#### B. Transportation

Nepal's harsh topography has limited the development of transportation and communication systems, and other infrastructure. There are only approximately 500 miles of motorable roads, principally in the Terai, some of which are blocked during the monsoon. Flights to remote parts of the country are also suspended during the monsoon, as the rural airstrips are not paved and there are limited radar facilities in the hills and mountains.

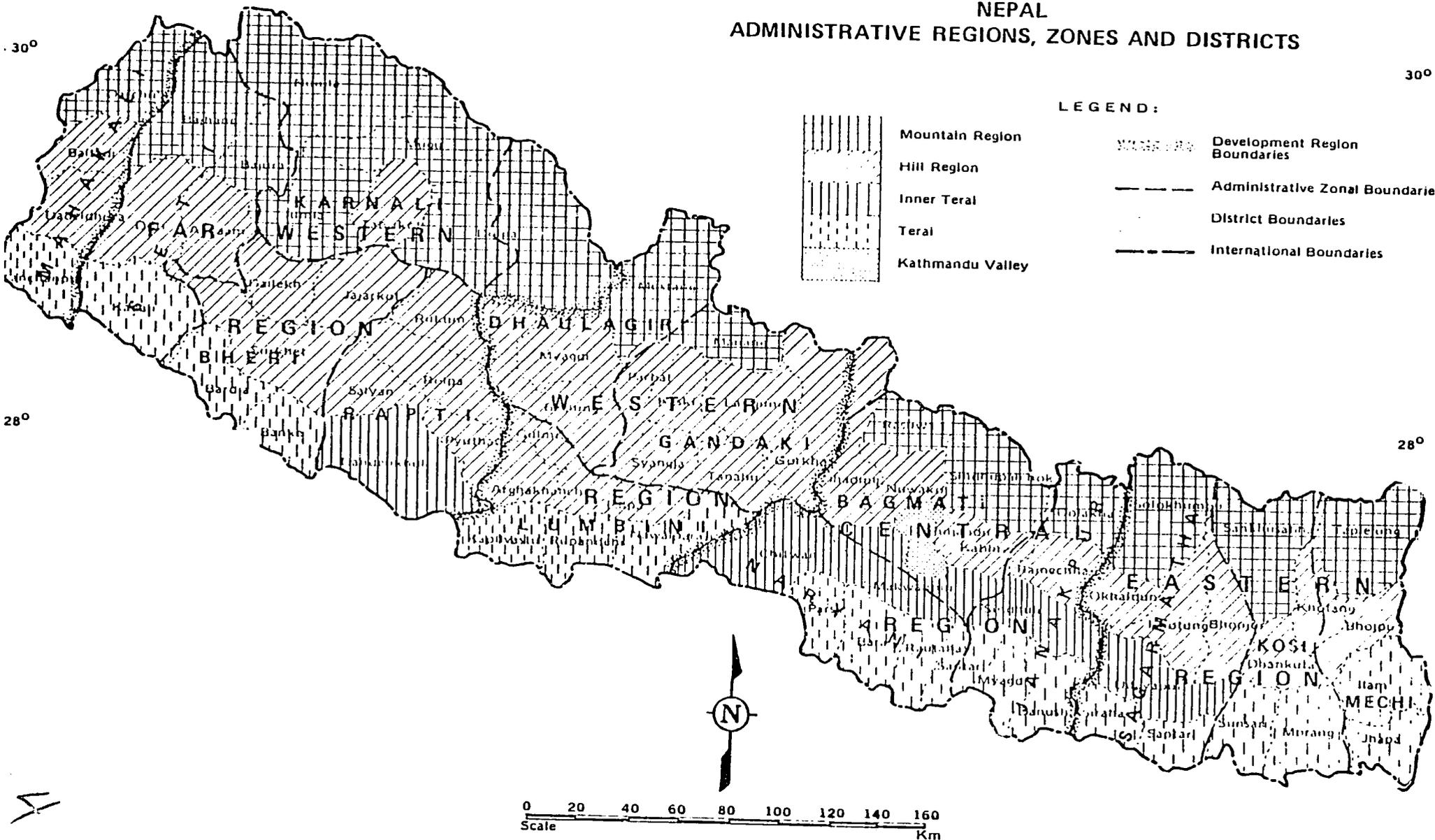
#### C. Political History and Current Political System

The Nepalese political system has been dominated by kings or prime ministers since the unification of several small feudal municipalities into the kingdom of Nepal in the 18th century. However, in 1962 the panchayat system was constitutionally instituted, which allowed for the election of public officials to posts in the following administrative levels of the government:

- Rastriya (national) panchayat
- 14 zonal panchayats
- 75 district panchayats

FIGURE 1

NEPAL  
ADMINISTRATIVE REGIONS, ZONES AND DISTRICTS



Source: Asian Development Bank. Economic Memorandum on Nepal. Manila: ADB, June, 1981; pg. v (NEP: Ec-5).

- 3,200 village and 20 town panchayats
- Wards (nine per panchayat)

Until recently, direct popular elections took place only at the ward level, with officials of the lower levels electing those of the next higher level. However, in the spring of 1979, expressions of discontent with the panchayat system resulted in His Majesty's Government of Nepal (HMG) instituting the following reforms:

- Freedom of speech.
- Freedom to congregate for political purposes.
- Election of members of all levels of the panchayat system by universal suffrage.
- Parliamentary, not royal, appointment of the prime minister.

These reforms were intended to demonstrate the willingness of the government to be responsive to the wishes of the electorate.

However, in understanding the political system in Nepal the reader must also recognize the continuing power of His Majesty the King. This power follows from the wealth of the ruling group, the position of the King as commander-in-chief of the armed forces and the people's belief that he is part deity.

#### D. Demographic Trends

In 1980, the population of Nepal was estimated to be 14.3 million persons and growing at a rate estimated between 2.3 to 2.6 percent per year. Six percent of Nepal's population lives in urban areas (defined to be concentrations of population greater than 10,000) and the remaining 94 percent lives in rural areas in small villages or scattered homes. This urban-to-rural ratio is the lowest in Asia and the third lowest in the world.

Approximately 10 percent of the population lives in the Himalayan region, 60 percent in the Hills, and 30 percent in the Terai. However, because only 2, 10 and 48 percent of the land in Mountains, Hills and Terai is arable; in 1980, there was on average only 0.13 hectares of cultivated land per capita in the Hills and Mountains and 0.32 hectares per capita in the Terai. It is estimated that these figures will decrease by about one third by the year 2000 (see Appendix Table B.1). As a consequence of the higher population pressure in the Hills and improved

malaria control in the Terai, there is some permanent migration from the Hills to the Terai (0.5 percent of the population). Out-migration to other countries is relatively insignificant and is limited to the wealthy and educated.

#### E. Land Distribution

Land holdings are not equally distributed among rural households. Three percent of households own 27 percent of the total cultivated land area; 10 percent of households own 60 percent of the cultivated area; and 54 percent own the remaining 11 percent of the land. Over 25 percent of households are landless, and farm on a tenancy or share-cropping basis where up to 50 percent of the principle crop goes to the landlord. Although ninety percent of the landless farmers are located in the Terai, and only 10 percent are in the Hills, the average land holding in the Terai is 1.7 hectares, whereas it is only 0.4 hectares in the Hills.

#### F. Household Income

Nepal's "work force" is comprised of 7.8 million people, 31 percent of which are employed in agriculture, 5 percent in the provision of services and 2 percent in industry. In 1971, 86 percent of the population was self-employed (including tenant farmers), 4 percent were unpaid family workers and 9 percent were persons employed for monetary wages (see Appendix Table B.2). However, 5.6 percent of the work force is usually unemployed and 63 percent is underemployed due to the seasonal nature of agricultural employment. Per capita annual income averages US \$176 in urban areas, but only US \$80 in rural areas. Up to two-thirds of all rural households must supplement their agricultural income in order to survive.<sup>2</sup> (The contribution of other activities to supplement agricultural incomes varies between the Hills and the Terai. See Appendix Table B.3).

A World Bank mission determined that 60 percent of the population have incomes below the minimum subsistence level (US \$62 per year), as defined by the National Planning Commission (NPC).<sup>3</sup> Furthermore, it is estimated that 47 percent of the population will still have incomes under subsistence levels in the year 2000 (see Table 1). Another NPC study determined only 36 percent of the population had incomes below subsistence levels. That study, however, also showed that about twice the proportion of rural persons as compared with urban persons were defined to be in absolute poverty (see Table 2).

TABLE 1

PERCENTAGE OF POPULATION IN ABSOLUTE POVERTY, 1979,  
AND PROJECTED DECLINE, 2000

Year 1979		Year 2000	
<u>Nepal</u>	<u>Low Income Countries</u>	<u>Nepal</u>	<u>Low Income Countries</u>
60	52	47 <u>/a</u>	22-26 <u>/b</u>

/a Corresponds to GDP growth of 4.0 percent and population growth of 2.6 percent.

/b Corresponds to GDP per capita growth rates of 2.7 percent for the "Base" scenario and 2.0 percent for the "Low" scenario.

Source: Huang, Y. et.al. Nepal, Development Performance and Prospects. Washington, D.C.: South Asia Regional Office, World Bank, December 1979, p. 58.

TABLE 2

PERCENT OF HOUSEHOLDS AND POPULATION  
BELOW POVERTY LINE, 1978

	Households			Population		
	Rural	Urban	Total	Rural	Urban	Total
Minimum Subsistence Income	41.22	22.08	40.30	37.23	16.97	36.20
Minimum Subsistence Consumption	34.34	19.86	33.67	32.14	20.01	31.54

Source: Centre for Economic Development and Administration. Planning for Basic Needs and Mobilization of Resources, Report of a National Seminar Held in Kathmandu, November 12-14, 1979. Bangkok: ILO-ARTEP, 1980, p. 206.

## G. Macro-Economic Situation

Over the Fifth Five-Year Development Plan, the average annual growth of the Nepalese economy was 2.2 percent (as measured by the change in GDP in constant prices). However, the per capita rate of growth has been negative since the size of Nepal's population increased on average by 2.6 percent per annum during the same period. The overall rate of growth in the agricultural sector was actually negative (-1.1 percent). Thus all of the growth was due to growth in the non-agricultural sector (8.6 percent) (see Table 3).

As a consequence of these trends a greater percentage of agricultural output has been required for domestic consumption rather than being available for export. Since agricultural products constitute 80 percent of Nepal's exports, these trends are manifest as part of the 5 percent decrease over the Fifth Plan in Nepal's exports. However, over the same period, the value of Nepal's imports increased by 15 percent (largely as a result of increases in the world price for petroleum).<sup>2</sup> Although the increasing deficit created in the current account has been covered by foreign assistance to Nepal, an increasing percentage of this assistance has consisted of loans as compared to grants. Until 1977, 70 percent or more of the foreign assistance was in the form of grants. However, by 1980 almost 50 percent of Nepal's foreign assistance consisted of loans (refer to Table 5). Thus increasing proportions of Nepal's export earnings are required for debt service payments.

## H. HMG Budget

The budget of Nepal is divided into two sections: (1) the regular or recurrent budget, which consists solely of HMG revenues; and (2) the development or capital budget, consisting of both HMG and foreign revenues. It should be noted, however, that a sizable proportion of HMG's development<sub>3</sub> budget includes recurrent as well as development expenditures.

Over the 10-year period 1969-79, HMG revenues covered from 58 to 67 percent of total expenditures. However, HMG revenues are projected to decline to 50 percent of total expenditures by 1985 (see Table 4). This decline is anticipated as (1) increasing amounts of foreign assistance can be absorbed as the result of earlier investments in improving the skills of public sector personnel; (2) donors continue to make assistance available to Nepal (as evidenced by the 25 percent average annual increase in foreign assistance commitments); and (3) as the rate of growth in HMG revenues slows.<sup>4</sup>

TABLE 3

GROSS DOMESTIC PRODUCT <sup>a/</sup>  
1974/75 - 1979/80

	(NRS million)						1975/76-
	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1979/80</u> Average Annual growth
1. Gross Domestic Product (current market prices)	<u>16,571</u>	<u>17,394</u>	<u>17,280</u>	<u>19,588</u>	<u>21,152</u>	<u>23,867</u>	<u>7.6</u>
Agriculture	11,550	11,611	10,506	11,752	12,290	12,969	2.3
Non-Agriculture	5,021	5,783	6,774	7,846	8,862	10,898	16.8
2. GDP Deflator	<u>100.00</u>	<u>100.54</u>	<u>96.96</u>	<u>108.35</u>	<u>112.72</u>	<u>128.94</u>	<u>5.21</u>
Agriculture	100.00	99.97	94.30	105.48	107.06	118.62	3.47
Non-Agriculture	100.00	101.72	101.39	112.96	121.65	143.83	7.54
3. Gross Domestic Product (1974/75 constant prices)	16,571	17,300	17,822	18,087	18,765	18,510	2.2
Agriculture	11,550	11,615	11,141	11,141	11,480	10,933	-1.1
Non-Agriculture	5,021	5,685	6,681	6,946	7,285	7,577	8.6
4. Per cent change in GDP (at constant prices)	--	<u>4.40</u>	<u>3.02</u>	<u>1.49</u>	<u>3.75</u>	<u>-1.36</u>	<u>2.2</u>
Agriculture	--	0.56	- 4.08	0.00	3.04	-4.76	-1.1
Non-agriculture	--	13.22	17.52	3.97	4.88	4.00	8.6
5. Per cent change in GDP Deflator	--	<u>0.54</u>	<u>-3.50</u>	<u>11.75</u>	<u>4.03</u>	<u>14.39</u>	<u>5.2</u>
Agriculture	--	0.03	- 5.67	11.86	1.50	10.80	3.5
Non-Agriculture	--	1.72	-0.32	11.41	7.69	18.25	7.5

<sup>a/</sup> Revised estimates.

Source: Central Bureau of Statistics.

From: Asian Development Bank. Economic Memorandum on Nepal. Manila: ADB, June 1981, p.42; (NEP: Ec-5).

TABLE 4

THE RESOURCE GAP IN NEPAL'S FINANCES  
1970/71 - 1984/85  
(AT CURRENT PRICES)

(NRs. millions)				
Year	Total Ex- penditure (TE)	Total Revenue (TR)	TR as a Percent of TE	Remarks
1970-71	769.5	459.7	60	Actual
1971-72	889.6	553.4	62	"
1972-73	982.8	615.8	63	"
1973-74	1226.3	766.4	62	"
1974-75	1513.7	1008.4	67	"
1975-76	1913.4	1115.6	58	"
1976-77	2330.4	1322.9	57	"
1977-78	2674.9	1582.0	59	"
1978-79	3114.6	1811.9	58	"
1979-80	4183.9	2121.3	51	Budget Estimate
1980-81	4787.8	2556.3	53	Projections
1981-82	5783.6	3030.7	52	"
1982-83	6986.5	3593.3	51	"
1983-84	8439.5	4260.2	50	"
1984-85	10194.8	5050.9	50	"

Note: The model used for projections was:  $\log y = \log a + bx + u$ .

For Expenditure:

a = 599.07  
b = 0.19  
 $r^2 = 0.99$   
t = 28.14

For Revenue:

a = 392.89  
b = 0.17  
 $r^2 = 0.99$   
t = 28.14

Where:

y = Expenditure or  
Revenue  
x = Time  
b = Rate of Growth  
a = Constant  
u = Error term

Source: Centre for Economic Development and Administration.  
Planning for Basic Needs and Mobilization of Resources,  
Report of a National Seminar, Kathmandu, November  
12-14, 1979. Bangkok: ILO-ARTEP, 1980; p. 247.

## I. Foreign Assistance

Between the First and Fourth development plans (1955-75), foreign assistance decreased from 62 to 23 percent of total government expenditures. However, late in the Fifth development period, foreign assistance as a percentage of total expenditures began to increase (see Table 5). In light of the increased development expenditures planned for the Sixth Plan (particularly in the social services) and the preceding discussion about the unlikelihood of HMG's revenues rapidly increasing to cover development and recurrent expenditures, donor assistance will likely continue to dominate in the development budget. Furthermore, the World Bank has urged donors to increase support for local costs and commodity assistance to reduce the constraints imposed by HMG's limited budget.<sup>5</sup>

China and India are Nepal's two principal donors and do not belong to the World Bank led-Nepal Aid Group. Assistance from this latter group of 40-plus multi- and bilateral groups comprises approximately 60 percent of Nepal total foreign assistance (see Appendix Table B.4).

TABLE 5  
FOREIGN AID IN NEPAL'S FINANCES  
1960/61 - 1979/80

Year	Development Expenditure	Foreign Grants	Foreign Loans	Total Foreign Aid	(NRs. Millions)
					Foreign Aid as Percent of Total Expenditure
1960-61	259.9	231.1	-	231.1	88
1970-71	465.0	270.7	32.5	303.2	6
1971-72	564.6	242.0	38.9	280.9	49
1972-73	608.6	180.3	47.4	227.7	37
1973-74	751.5	222.6	87.9	310.5	41
1974-75	967.2	282.8	104.0	386.8	39
1975-76	1238.9	359.7	145.9	505.6	40
1976-77	1498.3	392.6	164.3	556.9	37
1977-78	1808.0	466.6	381.8	848.4	46
1978-79*	2060.4	586.4	453.6	1040.0	50
1979-80*	2969.6	968.3	908.0	1876.3	63

\* Figures for 1978-79 are revised estimates and for 1979/80 are budget estimates.

Source: Centre for Economic Development and Administration.  
Planning for Basic Needs and Mobilization of Resources,  
Report of a National Seminar Held in Kathmandu,  
November 12-14, 1979. Bangkok: ILO-ARTEP, 1980, p.251.

## CHAPTER II NOTES

1. USAID/Kathmandu Nepal, Country Development Strategy Statement, FY'82, Kathmandu: USAID, January 1980, Annex A, pp. 1-5.
2. Asian Development Bank. Economic Memorandum on Nepal. Manila: ADB June 1981 (NEP: Ec-5), p. 6.
3. USAID/Kathmandu. Project Paper: Integrated Rural Health/Family Planning Services, Project # 367/0135, April 1980; p. 22.
4. The rate of growth in tax revenues which comprised over 80 percent of HMG's revenues in the Fifth Plan has declined from 45 percent per annum during the 1960's to 17 percent in the early 1970's and 16 percent in the late 1970's (Malla, p. 4). This decline is partially attributed to (1) decreasing returns from efforts to improve the efficiency of the tax collection system, (2) the low rate of growth of real incomes, and (3) the reduced flow of agricultural exports, taxes of which form a significant portion of the tax revenues.
5. Huang, Y. et al. Nepal, Development Performance and Prospects. Washington, D.C.: South Asia Regional Office, World Bank, December 1979, pp. vi-vii.

CHAPTER III  
THE HEALTH SECTOR IN NEPAL

A. Major Health Problems of the Nepalese

Although there is no national system for the registration of vital events, data from the census and other studies provide limited information about the health of the Nepalese population. The crude birth rate has averaged 44.5 live births per 1,000 population for the last decade. The crude death rate has been calculated to be 23 deaths per 1,000 population. In 1980, the infant mortality rate (IMR) was 152 deaths per 1,000 live births and had decreased from a 1960 estimated rate of 200 per 1,000. The IMR is highest in the mountains, lower in the Terai, and lowest in the Hills (169, 157, and 137 deaths per 1,000 live births, respectively) and is at least two times higher in rural than urban areas. About 40 percent of the population is under 15 years of age, 50 percent between the ages of 15 and 49, and 10 percent over 49 years of age. Life expectancy is 45 years at birth.<sup>1</sup>

Communicable diseases and nutritional deficiencies remain the major threats to life and health in Nepal. The incidence of malaria is about 12,000 new cases per year. TB and leprosy each affect about 1 percent of the population. G-I complaints due to bacterial, viral, or parasitic causes are common, and dehydration resulting from diarrhea is a leading cause of infant and child mortality. A 1975 nutritional study found that protein-calorie malnutrition (PCM) affected at least 50 percent of the Nepalese children.<sup>2</sup> Goiter is prevalent, in the mountainous regions. Anemia is believed to be a serious problem in areas where hookworm infestation is high and among women of child-bearing ages.

Socio-economic conditions as well as the lack of modern health services in most of Nepal are primary contributing factors to the high levels of morbidity and infant and child mortality.

Education, Religion and Traditional Beliefs

Currently 70 percent of all eligible children are enrolled in primary schools; however, only 35 percent of the male and 5 percent of the female adults are now literate.<sup>3</sup> Higher education is enjoyed by only a few and the emphasis is on developing vocational skills.

Given Nepal's location, it is not surprising that the predominant religions are Hinduism (89 percent of the population) and Tibetan Buddhism (7.5 percent). The doctrines of both

religions include beliefs about the role of deities and fate in all affairs of life, including illness.

### Agricultural Production and Malnutrition

As mentioned previously, there is little arable land per capita in Nepal. Furthermore, the rate of growth in agriculture output (2.2 percent) is being outstripped by the rate of growth of the population (2.6 percent). It has been estimated that agricultural production in the hill and mountainous regions provides sufficient food for only 260 days per year per person, whereas in the Terai sufficient food is produced for 629 days.<sup>4</sup> Given that the food shortages occur in the most populated areas of the country, it is not surprising that 50 percent of Nepalese children have been found to have protein-calorie malnutrition (PCM).

### Sanitation

Outside of the largest cities, few households have running water, latrines, or adequate ventilation for their fireplaces. Eighty-three percent of the urban population and 7 percent of the rural population have access to piped water. Unfortunately, these systems are frequently contaminated by fecal wastes. Only portions of several urban areas are served by sewage systems. Surveys have found 80 percent or more of the sampled population have one or more intestinal parasites. By 1990, it is expected that 50 percent of the rural population will have access to piped water.

## B. Health Services in Nepal

### B.1 Private Sector

For purposes of this paper, private health sector activities are those which are paid for by Nepalese households and not by HMG,<sup>6</sup> e.g., traditional medical practitioners, drug shops and pharmacies, the private practices or clinics of health assistants or physicians, and some mission-run hospitals.

#### Traditional Providers

There are at least seven general types of traditional healers: compounders, herbalists, birth attendants (surehnis); "knowers" (janne manches) and "blowers" (phunkane); shamen (dhamis or jhankris), and those with Tibetan or ayurvedic medical training. The exact number of faith or ritual healers (janne manche, phunkane, dhami jhankris) is unknown but has been estimated at 400,000 to 800,000 persons or between 28 and 56 per 1,000

population.<sup>7</sup> Furthermore, these healers deal with illness within the belief models of the Nepalese. Thus, the services of these healers may be utilized in preference to or in concert with allopathic treatment.

### Pharmacies

Due to a lack of legislation regarding the distribution of pharmaceuticals, there is no account of the number of shops in rural Nepal in which drugs are sold. There are 62 private importers of drugs, 22 of which are wholesalers. The remaining importers are retailers who act as outlets for India manufacturers. The importance of this group of institutions with respect to the provision of drugs is illustrated by the fact that the private sector accounted for 90 percent (Rs, 70 million) of the total value of drugs imported in 1978/79 in Nepal. Imported drugs account for about 90 percent of the estimated total value of drugs consumed (and about 8 percent of total imports). (For further information about the value of pharmaceutical imports, see Appendix Table B.5.) Royal Drug Limited (RDL) currently produces the other 10 percent of drugs consumed, from imported raw materials. It is estimated that, by 1986, production by RDL will meet almost 100 percent of the country's needs for essential drugs, or about 70 percent of the population's total pharmaceutical needs.<sup>8</sup>

### Private Clinics or Practices of Health Personnel

There is little information which documents the numbers of institutions or personnel engaged in delivery of allopathic services outside of the public health system. Although HMG pays its health workers a nonpracticing allowance, many of these workers undoubtedly refer patients to their private practices.

### Private Hospitals

There are public and private hospitals in Nepal. The private hospitals are primarily managed by missionary or charitable groups. It is the intention of HMG that the operation of these facilities be transferred to government control by 1990.

## B.2 Public Sector

Prior to the 1970's, Nepal's public health programs consisted primarily of several vertical disease control programs, e.g., against malaria, TB, and leprosy. In 1965, some MCH/FP activities were started in a limited number of districts. In 1972, the vertical and FP/MCH services were experimentally integrated in the health facilities posts two districts under one central administrative organization.<sup>9</sup>

An HMG/AID/WHO evaluation in 1975<sup>10</sup> indicated that this integrated approach was more cost-effective than delivery of the same services through vertical programs. HMG then began to integrate the services offered in other districts as rapidly as possible, without compromising the effectiveness achieved by the vertical projects.

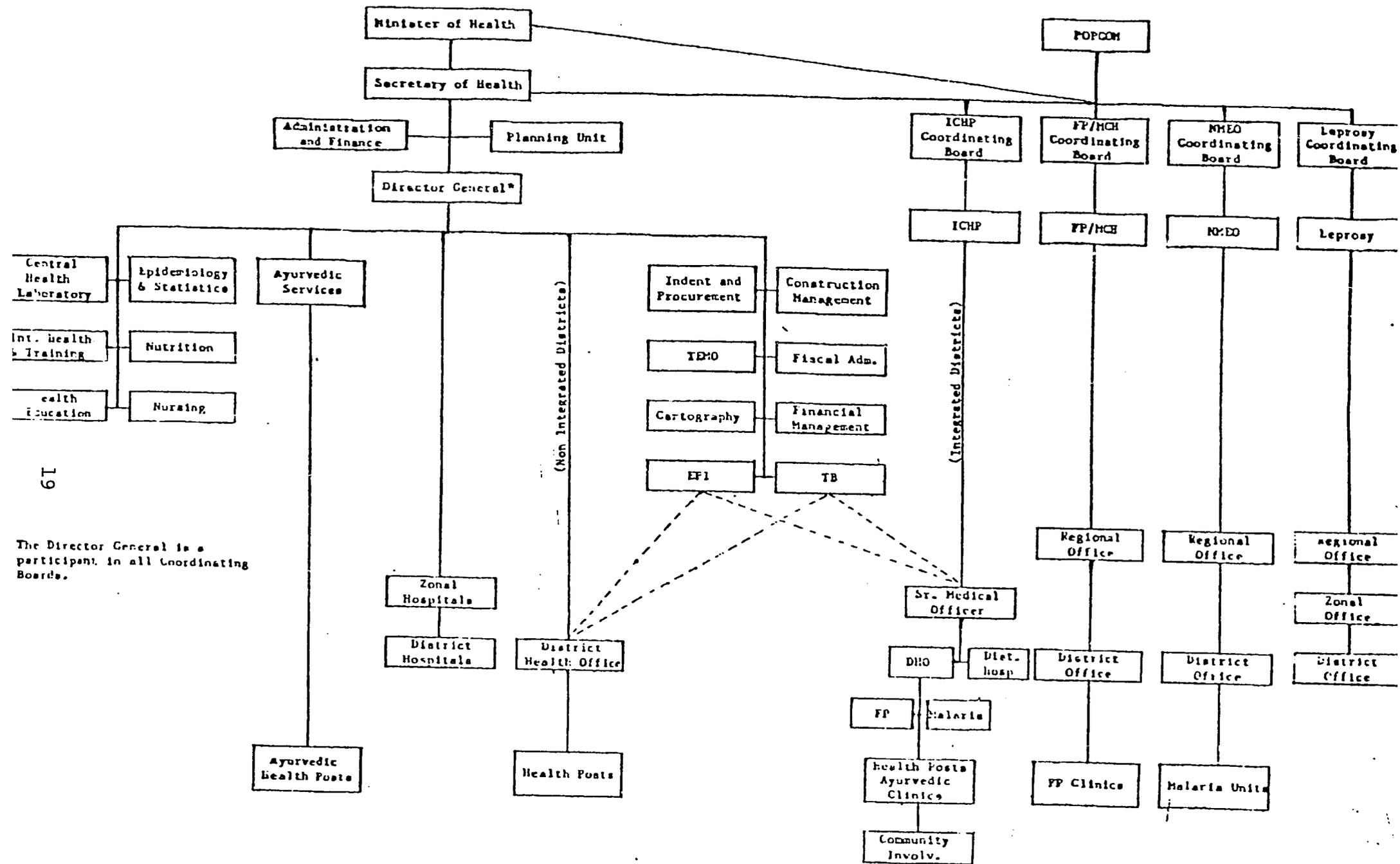
Ideally, the services offered at a fully integrated health post would include:

- Family planning motivation with emphasis on sterilization and the supply of contraceptives.
- Nutrition monitoring, including oral rehydration education.
- Health education.
- Smallpox surveillance.
- Immunization (smallpox, BCG and DPT).
- Recording of vital events.
- Case finding, treatment and followup of TB and leprosy patients.
- Referral services to district hospitals.
- Treatment of common illnesses.
- Training the traditional birth attendant and local health volunteers.
- Antenatal and postnatal care and delivery in the home or at the health post.
- Malaria surveillance, treatment or remedial measures.<sup>11</sup>

However, as of 1981 only 6 of the country's 75 districts had this full range of services available, although 23 of the remaining districts provided some level of integrated health post services. Primary responsibility for administering the provision of services in these districts rests with the Integrated Community Health Services Development Project (ICHSDP). In the remaining districts, FP/MCH, malaria, leprosy and TB control activities are all carried out separately from the services offered by the rural health post. According to the plans of HMG, 48 of Nepal's districts are to be integrated by 1985.

Figure 2 is a schematic representation of the organizations and facilities which make up the public health sector in Nepal. The fact that malaria, FP/MCH, leprosy, TB, and EPI programs are represented as organizationally separate from ICHSDP illustrates the importance that these organizations have continued to maintain.

TENTATIVE INTERIM ORGANIZATION  
(FIRST PHASE PROJECT PERIOD)



Source: USAID/Kathmandu. Project Paper: Integrated Rural Health and Family Planning Project (IRH/FP), Project #367-0135, April 1980, p. 18.

At the same time that this integration process is proceeding, HMG is also expanding the geographic coverage of health services to achieve the goals of its Long Term Health Plan, 1975-1990:

- Lengthen life expectancy.
- Achieve balanced regional development of health services.
- Control population growth (reduce CBR from 40 to 38 births per 1,000 woman years).
- Control and eradicate communicable and preventable diseases.

Thus, even though the number of health posts increased by almost 250 percent between 1970 and 1980 to 533 health posts, HMG has planned to further increase this number to 1,050 by 1985 and to 1,662 by 2000 to reach the following health post facility to population ratios:

Mountains: 1/5,000 population  
Hills : 1/10-15,000 population  
Terai : 1/20-25,000 population

These and other planned increases in health facilities are shown in Table 6.

HMG also has plans to increase the number of personnel in the public health service. The total number of skilled health personnel in 1980 was 5,358 (see Table 7)<sup>12</sup>. The number of skilled and non-skilled personnel in the health sector was 14,898. By 1985 the government plans to expand the number of skilled personnel by 142 percent over the 1980 levels.

### C. Financing the Public Health Sector

An obvious consequence of HMG's plans to continue to increase the number of public sector health personnel and facilities will be further increases in the capital and recurrent health sector budgets. There is an increasing concern on the part of donors about the ability of countries such as Nepal to finance the recurrent costs of development (especially social service) projects. An examination of trends in the resources which HMG has historically committed to supporting the health sector can illustrate what might be expected of HMG in the current five-year plan and beyond.

TABLE 6  
EXPANSION OF HEALTH SERVICES  
1970/71 - 2000

	<u>1970/71<sup>1/</sup></u>	<u>1980<sup>2/</sup></u>	<u>1985<sup>3/</sup></u>	<u>2000<sup>3/</sup></u>
District Health Offices	-	48	62	-
Hospitals	55	71	99	118
Number of Hospital Beds	2,006	2,568	4,020 <sup>a</sup> 3,271 <sup>b</sup>	6,790 <sup>a</sup> 4,880 <sup>b</sup>
Health Centers	37	26	-	-
Health Posts	153	533	1,050 <sup>a</sup> 1,570 <sup>b</sup>	1,662 <sup>a</sup> 2,307 <sup>b</sup>
Ayurvedic Clinics	82	85	-	-
FP/MCH Clinics	-	233	185 <sup>c</sup> 1,550 <sup>d</sup>	- -
Malaria Unit Offices	-	157	-	-
TB & Other Clinics	-	42	-	-
Health Labs.	-	50	82	-
Training Campuses	-	11	-	-

NOTES: - data not available from sources used  
a. "Projections on the basis of planning purposes"  
b. "Projections on the basis of population norms"  
c. Clinics already established in old health posts  
d. Panchayat-based clinics (there are 3,220 panchayats in Nepal)

SOURCES: 1. Ministry of Finance/HMG, Economic Survey, Fiscal year 1974-75.  
2. Ministry of Health/HMG, Health Information Bulletin, No. 1, June 1980.  
3. HMG (March 1981) Planning for Meeting the Basic Minimum Needs of the People Between 1980-2000, Nepal, Chapter 3: Health Sector.

TABLE 7

NEPAL: TOTAL SKILLED MANPOWER REQUIREMENTS  
FOR THE HEALTH SECTOR BY THE END OF  
THE SIXTH PLAN (1985)

	Current Filled Posts	Total Required by the End of Sixth Plan	Net Increase	Percent Change
Doctors	442	892	450	102
Health Educators	58	179	121	209
Med., Lab., Pharma. Technicians	173	672	499	288
Nurses	455	1,044	589	129
Auxiliary Nurse Midwives	1,049	2,036	987	94
Sanitarians and Health Inspectors	74	346	272	378
Senior Auxiliary Health Workers	653	1,221	568	87
Auxiliary Health Workers	932	1,928	996	107
Village Health Workers	1,522	4,624	3,102	204
<b>TOTAL</b>	<b>5,358</b>	<b>12,942</b>	<b>7,584</b>	<b>142</b>

SOURCE: "Planning for Health Manpower" - MOH and Institute  
of Medicine - Kathmandu - June 1980.

One often utilized measure of commitment of governments to a sector is the percentage of total government expenditures allocated to health. During its Third Plan (1965/66-1969/70) HMG spent 5.2 percent of its total expenditures (Rs. 2,471.4 million) on health, during the Fourth Plan (1970/71-1974/75) 5.0 percent of total expenditures (Rs. 5,381.9 million), and during the Fifth Plan (1975/76-1980/81) 4.9 percent of its total expenditures (Rs. 13,481.3 million) (see Appendix Table B.6). Thus, HMG is overtime committing proportionately less of its total revenues to the health sector relative to other sectors. However, since the figures on which the above percentages are based include foreign assistance as well as HMG funds, it is not possible to delineate trends in the allocation of HMG resources alone to the health sector.

Several other trends can be delineated by disaggregating the total health budget into the regular and development budgets and by considering the amount of foreign assistance actually dispersed. For example, over the Fifth Plan (1975/76-1979/80), the regular (recurrent) health budget increased from Rs. 33.2 million to Rs. 60.2 million (in current terms), or to Rs. 45.1 million, a 36 percent increase in real terms. Over the same period, the development health budget (Rs. 93.3 million) did not increase in current terms and thus declined by 25 percent in real terms.<sup>13</sup> At the same time, foreign assistance disbursements for health decreased from 52 percent of the development budget in 1975/75 to 26 percent in 1975/76, but increased to 78 percent in 1979/80 (see Table 8).<sup>14</sup> The above information suggests that HMG shifted its resources for health away from development expenditures to support for recurrent expenditures. Furthermore, since the development budget also includes recurrent costs covered by donors, the recurrent budget of the health sector over the Fifth Plan was even greater than the regular budget figures indicate.

It has been estimated that the total budgetary requirement for the health sector over the Sixth Plan (1980/81-1984/85) will equal US \$192.905 million. Only a small percentage (9.2%) of HMG's revenues or foreign assistance monies will be expended for hospital-based, curative services, whereas 37 percent of the estimated budget is designated for community water supply and sanitation efforts, 17 percent for rural health services, 17 percent for control of communicable diseases and 11 percent for other programs for the promotion of health (see Table 9). It is estimated that 83 percent of this budget will be made up of foreign assistance monies. Thus, since recurrent expenditures are estimated to be 70 percent of the health budget,<sup>15</sup> much of this foreign assistance will be required to meet recurrent expenditures. (Details about health sector assistance for the Sixth Plan can be found in Appendix Table B.7.)

TABLE 8

HEALTH AND TOTAL, REGULAR AND DEVELOPMENT  
EXPENDITURES AND FOREIGN ASSISTANCE COMMITMENTS  
AND DISPERSEMENTS, 1975/76 - 1979/80

	(NRs. millions)				
	1975/76	1976/77	1977/78	1978/79	1979/80
Health Expenditure (as a % of total expenditure)	126.5 (6.6)	125.1 (5.6)	134.8 (5.1)	150.7 (5.0)	153.5 (4.3)
Regular	33.2	32.5	41.5	52.2	60.2
Development	93.3	92.6	96.3	98.5	93.3
F.A. Commitment	52.4	42.9	38.5	48.4	110.8
F.A. Disbursement (% of hlth devel. exp.)	48.6 (52.1)	24.1 (26.0)	34.8 (36.0)	46.9 (47.6)	73.1 (78.3)
Total Expenditure	1,913.4	2,330.4	2,674.9	3,020.5	3,542.1
Regular	674.5	832.1	866.9	1,041.7	1,195.5
Development	1,238.9	1,498.3	1,808.0	1,978.8	2,346.6
F.A. Commitment	1,415.7	1,911.2	1,956.2	2,417.3	1,897.2
F.A. Disbursement (as a % of devel. exp.)	505.6 (40.8)	556.9 (37.2)	848.4 (46.9)	989.4 (50.0)	1,363.8 (58.1)

NOTE: F.A. = Foreign Assistance

SOURCES: 1975-79: Ministry of Finance/HMG. Economic Surveys, Fiscal Years 1977/78, 1979/80.

1979/80: Asian Development Bank. Economic Memorandum on Nepal. Manila: ABD (NEP: Ec-5), June 1981; appendix tables 38 and 39, 51.

TABLE 9

ESTIMATED BUDGET REQUIREMENT FOR THE SIXTH PLAN\*,  
1980/81 - 1984/85  
(000 \$)

	HMG	Foreign AID	Total (000 \$)	%	FA Total %
<u>Rural Health Services</u>	<u>3235</u>	<u>29345</u>	<u>32580</u>	<u>16.9</u>	<u>90</u>
- Health Posts	1958	6233	8191	4.2	76
- Community Health Training and Research	1277	10192	11469	6.0	89
- Primary Health Care	-	12920	12920	6.7	100
<u>Curative Services</u>	<u>659</u>	<u>17091</u>	<u>17750</u>	<u>9.2</u>	<u>96</u>
- Hospital Services	231	15889	16120	8.4	99
- Ayurvedic Services	428	1202	1630	0.8	74
<u>Preventive Services</u>	<u>11405</u>	<u>20989</u>	<u>32394</u>	<u>16.8</u>	<u>65</u>
- Malaria Control	10001	18922	28923	15.0	65
- TB Control	1404	2067	3471	1.8	60
- Immunization Program (EPI)	(1942)	---	---	---	---
<u>Promotive and other Preventive Programs</u>	<u>3652</u>	<u>17232</u>	<u>20884</u>	<u>10.8</u>	<u>83</u>
- Nutrition and Goitre Control	202	2353	2555	1.3	92
- FP/MCH	2442	9771	12213	6.3	80
- Environmental Health	168	672	840	0.5	80
- Control of Blindness	840	4436	5276	2.7	84
<u>Support. Services</u>	<u>1234</u>	<u>6301</u>	<u>7535</u>	<u>3.9</u>	<u>84</u>
<u>Health Related Programs</u>	<u>12545</u>	<u>69217</u>	<u>81762</u>	<u>42.4</u>	<u>85</u>
- Community Water Supply and Sanitation	11933	59244	71177	36.9	83
- Pharmaceuticals	612	9973	10585	5.5	94
TOTAL (excluding EPI)	<u>32730</u>	<u>160175</u>	<u>192905</u>	<u>100.0</u>	<u>83</u>

Excluding the Immunization Program

Source: WHO.

The information presented in this section and that presented earlier about Nepal's economy in general, provides support for the following two points.

- (1) "It is unlikely that Nepal will be able to increase its resource mobilization efforts sufficiently to finance the domestic costs of both an accelerated investment program and the country's pressing recurrent expenditure requirements, particularly in the social sector."<sup>16</sup>
- (2) If availability of donor funds is contingent on countries demonstrating that the recurrent costs of health sector development projects can be met, then countries like Nepal must determine:
  - a) How services could be provided more cost-effectively.
  - b) What services are the most essential (and economically feasible) to provide.
  - c) How nongovernmental resources, i.e., those of individuals and communities, can be collected and managed to alleviate the recurrent cost burden of health activities to the government.

Given HMG's policy that "Health services shall be fee payable eventually." It is appropriate to explore the potential of communities and individuals' resources to provide some financial support for public health services. Thus, in the subsequent sections of this report, available information about (1) individuals' payments for private health services, (2) the operating costs of health posts, and (3) currently operating or potential health financing mechanisms, will be presented for the purpose of assessing the potential for individual or community payments to support the provision of public health services in Nepal.

### CHAPTER III NOTES

1. USAID/Kathmandu. Country Development Strategy Statement, FY'82, Kathmandu: USAID, January 1980, pp. 3, 23-24.
2. Pourbaix, Philippe. A Nutrition Survey in Nepal. Delhi: Southeast Asia Region, WHO; Project: SEARO 0097.
3. USAID/Kathmandu, op.cit., p. 3.
4. Huang, Y, et al. Nepal, Development Performance and Prospects, Washington, D.C.: South Asian Regional Office, World Bank, December 1979, p. 8.
5. Asian Development Bank. Economic Memorandum on Nepal. Manila: ADB (Ec-5), June 1981, p. 23.
6. The definition of the private sector is problematic in that many services are (or have been) subsidized by HMG, e.g., the costs of training physicians or reduction of tariffs on pharmaceuticals sold by private pharmacists.
7. Shrestha, R.M. and M. Lediard. Faith Healers: A force for Change, Preliminary Report of an Action Research Project of the Information, Education and Communication Division, Nepal Family Planning and Maternal and Child Health Project, 1980/81.
8. Suwal, P.N., and UNCTAD Secretariat. Technology Policies in the Pharmaceutical Sector in Nepal. Geneva: UNCTAD, 1980, pp. viii-ix, 13-14.
9. A more complete description of the public health sector in Nepal can be found in: Grant, R.Y., et al. An Evaluation of AID-Financed Health and Family Planning Projects in Nepal, Washington, D.C.: APHA, January 26 - March 26, 1980 (Assign. No. 582015/583008), pp. 15-17.
10. HMG/AID/WHO Team. Report on the Evaluation of Integrated Basic Health Services in Nepal. January-February, 1975.
11. HMG. Long Term Health Plan, 1975-1990.
12. If physicians and nurses were evenly distributed with respect to the population, there would be only 1 physician per 32,500 population or 1 nurse per 34,250 population. Given that 75 percent of the physicians and 85 percent of the nurses are located in urban areas of the country, the distribution of these skilled workers in rural areas is even lower.

13. Calculations were performed using numbers in Table 8, using 7.5 percent as the average annual inflation.
14. Although during the Fifth Plan, foreign assistance increased as a proportion of the health budget, during 3 of the 5 years (1976/77-1978/79) foreign assistance comprised a greater proportion of development expenditures overall than in the health sector considered alone.
15. USAID/Kathmandu. Integrated Rural Health/Family Planning Services, (IRH/FP), Kathmandu: USAID, Project #367-0135, April 1980; p. 22.
16. USAID/Kathmandu. Country Development Strategy Statement, FY' 84, Kathmandu: USAID, January 1982, p. 61.

## CHAPTER IV

### THE POTENTIAL FOR COMMUNITY AND/OR INDIVIDUAL CONTRIBUTIONS TO FINANCE THE RECURRENT COSTS OF HEALTH SERVICES IN NEPAL

#### A. Survey Data on Household Health Expenditures

This section of the paper will review available survey information about Nepalese household expenditures for health, for the purpose of assessing households' ability and willingness to pay for health services. Given the low average incomes of the Nepalese and that 50 percent of the population has annual incomes under a defined measure of absolute poverty, it is important not only to review information about how much the Nepalese pay, but also to whom, and for what, and when, in considering questions about alternative schemes for financing the delivery of health services in Nepal. The utility of the data reviewed is limited to the extent that (1) information about all of the variables which affect health services' use was not available, (2) the numbers recorded are from incomplete annual data, and (3) the length of time since the data was collected.

##### A.1 Urban Household Surveys

The Nepal Rastra Bank's 1973-75 Household Budget Survey provides information on household medical care expenditures in 18 urban areas. Average household size in these urban areas ranged from 4.1 to 5.6 persons, and average annual household income ranged from Rs. 4,332 to 7,620 (the survey doesn't specify if this measure includes cash and goods or cash only). Household average expenditures ranged from Rs. 4,080 to 8,124. Average annual expenditures for medical care ranged from Rs. 2.5 to 98.4 (or from 0.1 to 1.2 percent of total expenditures) and for drugs<sup>3</sup> from Rs. 52.0 to 264 (or from 1.3 to 3.2 percent of total expenditures). Thus, the average total annual household expenditures for medical care and drugs ranged from Rs. 54.5 to 362.40 (or from 1.3 to 4.5 percent of total households expenditures) and the average household expenditure per capita per year ranged from Rs. 12 to 61. (These figures were calculated from the monthly figures appearing on Table 10).<sup>4</sup>

##### A.2 Rural Household Surveys

The 1972 Agricultural Credit Survey of 7 districts in Nepal's hills and 15 districts in the Terai (see Figure 3) provides the most geographically comprehensive information to date on rural, farm households expenditures for medical care.<sup>5</sup> The proportion of households that reported to have made some expenditure for

TABLE 10

MEDICAL CARE EXPENDITURE (Rs.) SURVEY DATA FROM 18 URBAN AREAS IN NEPAL  
1973-1975

District/Population	Average HH Size (# of persons)	Average HH Monthly Income	Average Monthly Expenditures (A)	Average HH Monthly Expenditures for		Total Medical Expenditures	(B) As a Percent of (A)	'C) As a Percent of (A)
				Medical Care (B)	Drugs/Medicines (C)			
Kathmandu 150,402	5.7	653	645.12	2.98	14.41	17.29	0.4	2.7
Lalitpur 59,049	5.8	538	543.19	8.20	17.19	25.39	1.5	3.2
Biratnagar 45,100	5.3	561	623.85	4.60	22.36	26.96	0.7	3.6
Bhaktapur 40,112	5.9	361	366.97	0.43	7.57	8.00	0.1	2.1
Nepalgunj 25,523	5.3	437	443.06	1.61	15.45	17.06	0.4	3.5
Pokhara 20,611	4.7	440	485.47	0.21	15.10	15.31	0.0	3.1
Bhairahawa 17,272	4.5	416	436.11	0.33	13.01	13.34	0.1	3.0
Hetauda 16,194	5.3	429	420.92	0.75	8.96	9.71	0.2	2.1
Janakpur 14,294	4.1	579	608.36	3.71	17.84	18.55	0.6	2.9
Birgunj 12,199	5.4	623	602.05	5.11	21.34	27.45	1.0	3.5

District/Population	Average HH Size (# of persons)	Average HH Monthly Income	Average Monthly Expenditures (A)	Average HH Monthly Expenditures for		Total Medical Expenditures (B)	As a Percent of (A)	
				Medical Care (B)	Drugs/Medicines (C)		(B)	(C)
Bhadrapur 7,499	5.3	713	677.37	1.32	15.14	16.46	0.2	2.2
Ilam 7,299	5.2	608	622.46	1.33	10.77	12.10	0.2	1.7
Mahendranagar 6,291	5.4	635	626.36	0.52	15.31	15.83	0.1	2.4
Ghorahi (Dang) 5,260	5.9	451	471.98	0.91	5.33	6.24	0.2	1.1
Dhankuta 4,137	5.7	447	507.30	0.63	5.66	6.29	0.1	1.1
Baglung 3,377	5.3	576	586.33	0.30	13.24	13.54	0.1	2.3
Surkhet 3,362	4.9	366	339.84	0.63	4.34	4.97	0.2	1.3
Okhaldunga 3,128	(5.3)	539	563.97	0.51	9.24	9.75	0.1	1.6

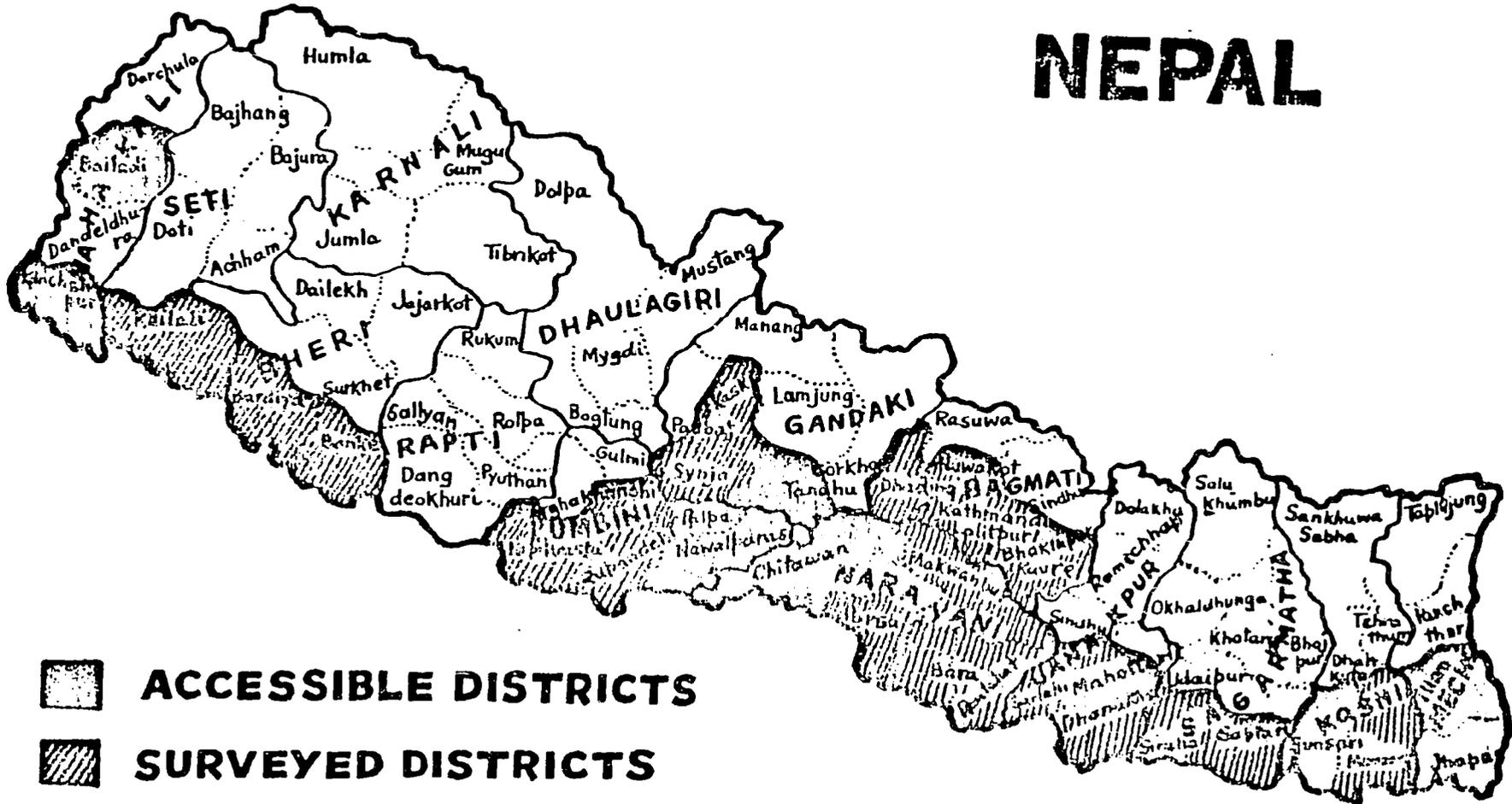
NOTE: HH denotes "household"

SOURCE:<sup>5</sup> Nepal Rastra Bank (1978) Household Budget Survey, Kathmandu: Nepal Rastra Bank, 18 volumes.

FIGURE 3

DISTRICTS IN THE AGRICULTURAL CREDIT SURVEY

# NEPAL



SOURCE: Nepal Rasthra Bank, Agriculture Credit Survey, Vol. IV: Summary and Recommendations (1974).

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medical care during the year prior to the survey ranged from 23 to 100 percent of households surveyed in any of the 22 areas. In 72 percent of the areas surveyed (17 out of 22), 90 percent or more of the households reported having made some expenditure during the year for medical care (see Table 11). On average, all of the households in the survey spent Rs. 64 annually for medical care. Thus, expenditure for medical care comprised 1.9 percent of total household expenditures, if foodstuffs are included, and 8.3 percent of total household expenditures if foodstuffs are excluded (see Appendix Tables B.8 and B.9). Since the average size of households in the survey is six persons, the average per capita expenditure was Rs. 10.67.

The above average expenditure figure can be disaggregated for large, medium, and small farm sizes<sup>6</sup> and equaled Rs. 139, and 49, respectively. For all three farm size groups, expenditures in the hill areas were generally lower (ranging from Rs. 3 to 187) than in the Terai (ranging from Rs. 16 to 550).<sup>2</sup> This difference may reflect the greater availability of drugs in the Terai and/or the greater wealth of Terai than Hill farms, measured by their fixed and liquid assets<sup>7</sup> (see Table 12).

### A.3 Other General Household Surveys

Numerous other general surveys have been undertaken which report information about households' cash and concash incomes as a function of household size and the size of their landholdings.<sup>8</sup> To the extent that households' incomes constrain their ability to pay for health services this information is briefly summarized below.

- Sixth percent of the households in the Rapati Baseline Survey live on marginal or submarginal lands or were landless. Fifty-seven percent of the population had annual per capita incomes of less than \$42, and cash income made up about 50 percent of this total.<sup>9</sup>
- Survey data for the Kosi Hill Area Rural Development Programme (KHARDEP) gave estimates of annual per capita cash incomes of \$18 to \$31 which varied inversely with the size of the household.<sup>10</sup>
- A survey in the Deurali panchayat of the Gorkha District found per capita incomes between \$8 and \$46. Furthermore 83 percent of the households were reported to be in debt for reasons of home improvement, illness, or agricultural investment.<sup>11</sup>

TABLE 11  
PROPORTION OF FARM FAMILIES REPORTING EXPENDITURES ON MEDICINE,  
1969-1970

Region/District	(Per cent)			
	All families	Large	Medium	Small <sup>6</sup>
A. <i>Hills</i>	81.45	93.43	86.16	78.27
1. Kathmandu	99.44	100.00	100.00	99.26
2. Kavre	91.30	100.00	89.29	90.87
3. Lalitpur	98.33	100.00	100.00	90.00
4. Nuwakot	44.88	25.00	53.85	45.28
5. Dhading	23.33	62.50	40.00	16.30
6. Kask	95.83	100.00	97.06	89.74
7. Syanja	98.39	100.00	100.00	98.13
B. <i>Terai</i>	91.25	94.98	95.82	89.45
8. Morang	100.00	100.00	100.00	100.00
9. Saptari	97.50	100.00	100.00	96.34
10. Siraha	100.00	100.00	100.00	100.00
11. Dhanukha	99.04	100.00	96.79	99.22
12. Mahottari	51.67	37.50	78.57	44.74
13. Sarlahi	98.33	95.23	100.00	98.53
14. Rautahat	98.50	100.00	100.00	98.20
15. Bara	68.89	85.71	85.71	63.77
16. Parsa	35.54	62.50	57.14	30.30
17. Makwanpur	98.33	--	100.00	98.18
18. Rupandehi	100.00	100.00	100.00	100.00
19. Kapilvastu	100.00	100.00	100.00	100.00
20. Banke	98.75	100.00	98.72	98.17
21. Bardiya	95.71	85.71	100.00	95.83
22. Kailali	96.67	98.33	96.77	93.10
Overall	88.04	94.44	92.99	85.73

SOURCE: Nepal Rastra Bank. Agriculture Credit Survey, Vol. IV,  
Kathmandu: Research Department, NRB, 1972.

TABLE 12

AVERAGE EXPENDITURE (Rs.) PER FARM FAMILY ON MEDICINE,  
1969-1970

Region/District	All families	Large	Medium	Small <sup>6</sup>
A. <i>Hills</i>	41	75	47	33
1. Kathmandu	67	147	70	56
2. Kavre	39	187	22	30
3. Lalitpur	26	29	25	20
4. Nuwakot	37	12	66	35
5. Dhading	11	71	25	3
6. Kaski	47	50	62	30
7. Syanja	39	82	57	34
B. <i>Tarai</i>	75	172	79	57
8. Morang	142	499	121	76
9. Saptari	51	124	57	40
10. Siraha	110	254	166	85
11. Dhanukha	147	550	164	110
12. Mahottari	21	12	38	16
13. Sarlahi	58	114	46	51
14. Rautahat	37	201	53	23
15. Bara	46	174	36	36
16. Parsa	24	72	35	19
17. Makwanpur	17	--	25	16
18. Rupandehi	63	147	62	51
19. Kapilvastu	34	74	59	27
20. Banke	68	87	63	62
21. Bardiya	39	43	45	37
22. Kailali	113	135	106	74
Overall	64	139	69	49

Source: Nepal Rastra Bank. Agricultural Credit Survey, Vol. IV,  
Kathmandu: Research Department, NRB, 1972, p. 147.

- The Household Baseline Survey for Rasuwa/Nuwakot found that household incomes increased with the size of the landholding and that cash income made up 21 to 56 percent of total household income. Furthermore, it was reported that 5.8 percent of nonfood expenditures were made for health care.<sup>12</sup> (This figure is lower than the 7.7 percent figure reported earlier from the Rastra Bank Credit Survey.)
- The Nepal Rural Household Survey of eight villages in the hills and Terai reported annual per capita incomes from \$24 to \$44.<sup>13</sup>

#### A.4 Rural Health Needs Surveys

The Rural Health Needs surveys in the Dhankuta, Nuwakot, Surkhet, and Tanahu districts of Nepal represent perhaps the best analyses of which of the available health services the rural Nepalese choose to utilize. Furthermore, several of the survey questions provide information pertinent to this review of household expenditures for health.

Information about household expenditures for visits to different health service providers appears in Table 13. In all areas, except Nuwakot where hospital expenditures were highest, expenditures to private practitioners exceeded those to any other facility or provider (range Rs. 5 to 36). The rank ordering of other expenditures to other providers varies between each of the sites, although government providers and traditional healers were relatively major sources of services in all districts.

These and other data were used to estimate annual per capita expenditure for health as a function of respondents' distance from the government hospitals and health posts (see Table 14). These data suggest that annual per capita expenditures are higher for populations near district hospitals, as compared with health posts, and higher for the populations closer (within an hour's walk) than farther (from 1 to 3 hours walk) from any of these public facilities.

The highest percentages of total health expenditures were for medicines or other preparations, with practitioner and travel fees comprising a much smaller proportion of the totals (see Table 15).

Given these not insignificant annual per capita expenditures for health (from Rs. 2 to 90), it is interesting that 16 percent or less of households in the four areas stated a financial problem as the reason that they did not seek outside consultation

TABLE 13  
MEAN OUT-OF-POCKET EXPENDITURE (Rs.) PER VISIT  
TO DIFFERENT SOURCES OF HEALTH CARE SERVICE

<u>SOURCE OF SERVICE</u>	<u>DISTRICT/YEAR OF SURVEY</u>			
	<u>DHANKUTA</u> (1977)	<u>NUWAKOT</u> (1977)	<u>SURKHET</u> (1978)	<u>TANAHU</u> (1975)
DISTRICT HOSPITAL	3.00	13.09	17.06	6.95
HEALTH POST			1.91	
FP--MCH CLINIC	NA	NA	2.52	NA
AYURVEDIC DISPENSARY	0.90	1.78	-	5.70
TRADITIONAL HEALER	4.20	2.10	16.32	4.40
PRIVATE PRACTICE	31.20	5.50	36.13	29.55
DRUG SELLER	NA	NA	16.26	NA
OTHERS	NA	294.25(*)	1.58	12.20
HOME TREATMENT	9.00	NA	2.99	1.85
 # OF HOUSEHOLDS SURVEYED	 601	 557	 720	 452
 TOTAL POPULATION SURVEYED	 3418	 3057	 4174	 2775

NOTE: (\*) Includes a major expense at a hospital in Kathmandu

Sources: Rural Health Needs Surveys:

DHANKUTA, Table A. 36, p. 62.  
NUWAKOT, Table A. 35, p. 65.  
SURKHET, Table 23, p. 60.  
TANAHU, Table A. 35, p. 56.

Kathmandu: Institute of Medicine, Tribuvan University.

TABLE 14  
ESTIMATED ANNUAL PER CAPITA EXPENDITURE (Rs.) ON HEALTH  
SERVICES (INCLUDING HOME TREATMENT) AS A FUNCTION  
OF DISTANCE FROM THE DISTRICT HOSPITAL OR NEAREST  
HEALTH POST

	DISTRICT/YEAR OF SURVEY			
	<u>DHANKUTA</u> (1977)	<u>NUWAKOT</u> (1977)	<u>SURKHET</u> (1978)	<u>TANAHU</u> (1975)
W/IN 1 HR. OF DISTRICT HOSPITAL	46.00	89.92	46.74	73.15
FROM 1 TO 3 HRS. OF HOSPITAL	2.00	15.23	21.08	41.70
W/IN 1 HR. OF HEALTH POST	10.00	37.30	22.45	28.90
FROM 1 TO 3 HRS. OF HEALTH POST	8.00	2.95	24.58	17.40
# OF HOUSEHOLDS SURVEYED	601	557	702	452
TOTAL POPULATION SURVEYED	3418	3057	4172	2775

Source: Rural Health Needs Surveys:

DHANKUTA, Table A.36, p. 62.  
NUWAKOT, Table A.35, p. 65.  
SURKHET, Table A.50, p. 164.  
TANAHU, Table A.35, p. 56.

Kathmandu: Institute of Medicine, Tribuvan University

TABLE 15  
 PERCENT DISTRIBUTION OF TYPE OF EXPENDITURE FOR HEALTH CARE  
 BY PERSONS CONSULTING SOME SERVICE OR USING HOME TREATMENT  
 DURING A 14-DAY RECALL PERIOD

TYPE OF EXPENDITURE	DISTRICT/YEAR OF SURVEY			
	<u>DHANKUTA</u> (1977)	<u>NUWAKOT</u> (1977)	<u>SURKHET</u> (1978)	<u>TANAHU</u> (1975)
PRACTITIONER FEES	3.6	1.9	29.2	3.8
MEDICINES	36.5	85.4	40.0	64.6
TRAVEL	7.1	1.3	2.4	2.9
OTHER (SPECIAL FOOD, SACRIFICES)	9.7	1.6	19.5	18.8
HOME TREATMENTS	43.0	9.8	8.9	9.9
TOTAL %	100.0	100.0	100.0	100.0
# OF HOUSEHOLDS SURVEYED	601	557	720	452
TOTAL POPULATION SURVEYED	3418	3057	4174	2775

Source: Rural Health Needs Surveys:

DHANKUTA, Table A.37, p. 63  
NUWAKOT, Table A.34, p. 64  
SURKHET, Table A.51, p. 165  
TANAHU, Table A.36, p. 57

Kathmandu: Institute of Medicine, Tribuvan University

for ill persons in their household. The most frequent reason given was that the problem was "minor," that the worker or medical supplies were "unavailable," or that the service was "unsatisfactory" (see Table 16).

#### A.5 Mid-Term Review

The Mid-Term Review (MTR) a document summarizing documented and new survey information on the health sector in Nepal provides information about resources (land or buildings, labor (time) and money) that communities or households contributed towards health services in the surveyed areas. Contributions of land, materials or labor are of interest to those concerned with financing the costs of health activities, since they are necessary inputs into development of the system which would otherwise require a monetary expenditure on the part of the government. Though willingness to make a one-time expenditure does not necessarily imply a willingness to repeatedly contribute for the activity, it does indicate that service is of sufficient value to the community or individuals to assume the costs associated with initiating the service.

Sixty-three percent of community leaders interviewed in the MTR from areas where health posts are in temporary buildings (N=86) reported that the buildings had been provided by the local people through one mechanism or another. In at least 25 percent of areas where health posts are in permanent buildings, community leaders (N=75) reported that the land for these was contributed by the community and, in 55 percent of cases the health post building was either constructed by or donated by the community (see Appendix Tables B.10, B.11, B.12).

Information from the household interviews of the MTR indicated that --

Out of 1825 households which are administratively under HP (health post) covered areas, 275 households or 15% of the households within the area, contributed something to their HPs. Contributions came mostly in the form of voluntary labor. Monetary contribution was the next most frequent, but far and away less popular form of contribution. Only a small percentage of those contributing anything, contributed materials such as construction materials, wood, and furniture. Only one person reported having contributed land (see Table 17).<sup>14</sup>

TABLE 16

PERCENT DISTRIBUTION OF REASONS GIVEN FOR NOT SEEKING  
ANY CONSULTATION FOR ILL PERSONS DURING A 14-DAY RECALL PERIOD

<u>REASON</u>	DISTRICT/YEAR OF SURVEY			
	<u>DHANKUTA</u> (1977)	<u>NUWAKOT</u> (1977)	<u>SURKHET</u> (1978)	<u>TANAHU</u> (1975)
HOME TREATMENT ADEQUATE	1	6	3	5
TOO FAR	4	3	3	10
FINANCIAL PROBLEM	1	6	7	16
UNSATISFACTORY SERVICES	13	9	17	10
TOO BUSY	6	11	13	9
MINOR PROBLEM	32	43	34	36
PLANNING TO CONSULTANT WORKER OR SUPPLIES NOT AVAILABLE	8	4	11	2
CONTINUING TREATMENT	19	12	-	10
OTHER	16	6	2	-
	-	-	10	2
TOTAL %	100	100	100	100
TOTAL #	218	988	814	1089

SOURCES: Rural Health Needs Surveys:  
DHANKUTA, Table A.19, p. 48,  
NUWAKOT, Table A.30, p. 60,  
SURKHET, Table 25, p. 64,  
TANAHU, Tables A.13 to A.16, pp. 42-3,

Kathmandu: Institute of Medicine, Tribuvan University

TABLE 17

TYPE OF CONTRIBUTION TO HEALTH POSTS BY  
HOUSEHOLDS INTERVIEWED IN THE MID-TERM REVIEW,  
1978-1979

Type of Contribution	# of Contributors	% of All Contributors (275)	% of Total Respondents (1,825)
Labor	177	64	10
Money	81	30	4
Material	30	11	2
Land	1	-	-
Other	8	3	-

NOTE: Some households contributed in more than one way.

SOURCE: HMG/MOH. Mid-Term Health Review, 2035. Research and Evaluation of Health and Health Services Mid-Fifth Plan Period (2031-2036), June 1979, p. 183.

The MTR classified information about willingness of households to provide voluntary labor under two headings:

- Short term - labor...provided to meet a specific need or event such as that to build a health post or to organize a special camp.
- Long term - commitment to provide a repeated service in conjunction with or on behalf of a health service project.

With respect to short-term voluntary labor, the MTR found that --

Out of 351 contributing households identified in the sample survey, 55% were labor contributing. Two to five days seems to be the amount of voluntary labor which most households which participate seem to contribute. It also seems that hill households tend to contribute more voluntary labor than Terai households. Similarly, households from areas within the administrative jurisdiction of HPs are more likely to contribute voluntary labor than are the households which are outside.<sup>15</sup>

With respect to longer term voluntary labor, the MTR found that 25 percent of the households would be willing to undertake some of the activities of the malaria project field staff. The primary reasons given by households unwilling to contribute labor on a long-term voluntary basis were no free time (52 percent) and lack of remuneration (10 percent).<sup>16</sup> Research by Acharya (1981) and Schuler (1981) corroborates the finding that household members (particularly adult women) often do not have free time that could be devoted to long term voluntary labor in support of health activities.

As recorded earlier, 37 percent of the households interviewed in the MTR made contributions to health posts in monetary terms. (It is not stated in the MTR whether these contributions were to build the health post or as payment for services delivered there.) Households in the Terai appeared to be more likely to contribute monetarily than households in the Hills (see Appendix Table B.13) as might be expected given the higher monetary incomes of households in the Terai. Ninety-three percent of households who contributed monetarily (34 percent of all contributing households but only 6 percent of all households surveyed) gave less than Rs. 50 (see Appendix Table B.14).

## A.6 Status of Women in Nepal Studies

Those designing health financing schemes should be concerned with their impact on the utilization of different services by and for different members of households. For example, it is possible that certain financing schemes would disproportionately decrease the use of services by those with little or no income (e.g., the poor and women and children) or for services which result in benefits at a point in the future (e.g., immunizations). Though one can determine only the actual impact of fees or charges on utilization with appropriately collected utilization data, data from the Status of Women in Nepal research project provides some information about how and by whom decisions were made in eight areas about consuming health services which require some household expenditure.

... women made decisions to spend family resources on medical treatment on their own in only 22.1 percent of the cases while men did so in 46.8 percent of the cases. However, village-wise examination of the data reveals a not unexpected pattern of the greatest male predominance in the dichotomous Hindu communities (the Maithili and the Parbatiya), moving to successively greater female participation in the 'intermediate' communities (starting with the Tharu where the heavy dependence on 'tradition' in medical matters overshadows the male lead) and ending with female predominance in two of the Tibeto-Burman non-dichotomous communities (i.e., the Baragaonle and the Rai).

... Turning to data on the stages of the decision making process (in Table 18) we see that in 47.7 percent of the cases women played the leading role in initiating family decisions to spend money on medical treatment or education even though the final decision about what to do and how much to spend was taken by men in 48 percent of the cases.<sup>17</sup>

## B. Estimated Per Capita and Per Visit Health Post Operating Costs

The information in the preceding section of this report established that the Nepalese make expenditures for health services, primarily drugs. The Urban Household Budget Survey and Agricultural Credit Survey found that medical expenditures comprised on average 1.3 and 1.9 percent of annual household expenditures (including foodstuffs), respectively. This translated into average expenditure per capita of between Rs. 12 and Rs. 61. The Rural Health Needs Surveys gave annual per capita expenditures

TABLE 18

MALE/FEMALE INPUT IN THE DECISION MAKING PROCESS FOR MEDICAL TREATMENT  
(By Village)

(In numbers)

Villages	WHO SUGGEST. UTILIZ. HLTH SERV.					WHO WAS CONSULT. ABOUT THE DECIS'N					WHO DECIDED					WHO DISAGREED				
	Male	Female	Both	No One	Total	Male	Female	Both	No One	Total	Male	Female	Both	No One	Total	Male	Female	Both	No One	Total
BARIGACHLE	-	4 (16.0)	15 (60.0)	6 (24.0)	25 (100.0)	-	-	-	25 (100.0)	25 (100.0)	-	8 (32.0)	13 (52.0)	4 (16.0)	25 (100.0)	-	-	-	25 (100.0)	25 (100.0)
LOHORUNG BAI	19 (41.3)	27 (59.0)	-	4 (8.7)	46 (100.0)	18 (39.1)	15 (32.6)	7 (15.2)	6 (13.1)	46 (100.0)	11 (23.9)	27 (58.7)	2 (4.4)	6 (13.0)	46 (100.0)	-	1 (2.2)	-	45 (97.8)	46 (100.0)
BHAM MAGAR	1 (8.3)	4 (33.3)	6 (50.0)	1 (8.3)	12 (100.0)	1 (8.3)	1 (8.3)	7 (58.3)	3 (25.0)	12 (100.0)	-	-	8 (66.7)	4 (33.3)	12 (100.0)	-	-	-	12 (100.0)	12 (100.0)
LABATIYA	28 (31.8)	59 (67.1)	1 (1.1)	-	88 (100.0)	61 (69.3)	9 (10.2)	6 (6.8)	12 (13.7)	88 (100.0)	21 (23.9)	14 (15.9)	1 (1.1)	2 (2.3)	88 (100.0)	3 (3.4)	-	1 (1.1)	84 (95.5)	88 (100.0)
BEWAR (Jyapu)	6 (33.3)	11 (61.1)	1 (5.6)	-	18 (100.0)	4 (22.2)	6 (33.3)	1 (5.6)	7 (38.9)	18 (100.0)	10 (55.5)	7 (38.9)	1 (5.6)	-	18 (100.0)	-	1 (5.6)	-	17 (94.4)	18 (100.0)
TAMANG	5 (38.5)	7 (53.8)	-	1 (7.7)	13 (100.0)	6 (46.1)	5 (38.5)	1 (7.7)	1 (7.7)	13 (100.0)	5 (38.5)	4 (30.8)	-	4 (30.8)	13 (100.0)	-	-	-	13 (100.0)	13 (100.0)
THARU	20 (40.0)	23 (59.0)	-	1 (2.0)	50 (100.0)	35 (67.3)	2 (3.8)	8 (15.4)	7 (13.5)	52 (100.0)	11 (21.2)	2 (3.8)	2 (3.8)	37 (71.2)	52 (100.0)	-	-	-	52 (100.0)	52 (100.0)
BAITHILI	20 (34.5)	24 (41.4)	9 (15.5)	5 (8.6)	58 (100.0)	21 (36.2)	6 (10.4)	22 (37.9)	9 (15.5)	58 (100.0)	33 (56.9)	7 (12.1)	6 (10.3)	7 (12.1)	58 (100.0)	3 (5.6)	2 (3.7)	-	49 (90.7)	54 (100.0)
ALL VILLAGES	99 (31.9)	161 (52.0)	32 (10.3)	18 (5.8)	310 (100.0)	146 (46.8)	44 (14.1)	52 (16.7)	70 (22.4)	312 (100.0)	146 (46.8)	69 (22.1)	33 (10.6)	64 (20.5)	312 (100.0)	6 (2.0)	4 (1.3)	1 (0.3)	297 (96.4)	308 (100.0)

Figures in parentheses indicate row percentages.

Source: Acharya, H., L. Bennett, et al. Status of Women in Nepal (unpublished data), 1981.

for medical care (including home treatment) between Rs. 2 and 90, with half of the areas considered below Rs. 23 per capita.

It is worthwhile to compare the above information with information about the operating costs of integrated rural health posts such as they existed in 43 of Nepal's 75 districts in 1979, and the average cost per capita or per visit which would have to be levied in order to totally cover these operating expenditures. Since this author is not aware of any published information about the actual operating costs of health post facilities, estimated operating budgets of health post facilities in 1977 were utilized (see fourth column, Table 19). The estimated costs were divided by estimates of the district population sizes in 1979 (fifth column) to obtain what would be the necessary collection of revenue per capita in order to meet the operating expenditures of the existing health posts (sixth column). In 4 of the 43 districts (9 percent), less than Rs. 2 per capita would be required to cover the estimated operating expenditures. In 18 districts (42 percent), less than Rs. 4 per capita would be required; in 14 districts (33 percent), less than Rs. 6 per capita would be required; and only in 7 districts (16 percent), would more than Rs. 6 be required. Thus, if districts taxed their populations so that Rs. 5 per capita on average was collected (less than the current average private expenditure per capita), sufficient revenue could, theoretically be raised to support health post expenditures at current planned levels of staffing and activity in most of the 43 districts.

The estimates of operating expenditures were also divided by the number of adult out-patient services rendered, (see the fifth and sixth columns).<sup>18</sup> In 51 percent of the districts, the average expenditure required per out-patient visit to cover the operating expenditures of the health post was less than Rs. 25. Fourteen percent of districts have average operating expenditures per visit between Rs. 25 and 50 and between Rs. 50 and 100, respectively. The remaining 21 percent of districts had average operating expenditures per visit exceeding Rs. 100. Districts with the higher average operating costs per visit: (1) were in the western hill region (and other hill and mountain regions); (2) had annual utilization totals of less than 5000 visits; and, (3) had more "old" style health posts rather than partially or totally integrated ones. Thus, in comparison with the per capita estimations, the operating cost per visit estimations are higher relative to what is on average being spent out-of-pocket for health services.

The preceding analyses are limited in that the estimated operating expenditures of districts' health posts do not take into account what will be the total number of health facilities

TABLE 19

AVERAGE PER CAPITA AND PER VISIT OPERATING COSTS (RS.)  
FOR HEALTH POSTS IN 43 DISTRICTS,

1979

Region	District	No. & Type of Health Posts <sup>1</sup>	Total Estimated Operating Expenses (Rs.) <sup>2</sup>	No. Population <sup>3</sup>	Average Cost Per Capita (Rs.)	No. Clinical Services <sup>4</sup>	Average Cost Per Service (Rs.)
Eastern Mt.	Taplejung	30 (4E)	903,059	116,112	7.78	6,314	143.02
	Solukhumbu	8E	596,144	86,270	6.91	18,735	31.82
	Dolakha	6E	447,108	147,176	3.04	20,547	21.76
Central Mt.	Rasuwa	4E	298,964	30,935	9.66	7,006	42.67
	Mustang	4E	298,964	12,633	23.67	5,550	53.87
Western Mt.	Bajura	30 (4E)	903,059	71,517	12.63	9,158	98.61
	Bajhang	20 (3E)	481,036	119,428	4.03	1,345	357.65
Eastern Hill	Panchthar	9E	670,662	151,675	4.42	11,328	59.20
	Okhaldhunga	30 (2E)	535,259	135,121	3.96	563	950.73
	Kabhre-Palanchok	40 (3E)	738,518	294,649	2.51	11,661	63.33
Central Hill	Muwakot	10E	745,180	196,079	3.80	44,127	16.89
	Dhading	18E	1,341,324	24,182	55.47	46,266	28.99
	Gorkha	70 (5E)	1,273,777	223,317	5.70	9,129	139.53
	Lamjung	60 (1E)	846,964	141,352	5.99	10,584	80.02
	Tanahu	12E	894,216	212,978	4.20	73,206	12.22
	Kaski	30 (1E; 8I)	1,494,413	211,707	7.06	96,485	15.49
	Baghing	30 (4E)	903,059	205,760	4.39	35,132	25.70
	Argha-Khanchi	30 (4E)	903,059	152,558	5.92	117,490	7.69
	Palpa	6E	447,108	208,524	2.14	6,175	72.41
Western Hill	Rolpa	60 (2E)	921,482	168,094	5.48	6,175	149.23
	Daiilekh	20 (4E)	555,554	164,711	3.37	3,072	180.84
	Achhan	40 (4E)	1,031,800	180,111	5.73	1,526	676.15
	Doti	5E	372,590	146,577	2.54	2,387	156.09
	Baitadi	8E	596,144	173,611	3.43	16,826	35.43
	Dandeldhura	10 (4E)	427,705	82,048	5.21	1,456	293.75

Table 5.10, cont.

Region	District	No. & type of Health Posts <sup>1</sup>	Total Estimated Operating Expenses (Rs.) <sup>2</sup>	No. Population <sup>3</sup>	Average Cost Per Capita (Rs.)	No. Clinical Services <sup>4</sup>	Average Cost Per Service (Rs.)
Eastern Inner Terai	Udayapur	8E	596,144	149,523	3.99	37,959	15.70
Central Inner Terai	Makwanpur Chitawan	9E	670,662	227,541	2.95	41,150	16.30
		7C	521,626	242,594	2.15	79,627	6.55
Western Inner Terai	Surkhet	9E	670,662	153,497	4.37	53,340	12.57
Eastern Terai	Sunrai Dhanusa Sarlahi	8E	596,144	322,082	1.85	66,893	8.91
		70 (1E)	975,705	412,129	2.37	2,805	347.84
		8E (21)	854,562	371,861	2.30	80,834	10.57
Central Terai	Nawal-Parasi Kapilvastu	7E	521,626	284,559	1.83	73,206	7.13
		10 (3E)	427,705	257,422	1.66	37,581	11.38
Western Terai	Banke Basdeya Kailali Kanchanpur	7E	521,626	190,762	2.73	33,507	15.57
		5E	372,590	180,720	2.06	18,775	19.85
		5E	372,590	233,812	1.59	24,195	15.40
		4E	298,964	146,577	2.04	18,307	16.33
Fully Integrated (Eastern and Central Terai)	Bara Parsa Rauthat Saptari Siraha	111	1,421,299	363,461	3.91	88,213	16.11
		91	1,162,881	361,573	3.22	100,587	11.56
		111	1,421,299	318,882	4.46	72,416	19.63
		111	1,421,299	301,088	4.72	49,350	28.80
		121	1,550,508	267,472	5.80	78,720	19.70

- Sources: 1. Health Planning Unit/HMG, Health Institutions in Nepal as of End of 1979 (mimeo), Kathmandu: HPU/HMG, March 1, 1980; 33 pp. Symbols: O=Non-Integrated Post; E=Partially Integrated Post; and I=Fully Integrated Post
2. Community Health Integration Division/HMG, Budget Request and Supporting Information 2034/35, Kathmandu: Department of Health Services, February 1977. These 1977 unit-cost figures (see Appendix, Tables 5B.8 and 5B.9) were inflated, using the implicit GDP deflator for the period 1977-1979, calculated from information in Asian Development Bank, Economic Memorandum on Nepal, Manila: ADB, 1981; pg. 42.
3. Harka Gurung, Population Increase in Nepal, 1971-1981, (New ERA Occasional Paper No. 004), March 1981; pp. 19-21. The 1979 populations were calculated by multiplying the ten-year difference by 0.80 and adding the product to the 1971 population.
4. Community Integration Project, Annual Report Community Health and Integration Project, 2036/37 (1979-80), Annexes 6A and 6B, Kathmandu: CHIP, February 1981.

providing each level of service, or what would be the cost of drugs sufficient in quantity to satisfy patient demands. Thus, the average cost per capita or per clinical service might be higher than these estimates. Further, HMG or districts might wish to select different cost recovery objectives (e.g., to collect revenues to cover solely the costs of drugs or to cover a portion of administrative costs of the district health office as well as the operations of the health posts).

## C. Description and Analysis of Local Revenue Generation Schemes

### C.1 Local Taxation

Since Nepal has one of the lowest tax-to-GNP ratios in the world (see Appendix Table B.17), it is appropriate to consider if more revenues might be mobilized to support development activities through improvements in the existing taxation system. It is beyond the scope of this paper to fully discuss changes which might be made in Nepalese taxation policy. However, two efforts to mobilize local revenues in support of local development activities -- the Compulsory Savings Scheme and the Panchayat Development Land Tax -- are described below.

#### Compulsory Savings Scheme

The Compulsory Savings Scheme (CSS) was developed in the Lands Act of 1964. In the CSS, all landowners, tillers or tenants were required to deposit a fixed portion of their farm produce (7 percent of product or 9 percent of cash from its sale) with a ward committee, which would refund the deposit in cash, in kind, or in bonds at a 5-percent per annum rate of interest after 5 years. The ward committees were also to make the produce (or revenues from its sale) available as loans to members of the ward at a 10 percent interest rate. It was intended that multi-purpose cooperatives would eventually replace these ward committees.

The CSS was introduced into all of Nepal's 75 districts over the 3 year period between 1964-67. However, the total savings collected decreased as the scheme was implemented over larger areas, and as government policy shifted with respect to the amount that was to be collected. Collections were suspended in 1968 because farmers were increasingly resistant to the CSS. Appraisal of problems associated with the CSS include the following:

- The scheme was instituted over too large an area over too short a time.

- The savings in kind were difficult to store and thus they were wasted.
- The scattering of the savings over 34,000 ward committees precluded the systematic disposal of the produce at a high price.
- The establishment of a cash price for in-kind deposits was difficult.
- People objected to the savings being used to support government institutions instead of farmers' activities.
- The administration of the savings or funds collected required an infrastructure which was not well developed in many villages, and the cooperative movement was also not well accepted in the rural areas.<sup>19</sup>

#### Panchayat Development Land Tax

The Panchayat Development Land Tax (PDLT) was started in 1965 as an attempt to increase revenues from taxes on agriculture.<sup>20</sup> By 1977, it had only been introduced in 14 panchayats, most of them in Jhapa District. However, in 1977/78, the PDLT was introduced in the Bhaktapur District and was to have been introduced in the remaining 73 districts of Nepal within 5 years time, replacing the traditional land tax entirely. However, the PDLT was suspended during the 1979/80 budget year, for reasons which will be explained below.

The main features of the PDLT were:

- A specified percentage of the main annual crop or rent was required for taxation purposes:
 

Landlord (nontiller):	15 percent of the rent received
Owner-tiller:	6 percent of the main annual crop
Tenant-tiller:	3-5 percent of the tenant's share of the main crop

Thus, owner-operators as well as tenants were subject to this tax, with the higher rate for absentee-landlords.

- The assessment as well as collection of this tax was the responsibility of local panchayats.

- Revenue collected from this tax was distributed as follows:

- 55 percent retained by local panchayat
- 10 percent given to the district panchayat
- 35 percent given to the central government

The tax, therefore, represented a transfer of central level resources to local panchayats.

- Priorities for spending PDLT resources included activities in the following sectors:
  - Agriculture: irrigation, distribution of improved seeds and fertilizers, marketing of improved tools and implements, and raising of improved breeds of cattle and poultry.
  - Construction: panchayat buildings, roads, bridges, etc.
  - Education: free and compulsory primary education.
  - Health: sanitation and prevention of diseases.
  - Consumer goods: sale of essential consumer goods.

The above expenditure priorities indicate that the satisfaction of basic needs in rural areas was the main intent of the PDLT. Where the PDLT operated on an experimental basis, 45 percent more revenues were generated than in comparable areas under the traditional land tax. Further, the budget in these panchayats increased to 12 times that in non-PDLT districts.<sup>21</sup>

However, several factors outweighed these benefits and led to suspension of the PDLT:

- The essential preconditions required for the successful implementation of PDLT were not created before the introduction of the tax. Local panchayats lacked professional staff and simple systems for valuation, assessment and collection of the tax. Land records were not made available to local panchayats in an up-to-date form. There was a lack of proper accounting and control systems. Instances of corruption and leakages were manifest. People felt that PDLT resources were being wasted or misused by local leaders.
- Expenditure priorities did not match the administrative or technical capabilities of the local panchayats.

- There was a lack of coordination among the various ministries involved at the central level.
- The rates fixed for the tax were much higher than those payable under traditional land tax. Given that the incomes of the rural people did not increase, and that the tax was regressive,<sup>22</sup> the public was understandably hostile towards the tax.
- Districts that wanted the PDLT were denied it, whereas those not interested in the PDLT were forced to implement it.<sup>23</sup>

## C.2 Co-operatives

In 1970, only 1.28 percent of all Nepalese villages had any sort of cooperative (i.e., multipurpose cooperatives, credit societies, cottage industry cooperatives, dairy cooperatives, or marketing and credit unions) operating. The Small Farmers Development Project (SFDP) sponsored by the Agricultural Development Bank is working in select villages of 24 districts to organize groups of 4 to 25 households to create savings funds and/or to undertake productive activities. The savings or profits of the group then provide funds for further investment or to cover special expenses (e.g., for ceremonies or for illnesses). Great variability has been observed in the types and levels of activities of the groups, depending upon the personal qualities and skills and the group leaders. The limited distribution of cooperatives and the great variability in their membership activities might limit the usefulness of cooperatives as an important mechanism for mobilization of resources for health sector programs.<sup>24</sup>

## C.3 Fees for Services or Commodities

### Hospitals

One alternative for financing rural primary health services is to shift the expenses for hospital services to consumers and utilize public resources to provide additional support for primary health care services. In Nepal, if such a policy were adopted, only 8.4 percent of the estimated health budget (both HMG and foreign assistance) for 1980 to 1985 would be made available. This amount, however, would nearly double the amount of funds budgeted for rural health posts and primary health care (4.2 and 6.7 percent, respectively) of the 1980-86 estimated health budget (see Table 9). It is also the stated policy of HMG, in the Long Term Health Plan, 1975-1990, that "Health Services are to be fee payable eventually". Furthermore, a

"Development and Management Committee" was recently created to provide guidelines to the Kathmandu Valley Group of Hospitals so that these government hospitals could become fully independent of HMG in FY 1981/82. Thus, the experience of a number of hospitals will be reviewed to determine to what extent the expenditures of hospitals might be supported by patient fees.

As of June 1981, general patients in government hospitals were charged a nominal registration fee for x-rays and an additional amount for private rooms. At the Bir Hospital in Kathmandu the revenue from these fees covered only 12 to 13 percent of the total expenditures arising as a consequence of providing services (See Table 20).

Fees are also charged at the four hospitals of the United Mission to Nepal (UMN), and these cover a higher proportion of the hospitals' operating expenditures (including expatriate staff compensation). For example, fees collected from patients of the Tansen Hospital in the Palpa District covered 71 and 76 percent of that hospital's total expenditures in 1979 and 1980, respectively. Of these fees, those collected for drugs provided revenues in excess of 150 percent of the expenditures made for the drugs. Fees collected at the Ampipal Hospital in the Gorkha District covered 69 and 83 percent of total expenditures during the same 2 years. Fees collected at the Okhaldunga Dispensary in the Okhaldunga District covered only 27 and 37 percent of total expenditures in 1978 and 1979 (see Table 21). It is unclear why the fees collected at different institutions covered different percentages of total expenditures. Reasons might include: lower income populations in the Gorkha and Okhaldunga districts, different fee schedules at the hospitals, lower utilization rates at the Ampipal and Okhaldunga facilities, or different treatment patterns of physicians or other staff at the three facilities.

Information on the percentage of total expenditures covered by patient fees was not collected for the UMN hospital Shanta Bhawan (SBH) in Kathmandu. The SBH fee schedule has different rates for three types of patients: (1) Nepali general patients; (2) Nepali and Indian private patients, UMN staff and other missionaries, and foreign general patients not in category 3; and (3) Foreign personnel associated with the UN agencies, embassies, or foreign assistance agencies and their contractors. The magnitude of this fee stratification, is illustrated by the significant differences between the average in-patient and out-patient charges for general and private patients (see Table 22). For all three years, fees for general in-patients were only 20 to 25 percent of fees for private in-patients. Fees for general out-patients were 5 to 7 percent of fees for private out-patients.

TABLE 20

PERCENTAGE OF TOTAL EXPENDITURES  
COVERED BY INCOME FROM FEES,  
BIR HOSPITAL,  
1976/77-1980/81

FISCAL YEARS	1976/77	1977/78	1978/79	1979/30	1980/81
Percent of Total Expenditures Covered by Income from Fees	9.47	12.22	12.82	12.56	12.10
Breakdown of Sources:					
Cabin (Room)	4.32	5.30	5.49	5.37	5.64
X-Ray	4.57	5.14	5.39	5.66	4.68
Registration	-	-	0.43	0.84	0.83
Miscellaneous	0.58	1.78	1.51	0.69	0.95

Source: Thapa, D. A Study of Bir Hospital. Pune, India: Institute of Management Development and Research, 1981; p. 9.

TABLE 21

PATIENT FEES AS A PERCENT OF TOTAL EXPENDITURES  
AND EXPENDITURES ON DRUGS,  
1978 - 1980

	EXPENDITURES (Rs.)	FEES (Rs.)	FEES AS A PERCENT OF EXPENDITURES
PALPA DISTRICT			
Tansen Hospital			
1979-Total	1,792,104	1,270,404	71
Drugs Only	477,020	698,794	146
1980-Total	2,056,003	1,559,924	76
Drugs Only	485,644	812,156	167
Community Health Program			
1979-Total	397,171	77,176	19
Drugs Only	84,561	72,004	85
GORHKA DISTRICT			
Ampipal Hospital			
1979-Total	674,044	468,229	69
Drugs Only	207,406	NA	NA
1980-Total	728,370	606,371	83
Drugs Only	212,635	NA	NA
Community Health Program			
1979-Total	205,156	23,729	12
Drugs Only	12,489	23,729	190
1980-Total	209,996	28,686	14
Drugs Only	35,687	28,686	80
OKHALDUNGA DISTRICT			
Okhaldunga Dispensary			
1978-Total	245,929	66,342	27
1979-Total	225,577	82,668	37

NOTE: Services of the Community Health Program in the Palpa District are provided at health post and clinic facilities.

SOURCE: Plans and Budgets for 1980, 1981 for the Palpa, Gorkha and Okhaldunga Projects; from the files of the JMN Health Office, Thapathali, Kathmandu.

TABLE 22

AVERAGE PATIENT CHARGES (Rs.) FOR IN-PATIENT AND OUT-PATIENT  
TREATMENT AT THE SHANTA BHAWAN HOSPITAL,  
1978 - 1980

TYPE OF PATIENT	NUMBER OF PATIENT	Year		
		1978	1979	1980
IN-PATIENTS				
General	4,838	198.15	203.95	246.34
Private	879	762.91	924.14	1033.21
OUT-PATIENTS				
General	34,717	8.08	8.17	9.39
Private	4,498	123.27	146.48	150.34

SOURCE: Khawas, B.B. Personal Communication, (12/27/1981) Kathmandu:  
Shanta Bhawan Hospital.

Unfortunately, this brief review covers little of the information of relevance to those concerned with financing HMG hospital services. However, it does indicate that a proportion of hospital expenditures can be covered by fees and that the experience of the hospitals of the United Mission to Nepal would be worth further study.

### Health Posts

To date, only two schemes to collect fees at health posts have been instituted in Nepal. One scheme, sponsored by the British Nepal Medical Trust (BNMT) is located in the Bhojpur District, and another, sponsored by the Swiss Association for Technical Assistance (SATA) is located in the Dolakha District.

The impetus behind the development of the Bhojpur Drug Scheme (BDS)<sup>25</sup> came from the interest of the staff of the BNMT in raising revenues sufficient to cover the cost of drugs utilized at the hospital or health posts in excess of the drugs provided by HMG. The alternatives they considered included:

- A fixed consulting fee
- A fixed prescription fee
- A fixed fee per course of prescribed drug
- A variable fee based on the actual cost of the drug

After weighing the pros and cons of each of these alternatives, it was decided to start by levying a fee of Rs 2 per prescription. A "prescription" was defined as the drugs needed to treat all new illnesses diagnosed during any particular consultation. Thus, if a patient returned with an illness treated earlier, the patient would be given additional medicines without charge.

The idea was originally proposed to the MOH of HMG in the Spring of 1978, approved in November 1979 and implemented in 1980.

Administration of the scheme involves the several groups listed below: (The tasks for each group are elaborated in Cassels & Peniston, 1981).

- BDS field supervisor, Bhojpur
- Bhojpur District Hospital: Senior Medical Officer
- Bhojpur Health Posts: Health Residents
- District Health Office
- District Health Committee
- Health Post Committees
- Hill Drug Scheme staff in Biratnagar

The 1981 and 1982 evaluations of the scheme<sup>25</sup> provided the following information.

Impact of the BDS on Utilization: Theoretically, utilization of the health posts in the BDS could: (1) increase as a result of the increased availability of drugs, or (2) decrease if the prescription charge was a significant amount of household cash income or if the service/drug could be purchased for less elsewhere. Comparison of data for the district hospital and health posts in Bhojpur before and after institution of the scheme showed an increase in the utilization of the hospital and at one of the seven health posts, and decreases at five of the other six health posts (see Table 23). However, high utilization rates for the first year (2036) as compared with the second (2037) were also reported at health posts without drug fees.<sup>26</sup> Data from the 2nd-year Progress Report indicates that utilization increased at the Hospital and the Ghoretar and Bastim health posts and decreased at the other five. To evaluate this issue it would be necessary to compare the rate of change in annual utilization (preferably by seasonal quarters) over several years before and after institution of the scheme, taking account of changes in population size and the entry or exit of other health service/drug providers.

A review of utilization records of one of the health posts (Ghoretar)<sup>27</sup> indicated that institution of the scheme did not seem to alter the age or illness characteristics of persons utilizing that health post. The proportion of females in each group increased, but this was thought to be related to the marriage of the health assistant rather than institution of the payment scheme.

Revenues vs. Drug Expenditures: One of the problems noted during the first year of the BDS was that patients avoided the Rs. 2 payment by claiming their need for additional medicine was related to a previously reported continuing illness. As a result, 30 to 40 percent of visits to any facility were treated as repeat visits and thus prescription fees were not collected. In addition, from 2 to 6 different drugs were included on a prescription and the average cost of the drugs dispensed per visit ranged from Rs. 2.15 to 6.56 (see Table 24). Thus, only 31 percent of the purchase cost of the drugs distributed (excluding transport) was covered by prescription fees. The second progress report noted that 30.4 percent of the purchase value of the HMG and BNMT drugs supplied during the second year of BDS operations were covered by prescription fees.

Policy Changes: After reviewing the above information, the Bhojpur District Health Committee thought to alter the pricing policies of the scheme to: (1) recover more of the cost of the

TABLE 23

TOTAL ATTENDANCES REGISTERED  
AT BHOJPUR DISTRICT HOSPITAL AND HEALTH POSTS  
2036 (1979/80) AND 2037 (1980/81)

2036 Quarter <sup>1</sup>	<u>Hospital</u>		<u>Ghoretar</u>		<u>Kot<sup>2</sup></u>		<u>Bastim<sup>3</sup></u>	
	1	1654	2244	1290	924		540	
2	2263	2564	1842	830	86	577		318
3	2153	1859	322	754	683	609		885
4	1324	1438	453	437	373	504		468
Total	7394	8105	4407	2945	1142	2230		1671

2037 Quarter	<u>Pangchha<sup>4</sup></u>		<u>Kulung<sup>4</sup></u>		<u>Chhinamakhu<sup>4</sup></u>		<u>Yaku</u>	
	1	532	532	706	591	1122	726	523
2	1366	1179	749	710	1229	828	1064	535
3	697	545	769	509	1498	392	816	467
4	454	508	304	306	734	252	633	290
Total	3049	2764	2528	2116	4583	2198	3036	1705

Notes: The first column for each facility is the total attendance for the same 3 months of 2036, i.e., the year before the scheme started.

1. Quarters: 1=Falgun, Chaitre, Baisakh (January-March)  
2=Jes̄tha, Ashad, Srawan (April-June)  
3=Bhadra, Asvin, Kartik (July-September)  
4=Mangsir, Poush, Magh (October-December)
2. Kot HP opened Srawan 2036
3. Bastim opened in Srawan 2037 and the BDS started operating there immediately.
4. BDS started Srawan 2037

SOURCE: Cassels, A. and Peniston, B. The Bhojpur Drug Scheme, A Report on the First Year of Operation of a Drug Supply Scheme in Bhojpur District, Koshi Zone, Nepal, Kathmandu: BNMT, 1981, p. 34.

TABLE 24

UTILIZATION AND AVERAGE COST OF DRUGS PER VISIT TO  
 BHOJPUR DISTRICT HEALTH POSTS,  
 2037 (1980/81)

Health Post	Utilization		Value Of All (Drugs Rs) Dispensed Per Year	Average Cost (Rs) Of Drugs Per Visi
	Annual	Average Daily		
Ghoretar	2936	15	12,521	4.26
Kot	2230	11	12,827	5.75
Yaku	1671	8	8,631	5.17
Bastim	2764	14	5,932	2.15
Pangchha	2116	11	11,128	5.26
Kuleeny	2198	11	7,711	3.51
Chhinamakhu	1705	9	11,185	6.56

SOURCE: Cassels, A. and Peniston, B. (1981) The Bhojpur Drug Scheme, A Report on the First Year of Operation of a Drug Supply Scheme in Bhojpur District, Koshi Zone, Nepal, Kathmandu: BNMT, adapted from pp. 34 and 40.

drugs provided, and (2) discourage the prescription of a drug for each symptom reported (polypragmasy) and the prescription of vitamins of little medical value. The proposed fee schedule was:

Hospital In-patients: An initial payment of Rs. 2 in the OPD with an advance payment of Rs. 18 for a one week's stay. Refunds of Rs. 3 per day were made for stays of less than one week. Additional days cost the same amount.

Hospital or Health Post Out-patients: An initial payment of Rs. 2 for the consultation and 1st drug. Rs. 1.5 is charged for each additional drug prescribed. Infrequently used items, e.g., plaster of pans and I.V. fluid, are priced at cost.

As of June 1983, the above policy changes had not been approved by HMG. The BDS, however, has revised the policy that allowed patients to receive free drugs for previously reported illnesses. Now Rs. 2 is required per prescription per visit. BDS analysts believe that the proposed policy changes and efforts to use fewer proprietary drugs and to train health assistants to prescribe more judiciously will lead to an increasing percentage of the cost of drugs being covered by fees.

Revenues vs. Administrative Costs: In considering the potential for alternative financing schemes to provide revenues to cover the recurrent costs of a rural health system, it is important not only to compare the revenues generated with the costs of the input(s) which they are intended to cover, but also with the administrative costs of the scheme. In the case of the BDS (as for the rural health insurance schemes described later in this paper), the administrative costs may exceed the revenues generated by it.

Other Findings: Of interest is information about the value of the drugs actually dispensed from the Bhojpur facilities. It is commonly understood that HMG facilities have sufficient drugs for only 3 to 4 months of the year. The experience of the BDS corroborates this belief as the drugs provided by HMG comprised from 26 to 44 percent of the total drugs utilized by these facilities in 2037/38 (1980/82) (see Table 25). The remainder were supplied by the BNMT and UNICEF.

TABLE 25

COST (Rs.) OF DRUGS PROVIDED BY HMG AND ACTUALLY DISPENSED  
AT FACILITIES IN BHOJPUR DISTRICT,  
2037/38 (1980/82)

<u>FACILITY</u>	<u>VALUE OF DRUGS PROVIDED BY HMG (A)</u>	<u>VALUE OF DRUGS DISPENSED (B)</u>	<u>(A) AS A PERCENT OF (B)</u>
Bhojpur Hospital	19,563	60,668	32%
Ghoretar	5,652	16,720	34%
Kot	5,551	21,323	26%
Yaku	5,652	12,965	44%
Bastim	5,652	20,009	28%
Pangchha	5,551	20,899	27%
Cuhinamakhu	5,551	14,679	38%
Kulung	5,561	16,503	34%

SOURCE: Subedi, C., and A. Cassels. The Bhojpur Drug Scheme, 2nd Year - Progress Report. June 1982; (mimeo), p. 11. The Bhojpur Drug Scheme, Kathmandu: BNMT/HMG,

The Swiss Association for Technical Assistance (SATA) has instituted in the Dolakha District a scheme similar to the BDS. In contrast to the BDS, it only took 9 months to receive permission from HMG to initiate the Dolakha Drug Scheme (DDS). Institutions in the DDS charge a set fee (Rs. 1) per prescription to generate additional revenues which would ensure a constant supply of drugs at a reasonable cost to villagers. Medications for the treatment of TB, malaria or leprosy vaccinations, or family planning commodities are distributed free of charge.

As of September 1982, the DDS had been initiated in four of the districts' ten health institutions the Bonch, Chagu, Dandapakhar and Namdu health posts. In order to ensure local acceptance and support for the DDS, the scheme is introduced in a new facility only upon receipt of a written request from the concerned panchayat. Further, all of the money collected is controlled by the Pradhan Pancha, chairman of the "User Group of DDS" in that panchayat. It is hoped that health facilities will become financially self-sufficient with respect to covering the costs of drugs dispensed after a 5-year period, during which pricing policies and management systems can be instituted.

There were 4,389 consultations made by 3,171 persons at the Bonch health post during the first year of DDS operations. Rs. 18,526 of drugs were dispensed for an average drug cost per patient of Rs. 5.84. Over a different 12-month period there were 20,022 consultations by 11,954 patients at the Dandapakhar health post during their first year of DDS operations. Rs. 97,603 worth of drugs were dispensed for an average drug cost per patient of Rs. 8.15. Clearly the Rs. 1 fee per prescription would not cover the costs of drugs dispensed at these 2 facilities. SATA staff believe that more drugs are dispensed to patients than are necessary to effectively treat the patients' illnesses. For this reason, the DDS has applied to the MOH to change from a pricing policy of Rs. 1 per prescription to Rs. 1 per drug prescribed on the prescription. It is expected that this change will cause patients to request fewer drugs. In addition, SATA is attempting to change the poly-pragmasy behavior of the health assistants through training and supervision efforts and by standardization of treatment protocols for different diagnoses.

A more detailed description of the DDS reviews information about: the mechanics of administering the scheme (including management of the funds) and the rationale for choosing the BDS model over alternatives to set up drugshops (too profit-oriented) or insurance schemes (prepayment would be a difficult concept to promote in rural Nepal). The report also suggests that the logistical difficulties of providing additional drugs to the health posts would be simplified by distributing a standardized package of drugs to each post, with additional drugs stocked at

the District Health Office to be dispensed in return for some payment by the health post. Detailed evaluation information about the revenues and expenses of the DDS and its input on the utilization of health post services was not available as of September 1982.<sup>28</sup>

### Community Health Leaders

HMG and several organizations (e.g., BNMT, SATA, UMN and the Peace Corps are experimenting with ways that Community Health Leaders (CHL) can collect fees from individuals or communities to cover the replacement costs for the simple medicines and first aid supplies they distribute. CHL's are selected by ward-level health committees, trained for a period of 24 days, and then work on a voluntary basis for an estimated 6 hours per week. The tasks of the CHL include:

- Explaining to the people how they can stay healthy by their own efforts.
- Demonstrating tasks necessary to improve health.
- Providing treatment for minor illnesses.
- Developing schemes to provide revenues for the re-supply of their first-aid kits.<sup>29</sup>

CHL programs in the Jeevanpur and Chhatredeorali panchayats of the Dhading District and Mumling and Akhibhuin panchayats of the Sankhuwa Saloha District started in 1980. An evaluation in April 1981 suggested that --

- CHLs were often unclear about their tasks and required constant supervision from the VHWs. In turn these supervisory activities decreased the number of houses that VHWs had the time to visit.
- CHLs felt they deserved some remuneration in view of their ever increasing responsibilities, but that it was unlikely that the wards would provide any payment to them.
- The first aid activities of the CHLs were those in greatest demand.
- The initial CHL drugs and supplies provided by UNICEF lasted on average less than 6 months.

- Sixty-three percent of the wards in the four panchayats (22 out of 36 wards) raised some funds to purchase drugs to resupply the CHL's kits. The average amount raised equalled Rs. 142 per ward. The wards that raised funds chose the following means for doing so:<sup>30</sup>

Fundraising w/voluntary contribution	52% (11/22)
Fixed amount raised from all households	42% ( 9/22)
Fundraising from rich only	3% ( 1/22)
Sale of drugs	3% ( 1/22)

The UMN-sponsored CHL programs in the Bougha Ghumna and Pokharathok panchayats of the Palpa District started during 1977 and 1978. Individuals were given a brief training and an initial supply of medicines. These workers charge on a cost-plus basis for the medicines they dispense, and replenish their supplies by purchasing the drugs at a 15 percent discount at the UMN office in Palpa. To date, the health workers have been able to generate sufficient revenues (from Rs. 400 to 600 per year) to cover the costs of replacing the drugs they dispense. Records of the revenues generated and expenses made are kept by the respective ward health committees, which are also responsible for determining who is unable to pay and thus may receive drugs without payment.<sup>31</sup>

#### C.4 Insurance

There were no private, commercial health insurers in Nepal in 1981. However, several shops in Kathmandu were advertising the sale of insurance against loss of life and property. Thus one might expect that health insurance could be added to their portfolio. On the other hand, there were at least two schemes in which health insurance was provided by employers and two schemes where the insurance was available for purchase at the rural health posts.

##### Employment-Related Insurance

HMG provides health insurance to its employees. For gazetted employees (top level government officials), the value of insurance coverage during the period of employment is equal to 9 months of pay, and for dependents of gazetted employees, the amount is equal to 4.5 months of the employee's pay. For nongazetted employees (all other government employees), the value of the insurance benefits equals 15 to 18 months of pay and 7.5 months of pay for their dependents. These individual insurance funds are started at the time of employment and are drawn down when the employee or dependents utilize the services of an HMG medical facility or an approved panel of physicians. An employee can either receive an advance for, or be reimbursed following treatment. If the

employee receives a pay raise, the higher rate of pay is multiplied by the unused weeks of insurance to determine the increase of the amount in the employee's insurance fund. If the employee changes from one government agency to another, his/her record is forwarded to the new agency without change. If there is money remaining in the fund at the time of retirement, the remainder is given to the employee in a lump sum.<sup>32</sup>

The United Mission to Nepal (UMN) also provides health insurance to its employees; however, the insurance premiums are drawn out of the employee's monthly salary. Unfortunately, the author does not have any information on the extent to which these revenues covered the cost of care to UMN employees or about the utilization rates of these individuals compared with persons of similar age, sex, educational attainment or residence who are not insured.

#### Health Post-Based Insurance

The first health post-based insurance schemes were those of the Nepal Resettlement Company (NRC). In 1965/66, the NRC, an autonomous HMG company (which receives assistance from the World Food Programme and the Israelis), was given land by the Ministry of Forests in 12 districts of the Terai for the resettlement of households homeless because of natural disaster. As part of the resettlement effort, health posts were built (partially with voluntary labor), staffed by HMG personnel and supplied with Rs. 10,000 of drugs per annum. An insurance scheme was devised such that households which paid a premium of Rs. 18 (in full or in installments) would receive free treatment and drugs at the health post for the subsequent 12 months. Households that were too poor to purchase the insurance received treatment without cost. The schemes were started in at least five of the nine areas resettled by NRC (see Table 26). However, only limited evaluation information is available. It was reported<sup>33</sup> that about 90 percent of the households in the resettled areas initially purchased the insurance, and that 10 to 20 percent of these dropped out of the schemes over time (since private drug shops are near all of the resettled areas, it is conceivable that nonenrollees have alternate sources from which to purchase drugs). It was estimated that the insurance revenues covered from 15 to 20 percent of the cost of the drugs delivered to the health posts, excluding transportation. However, it was decided not to raise the insurance premium as it was thought that this would cause additional households to drop out of the schemes.

The NRC was responsible for activities in the resettled areas for 5 to 6 years. During this time they requested that

TABLE 26

NEPAL RESETTLEMENT CORPORATION SITES:  
 NUMBER OF HEALTH POSTS AND STATUS OF HEALTH INSURANCE SCHEMES,  
 1963 - 1980

<u>Project Site</u>	<u>Date Opened</u>	<u># Families</u>	<u># Health Posts</u>	<u>H.I.S.*</u>
Nawalpur	2020	1504	2	Y/N
Banke	2023	1520	1	Y/UNK
Bardiya	2026/7	2712	2	Y/UNK
Kanchaunpur	2026/7	2548	1	Y/UNK
Jhapa	2026/7	1286	1	Y/UNK
Nawalparasi	2033	2876	0	N
Kailali	2032/3	1003	1	UNK
Sarlahi	2035/6	235	1	UNK

NOTE: \*H.I.S. = Health Insurance Scheme

Y = Insurance scheme started

N = Insurance scheme discontinued

UNK = Unknown insurance scheme started or continued

SOURCE: Paudel, N.B. Nepal Resettlement Company (An Introduction),  
 Lalitpur: NRC, 2037 (1980/81).

facilities, such as the health posts become part of the quota of health posts which are to be supported by the MOH. The NRC does not know if resettled communities continued the insurance schemes after it withdrew its support.

The health insurance schemes of the NRC were models for those later developed by the Community Health Project (CHP). In cooperation with Village Health Committees in the Lalitpur District, the UMN has been assisting in the development and operation of health insurance schemes in three village panchayats since 1978. The financial objective of these schemes is to raise sufficient funds to cover the cost of drugs used in excess of the value of drugs supplied annually to health posts by the government. Premiums equal Rs. 12 (US \$1) per household per year in two of the schemes (one semi-urban and one rural) and Rs. 25 (US \$2) per year in the third (a semi-urban health post). The premiums can be paid in full, in installments, or in the form of labor. Some poor households obtain memberships without charge. Initially, households could enroll in the schemes and renew the insurance memberships at times of their choosing, and they tended to do so primarily when someone in the household was sick. Later, the benefit period was limited to a specific 12-month period of the year. After institution of this policy, purchase of the cards during the first quarter of the period nearly doubled (from 29 percent of total enrollments to 53 percent). Insured persons are entitled to free services and drugs at village health posts, a Rs. 50 (US \$4) deduction per out-patient visit at the nearby UMN Hospital and Rs. 100 (US \$8) deduction per in-patient stay. Nonmembers receive consultation services without charge at the health posts but receive prescriptions instead of drugs. Emergency services at the health posts are available to everyone without charge.

The main findings from an analysis<sup>34</sup> of the CHP insurance schemes are listed below.

#### Enrollment:

- Total enrollments increased over a 3-year period from 1978-1981 in all three insurance schemes.
- The percentage of enrolled households which renewed their insurance (20 to 40 percent of any total group enrollees), increased over time in all the insurance schemes.
- Five to twelve percent of the geographically eligible households in each area were participating in the insurance schemes by the third year.

- Evidence from one health post suggested that, over time, larger households were more likely to purchase the insurance.
- Enrollment was inversely related to the distance of the household from the health post.
- Ninety percent of households paid for their insurance in full, 5 to 10 percent paid in installments and 0 to 5 percent paid by provision of labor services. Payment with labor was most popular in the scheme with the highest premium.
- In the semi-urban communities of Lalitpur, households' demand (number of enrollments) for CHP insurance was elastic with respect to price over the range of Rs. 12 to Rs. 26. Thus, lowering the highest insurance premium would increase both the number of enrollments and the revenue from enrollment fees.
- Information was not collected about the relationship of households' demand for insurance and their income.

#### Utilization:

- It was not determined if owning insurance positively or negatively affected utilization of health post services.
- Differences between the utilization patterns of the health post by the semi-urban and rural populations were observed. The average number of visits by enrolled urban households was higher ( 1.5 visit per household) as compared to enrolled rural households ( 0.8 visits). In the rural area, males utilized the health post more than females, in the semi-urban areas, the opposite occurred. In both rural and urban areas, the utilization of the health posts by children under five was low relative to the proportion of the population made up by this age group. (The availability of FP/MCH services without charge at weekly clinics at the same health posts probably explains this finding.)
- Utilization of the hospital out-patient benefits increased significantly over the three years of operations even after adjusting for increases in enrollment into the schemes. Utilization of inpatient benefits did not significantly increase overtime.

- One half the number of persons referred from the rural health post were seen at the hospital, whereas twice the number referred from the semi-urban health posts were seen at the hospital.
- The in-patient or out-patient utilization of the hospital by insured persons was less than 1 percent of the total in-patient or out-patient utilization of the hospital during any given year.

#### Expenditures:

- The average cost of drugs per visit was highest in the rural area (Rs. 3.2) and lower in the urban areas (Rs. 2.0 to 2.3). This was inversely related to the average number of health post visits per household and the accessibility of households to other modern medical providers.
- The average number of and costs of hospital visits per insured household were highest for the insurance scheme with the highest premium, suggesting that "sicker" households were more likely to enroll into that scheme (i.e., adverse selection).
- The average charge for hospital in-patient care to insured persons was less than the average charge to general in-patients. However, the average charge for hospital out-patient visits to insured persons was twice the average charge for general out-patients at the hospital. Whereas the insurance only covered up to 39 percent of charges for in-patient care, it covered 82 percent or more of charges for out-patient care.
- It was not determined to what extent health providers at the hospital were appraised of the insurance status of their patients, nor if this information would have affected the tests and treatments they prescribed for such patients. Alternatively the higher average out-patient charges for insured persons may be related to patient's demands for more services and medicines since they do not have to pay any additional amount.

#### Revenues vs. Expenditures:

- Revenues from enrollment fees for all three schemes were adequate to cover the cost of drugs to supplement

the value of the supply given by HMG. However, the value of the drugs supplied by HMG (Rs. 8500) was sufficient for all three health posts after the second year of operations. Alternatively, fees would have been adequate to cover the cost of hospital charity for in-patient and out-patient care to insured persons in two of the schemes, but only the cost of charity for in-patient care in the third (i.e., Badegaon).

- Revenues from enrollment fees were not adequate to cover the total cost of the drugs used.

#### Administration:

- Accounting problems were found.
- Administrative costs of the schemes may be high relative to the revenues generated by the schemes and require further evaluation.
- Improvement in the marketing of the schemes would seem to be indicated by the low rates of participation of eligible households.

Continuation of experimentation with these insurance schemes was recommended since improvements in the premium and benefit policies and management procedures might result in increases of revenues relative to expenditures and in the more equitable distribution of benefits.

#### C.5 Public/Private Sector Schemes

There are currently two projects in Nepal where health or family planning commodities are distributed by private sector retail shops. These projects are described below.

##### Pharmaceuticals

The Hill Drug Scheme (HDS)<sup>35</sup> was started in 1969 by the BNMT and is presently operating in 20 to 30 retail drug shops in the Kosi and Mechi zones of eastern Nepal. The HDS trains storekeepers in basic pharmacy and in stock and sales revenue management. The retailers may then purchase drugs from the HDS at 10 to 12 percent above HDS's costs (this margin is used to cover BNMT's administrative costs and the costs of transport and customs). The retailers are contractually bound to sell the drugs for no more than an additional 10 percent profit. To ensure that this practice is followed, price lists must be

displayed in their shops. Some HDS drugs may be sold freely and some only with a prescription from the health assistant or doctor.

As of early 1981, 54 retailers had been trained for shops in 33 different locales. Although 20 to 30 of these shops have been operational at any one time, only 8 of the shops have been in operation for more than 5 years. This relatively high attrition of retailers has resulted from: (1) competition from other private retailers (do not have to conform to HDS rules of prescription, and sell tonics and other drugs of questionable value, or have a kickback relationship with some of the health workers), and (2) the decision of some HDS retailers to become private entrepreneurs in order to set their own prices. Stock turnover at the shops ranges from a low of Rs. 225 to a high of Rs. 7,000 per annum. In the past, the HDS lost between Rs. 20,000 to 30,000 on average per year. Some of this was due to retailers' defaulting on loans from the HDS. The losses have decreased recently due to increase orders from the Save the Children fund and the more careful selection of shopkeepers. The problems experienced with the schemes have led the BNMT to conclude that they are not a particularly promising way to provide drugs at low cost to large numbers of the rural population, but that they can serve as a useful adjunct to other community health programs which can provide the necessary supervision.<sup>36</sup>

### Contraceptives

The Contraceptive Retail Sales (CRS) project is an attempt to provide contraceptives (currently condoms and oral contraceptives and soon also low dose pills and foaming tables) through medicine and general retail shops in Nepal. HMG also distributes these FP commodities without charge through government and voluntary clinics.

As of March 1982, Dhaal and Suki-Dhaal (condoms) will have been sold in 5,814 outlets, and Gulaf (oral contraceptives) in 52 of Nepal's 75 districts, primarily in areas accessible by road or air. Since the objectives of this social marketing project are to make contraceptives "available at a price which most couples can afford," prices to the consumer are low (i.e., Rs. 0.50 for three condoms and Rs. 1.50 for one cycle of pills). Given these low prices and initially the low sales for these new and socially "sensitive" products, dealer and retailer margins were set two to three times higher than markups on other medical products in Nepal in order to induce merchants to carry these products. Since CRS sales began in 1978, annual sales of condoms have increased over the following three years

by 21, 24, and 1 percent. Although sales of pills initially decreased by 8 percent, sales increased subsequent years by 15 and 19 percent. Furthermore, CRS condoms account for 20 to 30 percent of the total number of condoms and CRS pills for 5 to 10 percent of pills distributed through HMG public (free) or commercial (CRS) programs (see table 27).

An original objective of the CRS project was to develop by the end of the contract period, ". . . a selfsupporting, or nearly so, commercial distribution system." However, even excluding the cost of technical assistance, revenues of the CRS project in 1981 would have only covered 8 percent of the operating expenditures of the project. Further, even though the revenues of other major contraceptive social marketing projects, e.g., Egypt, Jamaica and Bangladesh do not totally cover their expenses (only 21, 42 and 13 percent respectively), the percentage of expenses covered by the Nepal project is the lowest of the four (see Table 28). This comparison is marred by the fact that it does not indicate differences among (1) the populations of the countries (e.g., urban-to-rural distribution, income distribution, education, etc.); or (2) the CRS projects (e.g., length of implementation); or (3) what would happen to sales and revenues in Nepal if prices were increased.

Perhaps a more relevant way to evaluate the CRS project, particularly since commercial viability is not as important an objective as increasing the Nepalese awareness and use of contraception, is to compare the cost per couple-year-protection (CYP) between the CRS project and contraceptives distributed through other public programs. The average cost per CYP for either condoms or pills for the CRS project was estimated to be \$8.30 in 1981, the cost per CYP in the FP/MCH project at \$8.50 for condoms and \$10.14 for oral contraceptives. These figures exclude the costs of technical assistance and imported commodities. Further, the figures are not corrected for the urban/rural location of the project activities nor other factors related to economies of scale.<sup>37</sup>

The experience of the CRS project has brought to light several findings which are relevant to other commercial ventures in Nepal, including the sale of pharmaceuticals through private sector retailers. These findings include:

- Training Nepalis in sales and marketing management techniques is feasible; however, there is a need for continual re-education and review of information about the use and contraindications of pharmaceutical products.

TABLE 27  
 FP/MCH<sup>1</sup> & CRS REPORTED  
 CONDOM AND ORAL CONTRACEPTIVE DISTRIBUTION IN NEPAL  
 JULY 1977 - JULY 1981

YEAR	CONDOMS					ORAL CONTRACEPTIVES				
	Free Distribution Unit	Percent	Sales Unit	Percent	Percentage Change Total Distribution	Free Distribution Cycles	Percent	Sales Cycles	Percent	Percentage Change Total Distribution
1977/1978	2,363,588	91	26,620 <sup>2</sup>	9	----	315,200	93	1,452 <sup>2</sup>	3	----
1978/1979	2,238,955	77	666,102	23	+ 21	274,544	90	18,094	6	- 8
1979/1980	2,509,944	69	1,105,429	31	+ 24	313,074	90	22,753	7	+ 15
1980/1981	2,856,822	78	782,104 <sup>3</sup>	22	+ 1	343,071	85	56,136	14	+ 19

HMG's fiscal year is approximately 16 July - 15 July of the Gregorian Calendar which corresponds to their data recording system. Distribution figures include CHIP and FPAN; complete data for FPAN are not included in some years.

Figures for Nepal CRS project represent only one and a half months as CRS sales began June 1, 1978.

Lower condom sales are due to late arrival of commodities in June 1981.

Source: Altman, D., et al. Evaluation of the Nepal Contraceptive Retail Sales Project, April 8 - May 10, 1982, AID Contract No. DS/POP/FPSPD, DPE-0611-C-00-1001-00, Westinghouse Health Systems, p. 20.

TABLE 28

CONTRACEPTIVE SOCIAL MARKETING COST PER CYP  
AND COST AS A PERCENTAGE OF TOTAL EXPENSE (IN PARENTHESIS)  
BY FUNCTIONAL EXPENSE CATEGORY,  
1981  
(Current US\$)

	EGYPT CY81	JAMAICA CY81	NEPAL FY81	BANGLADESH CY81
Cost of Product	1.95 (21%)	3.78 (42%)	3.92 (4%)	4.46 (13%)
Packaging	.20	1.00	.50	.40
Commodities	1.75	2.78	3.42	4.06
Distribution	.66 (9%)	1.59 (21%)	1.33 (3%)	.40 (6%)
Direct	.22		.83	.08
Margins	.44	1.59	.50	.32
Promotion	3.08 (42%)	1.81 (24%)	9.66 (25%)	.20 (17%)
Advertising	2.07	1.50	8.17	.69
Field Force	1.00	.31	1.42	.51
Management	1.65 (22%)	.41 (5%)	23.59 (61%)	.83 (12%)
Local	.86	.16	3.42	.44
Technical Asst.	.78	.25	<u>20.17</u>	.39
<hr/>				
TOTAL EXPENSE	7.24 (100%)	7.59 (100%)	38.50 (100%)* <u>18.33 (100%)</u>	6.98 (100%)
SALES REVENUE	1.57 (21%)	3.19 (42%)	1.46 (4%) <u>(8%)</u>	.89 (13%)
NET EXPENSE	5.76 (79%)	4.41 (58%)	37.04 (96%) <u>16.87 (92%)</u>	5.99 (37%)
<hr/>				
TOTAL PROJECT				
Net Expense (US\$000's)	1,242	141	443	4,273
Sales in CYP (000's)	216	32	12	713

\* Underlined numbers and percentages are those which apply when the cost of technical assistance is lowered to zero.

Source: Seims, T., AID/W personal communication, June 1982.

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- There is a general lack of experience in Nepal with respect to marketing research and promotional and advertising techniques.
- Retailer profit margins on pharmaceutical products averages 8 to 10 percent.
- The low literacy of the population requires simple or pictorial inserts to instruct consumers about the correct use and potential dangers of pharmaceutical products.
- There is a lack of commercial firms in Nepal with adequate facilities for packaging and printing of products or promotional materials.<sup>38</sup>

## CHAPTER IV NOTES

1. Variables which affect the demand for (or utilization of) health services include: (a) the frequency and duration of illness; (b) the status of the household member who is ill; (c) the size of the household; (d) household income; (e) availability and prices (money and time) associated with competing health services providers; (f) competing demands for time of those utilizing the services, etc. For a schematic model of the relationships between these variables, see: Donaldson, D.C. An Analysis of Health Insurance Schemes in the Lalitpur District, Nepal, unpublished master's thesis, 1982. See also Akin, J.S., Griffin, C.C., Guilkey, D.K., and Popkin, B.M. The Demand for Primary Care Health Services in Low Income Countries: A Review and Case Study, Chapel Hill: Carolina Population Center, 1981 (draft); 146 pp.
2. The survey expenditure numbers given were not inflated to 1982 values real incomes (as measured by GNP as Capita) were at best stagnant and probably decreased for the period 1972-82.
3. Medical care in the Household Budget Survey included only "professional fees": drugs included "vitamins, tonics, quinines, painkillers, injections, ointments, cough drops, antacids, and other medicines."
4. Comparison of the total expenditures for medical care and drugs with household incomes (as measured by total household expenditures) within each area surveyed showed that the demand (as measured by expenditures) for medical services and supplies was elastic with respect to income (i.e., as incomes rose, expenditures for health increased at a proportionately higher rate). Interested readers should refer to the original survey documents.
5. Medical expenses in the Agricultural Credit Survey (Volume III, p. 44) were defined to include household expenditures over a 1 year period for: "medicines and herbs, medical practitioner (including traditional healers) services, nursing care, hospital expenditures, and expenditures for barber services and soap."
6. Far sizes in the Agricultural Credit Survey were defined as follows:
  - Large Group > 1.71 hectares
  - Medium Group > 0.71 hectares, < 1.71 hectares
  - Small Group > 0.35 hectares, < 0.71 hectares

7. In Agricultural Credit Survey (Vol. IV, p. 148), stated that:
 

"On a regional basis, the proportion of expenditures on food products, household utensils and furnitures, medicine and rent and taxes was higher in the Terai, while the proportion of expenditures on clothing, shoes and beddings, education, lighting and fuel, transport and communications, drinks and beverage, entertainment, legal affairs, and 'other' was higher in the Hills."
8. In reviewing data from household income and expenditure surveys the reader should be aware that households generally underreport income but inflate expenditures. These errors are further exacerbated by the difficulty of evaluating the large proportion of noncash transactions in subsistence agricultural economies like Nepal.
9. USAID/Kathmandu. Rapati Zone Project Paper. Kathmandu: USAID, May 1980, Annex J, pp. 1-2.
10. Coglin, S. and A. Falk. A Study of the Socio-Economy of the Kosi Hill Area: Guidelines for Planning and Integrated Rural Development Programme. Surrey: England: Land Resources Development Centre, 1979; Vol. I, p. 147.
11. Save the Children Foundation, USA. A Proposal for a Community-Based Integrated Rural Development Project, 1980/81, pp. 14-15.
12. Rasuwa/Nuwakot Development Project. Household Baseline Survey. Kathmandu: Rasuwa/Nuwakot Development, 1978; pp. 71, 78.
13. Asian Regional Team for Employment Protection. Nepal Rural Household Survey. Bangkok: ILO, 1976; p. 16.
14. HMG/MOH. Mid-Term Health Review, 2035, Research and Evaluation of Health and Health Services Mid-Fifth Plan Period (2031-2036). June 1979, p. 183. The MLK presented additional information (pp. 183-186) about the likelihood of households contributing to health posts based on their: (a) location within and outside the administrative zone of the health post, (b) location by region and (c) location within the Terai or the Hills. These findings are not presented here as the author feels their validity is questionable given the small sample sizes used.

15. Ibid., p. 188.
16. Ibid., p. 190.
17. Acharya, M., L. Bennett, et al. Status of Women in Nepal (unpublished data, personal communication), 1981. The data presented in the text of this paper was in response to the following questions:

"What expenditures did your family make on medical treatment for family members during the last year (both indigenous and western healers)?"

1. "Who first suggested the expenditures?"
2. "Who was consulted?"
3. "Who decided to spend more, less, or the same as usual?"
4. "Who disagreed with the purchase?"

"Male" respondents included: husbands, other male household members, male relatives, or male neighbors. "Female" respondents included: wives, other female household members, female relatives, or female neighbors.

18. Adult out-patient services are only one type of service offered by health posts. Others include:
- Provision of family planning counsel and commodities.
  - Provision of MCH services, e.g., immunizations, nutritional surveillance, teaching, about oral rehydration therapy.
  - Case detection and followup for TB, leprosy, and malaria patients.
  - Recording of vital events.
19. Dhital, B.P. "Compulsory Savings Scheme in Nepal: An Experiment for Mobilizing Rural Capital," in Report of a National Seminar on Land Reform, October 23 to 27, 1970, Kathmandu: Sangam Press, pp. 46-55.
20. It is important to note that there was a rapid increase in land taxes before the PLDT was instituted. For example, over the period from 1951/52 to 1960/62, land taxation

rates increased by 112.7 percent. In 1962/63, an additional increase of 75 percent was levied and in 1967/68 there was a further increase of 50 percent. These increases took place when there was little increase in land tax rates in other developing countries (from Dhital, op. cit., p. 53).

21. Agrawal, G.A. "Mobilization of Resources for a Basic Needs Oriented Public Sector Programme in Nepal," in: CEDA. Planning for Basic Needs and Mobilization of Resources, Report of a National Seminar held in Kathmandu, November 12-14, 1979, Bangkok: ILO-ARTEP, 1980, pp. 225-6.
22. The regressive incidence of the PDLT refers to the fact that: (1) tenant farmers were required to pay taxes whereas they had not been required to do so under the old land tax, and (2) the taxation rates were the same for the smaller and larger landholders, whereas farmers with small landholdings had received 50 percent rebates under the older land tax.
23. Agrawal, G.A. op. cit., pp. 227-8.
24. Jha, K.K. Agricultural Finance in Nepal. New Dehli: Heritage Publishers, 1978, pp. 166-169. For a description of the SFDP, see: MSH/Nepal. Report of Community Involvement Investigations in the Health Field. Kathmandu: MSH, 1979; pp. 4-8. For a description of traditional Nepali cooperatives, see: Messerschmidt, D.A. "Dhikurs: Rotating Credit Associations in Nepal," in: H.F. Fisher, ed., Himalayan Anthropology, the Indo-Tibetan Interface. The Hague: Mouton, 1978; pp. 141-66.
25. For a more detailed description of the scheme see: Cassels, A. and B. Peniston. The Bhojpur Drug Scheme, a Report on the First Year of Operation of a Drug Supply Scheme in Bhojpur District, Koshi Zone, Nepal, Kathmandu: BNMT, 62 pp. plus appendices. See also: Subedi, C. and A. Cassels. The Bhojpur Drug Scheme, 2nd Year Progress Report, Kathmandu: BNMT/HMG, June 1982, (mimeo), 25 pp.
26. Donaldson, D.C. An Analysis of Health Insurance Schemes in the Lalitpur District, Nepal. Seattle: University of Washington, 1982, master's these, p. 161.
27. Cassels, A. Personal communication, June 1981.
28. For a more detailed description of the scheme see: Achard, T. Dolakha Drug Scheme, Integrated Hill Development Project,

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31. Carnahan, R. Personal communication, June 1981.
32. Singh, B.B. Personal communication, June 1981.
33. Paudel, N.B. Nepal Resettlement Company (An Introduction). Lalitpur: Punerbas Nepal Resettlement Company, 2037 (1980/81); 117 pp.
34. Donaldson, D.S., op. cit., 161 pp.
35. For a more detailed description of the Hill Drug Scheme (HDS) see: Cassels, A. and B. Peniston, op. cit.
36. A former BNMT staff member who was involved with the HDS stated that one of the objectives of the HDS drug shops was to create "competition," which would force the existing village drug sellers to drop their prices (N. Roberts, Personal communication, June 1982).
37. Another analysis of the cost-effectiveness of Nepal's family planning efforts using births prevented per acceptor as the effectiveness measure appears in: Barnum, H.N. Nepal, Economic and Financial Notes on the Population Sector, Washington, D.C.: World Bank, July 1982, (draft), 36 pp. plus tables.
38. For a well-done review of the Nepal CRS Project see: Altman, D. et al. Evaluation of the Nepal Contraceptive Retail Sales Project, April 8 - May 10, 1982, AID Contract No. DS/POP/FPSD, DPE-0611-C-00-1001-00, Westinghouse Health Systems, p. 20.

V. SUMMARY AND RECOMMENDATIONS

## CHAPTER V

### SUMMARY AND RECOMMENDATIONS

The purpose of this report is to review documented information of relevance for those considering the potential of alternative sources of financial support health services in Nepal. This review includes the following:

- Descriptions of the health services provided in Nepal by public and private providers.
- Analyses of His Majesty's Government of Nepal's (HMG) total and health sector budgets.
- Analyses of the prospects for Nepal's economy as a whole and the implications of this for resource allocation to the health sector.
- Surveys of households' expenditures for health services.
- Reports of health post operating expenditures.
- Evaluations of local revenue generating schemes, designed specifically for support for the delivery of health services or which might be suitable for that purpose.

A summary of the outstanding findings from these sources and of the author's recommendations follows below.

#### Description of the Health Services Provided by the Public and Private Sectors

The poor health status of the Nepalese relative to populations in other parts of the world is starkly documented by an infant mortality rate of 150 deaths per 1,000 live births and an average life expectancy of 45 years. Major factors contributing to the poor health status of the Nepalese include malnutrition resulting from inadequate food production per capita, a number of vector or waterborne diseases resulting from poor housing and sanitation, and inappropriate health practices resulting from low levels of public health education. In addition, the ratios of all opathically trained doctors and nurses to total population are some of the lowest in the world, and 75 percent of these personnel are located in urban areas where only approximately 5 percent of the population resides.

HMG has committed itself to the delivery of basic health services from fixed rural health posts and is in the process of simultaneously (1) expanding these services to unserved rural areas, and (2) consolidating the services now provided by vertical disease control projects into the operations of the integrated health post facilities. These government services are being introduced into rural areas which have heretofore relied on traditional healers, herbalists, and drugs sold by local shopkeepers.

### Analyses of His Majesty's Government of Nepal's Total and Health Sector Budgets

During the current period of worldwide economic recession, of increasing concern to developing countries and foreign assistance organizations is the widening gap between governments' revenues and their recurrent expenditures. The recurrent costs of social sector projects are of particular concern since the benefits from these projects do not directly result in increases in GDP (hence government revenues) but do add to governments' recurrent expenditures.

By 1985 HMG's revenues are expected to cover only 50 percent of Nepal's total (development and regular) expenditures. Furthermore, the foreign assistance which will be required to cover this deficit is expected to be increasingly composed of loan monies, thus contributing to Nepal's increasing trade imbalance.

The proportion of total expenditures that HMG allocated to its health sector dipped from 5.2 to 4.9 percent over the period 1965/66 to 1980/81. Furthermore, since over the Fifth Plan period, HMG health sector revenues have been increasingly required to support the regular (recurrent) budget. Donor revenues have been utilized to offset HMG's decreasing development expenditures in the health sector. Since it is estimated that 70 percent of the total health sector budget is required for recurrent expenditures, and 83 percent of the total health sector budget is covered by foreign assistance, it follows that foreign assistance covers a significant proportion of the sector's recurrent costs.

### Prospects for Nepal's Economy

Prospects for the rapid growth of Nepal's economy are considered slim given the more rapid growth of Nepal's population relative to increases in agricultural production. Development of Nepal's nonagricultural sector is limited by the lack of (1) a seaport, (2) significant mineral resources and (3) a well

developed roadway system, and the poor management of the government's parastatals. Rapid economic growth as a source of additional revenue for support of the health sector seems improbable.

### Survey Information about Household Expenditures for Health

One potential source of revenues for support of health sector activities is contributions from the communities or individuals who benefit from the services provided. Given that the average income per capita in Nepal is about \$100 and that 50 percent of the population have incomes under the Nepal-defined level of absolute poverty, it is important to determine how much Nepalese are willing to pay, to whom and for what in considering whether publicly-subsidized/delivered services might acquire any private funds for their support.

General expenditure or special purpose household surveys are useful for assessing household willingness-to-pay. A 1973-75 survey of 18 urban areas in Nepal found that from 1.3 to 4.5 percent of household annual expenditures, (Rs. 55 to 365 per household or Rs. 11 to 73 per capita) were spent on medical care and drugs. Demand for health services (as measured by expenditures) was elastic with respect to income. A 1972 survey of 22 rural districts found that in 72 percent of the districts that over 90 percent of the households had made some expenditure for medical care or drugs during the preceding year. On average, households allocated 1.9 percent of total annual expenditures (Rs. 64 per household or Rs. 11 per capita) for medical care and drugs. Thus, the proportion of total household expenditures for health seems similar between poor urban and rural areas. Surveys in an additional four rural districts corroborate the findings of the urban household survey, that the largest proportion (35 to 85 percent) of household health-related expenditure is for drugs.

### Health Post Operating Expenditures

In considering the potential of community or household payments to meet some of the recurrent costs of providing health services, it is useful to compare the operating expenditures of health facilities or programs with the household expenditure data reported above. For example, when the estimated 1979 operating budgets (excluding district and central administrative costs) for existing health post facilities in 43 districts were divided by the estimated 1979 population for the same districts, it was found that expenditures of Rs. 6 per capita or less would be required to provide for these total costs.

The collection of this per capita amount would seem feasible (theoretically) given the average per capita out-of-pocket expenditures for medical services reported above. Alternatively, if the same budget estimates were divided by the actual number of visits made to the same facilities in 1979, then per visit charges of Rs. 15 or less would be sufficient to cover the operating budgets of health post facilities in only 11 of the 43 districts (25 percent). Per visit charges of Rs. 16 to Rs. 25, Rs. 26 to 99 and Rs. 100 to 950 would provide sufficient revenues for the operating budgets of the other 3 quartiles and districts. Payment of per visit charges of these magnitudes would be more difficult for poor urban and rural households.

### Evaluation of Local Revenue Generating Schemes

In Nepal, there have been and currently are local revenue generating schemes specifically designed to provide revenues for the recurrent costs of delivering health services, or which might be suitable for that purpose. There are five types of such schemes:

- Local taxation
- Cooperatives
- Fee for service (hospital or health post-based)
- Insurance (employer or community-based)
- Public/private sector sales of pharmaceuticals or contraceptives.

Pilot project attempts at local taxation were successful in generating up to 45 percent more revenue than that collected through Nepal's traditional land tax. However, institution of these taxation mechanisms on a national basis was met with sufficient resistance and noncompliance to lead HMG to suspend the operation. In addition, although the additional revenues or goods generated were intended for local development purposes, insufficient local initiative or expertise existed to apply these goods or revenues to new or ongoing development projects.

The revenue generating potential of cooperatives was not explored in depth since only a small proportion of Nepalese villages have operating cooperatives and there is a great deal of variability in their organization and of activity.

Collection of fees for services or drugs occurs in some way at all health facilities in Nepal. At all HMG hospitals and health posts, a nominal annual registration fee is collected from all users. However, revenues from such fees and other charges covered only 12 percent of Bir Hospital's operating expenditures, whereas from 27 to 86 percent of the operating expenditures of hospitals operated by the United Mission to

Nepal were covered by revenues generated by a more extensive, sliding scale fee schedule.

In two districts, health post fees are collected per drug prescription. Neither scheme has been in operation long; the revenues generated by one scheme have been sufficient to cover 30 percent of the total cost of the drugs dispensed (on average from Rs. 2 to 6.5 per visit). Alternatively, these revenues would cover 83 percent of the administrative costs associated with the scheme (excluding the cost of the drugs dispensed). Further experimentation with pricing strategies may improve the revenue-generating capabilities of the schemes. In the future attempts to incorporate the schemes' administrative tasks into the responsibilities of existing personnel in the public health sector may reduce the operating costs of the schemes. Neither project has collected sufficient information to determine whether the payment scheme has a disincentive effect on utilization of the facility and/or the health status of the population.

Fees for drugs and first aid supplies dispersed are also collected by Community Health Leaders (CHLs). To date, there has been little published evaluation of the revenue-generating schemes used by these volunteer workers.

Private insurance as a source of support of health sector activities, is frequently criticized as an approach which wouldn't be appropriate in Nepal because the low income of households would require that expenditures for health services be made only when necessary for serious illness or injury. Health insurance is however being provided to government civil servants and staff of the United Mission to Nepal. Insurance has also been sold at health posts in two rural projects on a fixed-fee-per-household basis. Participation (enrollment) seemed to be positively related to household size and utilization of hospital benefits and inversely related to price and distance from the facility. The revenues generated by insurance schemes in one project were not adequate to cover the cost of the drugs utilized at the health post nor the estimated cost of administering the schemes. However, enrollments and re-enrollments in the same schemes have increased over the few years they have been in operation, and it may be possible to make the schemes more financially sound through changes in benefit and administrative policies and by attempting to improve enrollments with more vigorous marketing.

Finally, both drugs and contraceptives have been sold through mixed public/private sector initiatives. In both of the schemes described in this report, a fixed profit margin was determined for the drugs or contraceptives sold by the project

retailers. In the Hill Drug Scheme (HDS), many of the first 54 drug retailers who were trained "dropped out" as they were able to make greater profits selling drugs privately at higher prices or because they were out-competed by other retailers who had a greater selection of drugs and who did not have to follow any prescribing guidelines. The shops which have seemed the most successful are those associated with some other community health activity, e.g., a health post or a CHL program.

The Contraceptive Retail Sales (CRS) project has attempted to sell contraceptives in a country with one of the lowest contraceptive prevalence rates in the world. Nevertheless, sales of condoms and pills have increased annually, as has the number of distributing retailers. Although the CRS project could not be self-sustaining in the near term, evidence seems to indicate it is a cost-effective way to distribute temporary methods of contraception in Nepal.

### Conclusions and Recommendations

Review of the preceding information (and the more detailed information presented in the full report) led the author to the following conclusions and recommendations.

1. Given the extreme poverty of the majority of the Nepalese and the likelihood that this will remain their "lot" even beyond the year 2000, HMG and/or donor resources will continue to be required to subsidize a great proportion of the recurring costs of delivering primary health care services to the entire population.
2. Given that (1) HMG health sector revenues have increasingly been drawn away from the development into the recurrent budget of the health sector, and (2) that donor revenues also presently support some of these recurrent expenditures, further expansion of the number of health facilities and health workers may require any or all of the following to occur:
  - A greater proportion of HMG's regular budget will have to be allocated to the health sector.
  - HMG will have to improve its overall collection of revenues through policy and administrative reform.<sup>1</sup>

- Donors will have to commit themselves at the project design phase to make funds available on a long-term basis to pay the recurrent costs resulting from a project's activities.
  - New and continued experimentation with the collection of local revenues in support of health sector activities will need to be supported and strengthened.
3. However, in view of the limited local government, national and donor resources for Nepal's health sector activities attention must also be given to prioritizing the multitude of population coverage and disease-specific objectives set out in HMG's comprehensive health plans, and to seek ways to meet these objectives cost-effectively.
  4. To assess the cost-effectiveness of different approaches, the collection of facility-based cost and utilization data is essential and should be instituted in at least a representative sample of districts.
  5. In view of the fact that the data from the household expenditure surveys is "dated", consideration should be given to adding questions about health expenditures to ongoing or new household surveys that are part of other project efforts. Conducting special surveys for health program purposes may be warranted.
  6. Given that the proportion of expenditures at Mission hospitals covered by fees ranges from 27 to 86 percent and that hospitals generally are located in more densely populated areas where total and cash incomes are likely to be higher, more emphasis should be given to determining how hospitals might be made financially more independent.<sup>2</sup> Many hospitals provide primary health care services to rural populations without access to a health post. However, more highly trained, hence costly, personnel often deliver these services at hospitals. Thus, special consideration must be given to the setting of fees for primary health care services at rural hospitals in comparison to health posts, in order to achieve both equity and cost recovery objectives.

A possible corollary to a policy change which raised fees at public hospitals would be the development of private health insurers.

7. The support for ongoing experimentation with health post-based and public-private financing schemes, should be continued with greater emphasis on improving the ongoing evaluation of these efforts. Only when such information is available will it be possible to compare these schemes with respect to equity, efficiency, and sustainability criteria. Further, different local financing mechanisms are likely to be appropriate for different areas, thus documentation about the outcomes achieved through a variety of approaches would be useful for other facilities or districts considering which mechanism to select for implementation.
8. Expansion of these schemes to other districts does not seem warranted at this time, in view of their administrative requirements compared with the skills and time of the personnel available, and with the small amount of revenues generated. However, it should be noted that the job descriptions of health post and district health office personnel include accounting and financial management tasks.<sup>3</sup> Thus, expansion of the schemes once they have succeeded in the pilot phase, may be possible without greatly expanding the number of personnel on the roles of the MOH.
9. The District Administrative Plan of 1975 decentralized governmental authority to district levels for the planning and execution of development activities. Thus, it would seem appropriate for District Health Offices and Committees to have primary responsibility for and authority to implement and modify local revenue generating schemes in support of health facility activities, once the initiation of such activities has been approved by the MOH.
10. Given that the total 1979 operating expenditures for existing rural health posts in most districts could be covered by a low per capita expenditure, some thought might be given to a pilot project where a nominal per capita health tax is added to ongoing tax collection efforts. For equity reasons, such a pilot project should be located in a district with many facilities, so that it would be likely that the majority of the population would benefit from the services available. In light of previous resistance to tax increases in rural areas, this project should be instituted only in areas where

there is some local support for the approach and where improvement in the services offered can accompany institution of the tax.

11. Donors, in assisting HMG narrow the gap between the quantity of drugs needed by Nepal's population and what HMG is able to provide, should also assist HMG in activities which move Nepal toward drug self-sufficiency. In particular, donors should ensure that drug import assistance does not weaken HMG's current support for projects that are experimenting with drug financing schemes or the private sector's interest in drug provision activities. Further, Donors should seek to assist HMG in (a) strengthening the production capabilities of Royal Drug Ltd. and (b) developing training materials or supervisory techniques that emphasize the importance of prescribing only those drugs necessary for treatment of a patient's illness and encourage the use of non-proprietary items.
12. In view of the wide geographic distribution of rural retail shops or drug stores, thought should be given to (a) ways to improve the quality of information, advice and drugs these providers give to villagers, and (b) what would be the pros and cons of putting a ceiling on the prices at which these shops can sell essential drugs (particularly those produced by Royal Drug Limited). A study of these and other issues related to the distribution of drugs by the private sector might be undertaken by the Pharmaceutical Consultative Council,<sup>4</sup> since it is their responsibility to advise HMG on pharmaceutical policies.
13. Given the observed variance in utilization rates of health posts and the number and type of drugs dispensed per visit, effort should be directed at refining the criteria whereby the available HMG drugs are distributed to hospitals or health posts.<sup>5</sup>
14. USAID/N should inquire whether HMG would sponsor a conference/workshop to review information about the problem of financing health sector activities in Nepal and to develop recommendations for future HMG and donor activities with respect to this issue.

## CHAPTER V NOTES

1. Several reforms have been suggested in World Bank (October 16, 1981) Nepal: Policies and Prospects for Accelerated Growth (Report No. 3577-NEP) Washington, D.C.: World Bank, 122 pp.
2. The following set of studies might be included in such an effort.
  - A study of how Mission hospitals (1) create their fee schedules, (2) determine who should pay and how fees are collected, and (3) account for and control their costs.
  - Determination of the accounting and patient record systems used by HMG hospitals and whether these systems provide information about operating costs for the hospital as a whole and for cost centers (e.g., ER, OR, lab, etc.), and about patient utilization and cost per patient receiving in-patient or out-patient services.
  - Determination of the decision-making groups within HMG hospitals and how these persons/groups would need to be involved in policy and administrative changes.
3. ICHSDP (Aug/Sept. 1980) Job Descriptions of Health Post Personnel, Kathmandu: Department of Health Services, pp. 6-7.  
Administration (Personnel, Finance, Supply and Supervision)
  - Sends timely requisitions to the DHO for necessary cash, equipment, medicines, and other supplies.
  - Maintains records of expenditure as per instruction.
  - Insures that the supplies and equipment of the HP are inventoried properly and maintained in proper order.
  - ICHSDP (July/August 1980) Job Descriptions of District Health Office Technical Staff, Kathmandu: Department of Health Services, pp. 2-3.  
Administration and Management, Logistics and Supply
    - Conducts extensive survey to assess the stock, status and need of all supplies, equipment and drugs for the DHP and HP's.

- Submits plan for supplies and equipment to the Central Store (Indent and Procurement Division) through ICHSDP. This plan should specify quantity of supplies needed, modes of transportation, duration, etc.
- Makes an assessment of individual HP requirements.
  - Updates records and reports every 3 months on the basis of records and requisition forms.
  - Forwards the documents to Indent and Procurement Division through ICHSDP.
- Meets the extra requirement of supplies by local purchase through the DHO budget.
- Procures, maintains and distributes record forms, registrars and stock books.

#### Financial Management

- Prepares and submits annual budget with specific justifications whenever necessary.
  - Management of accounts
    - Ensures appropriate spending of amounts as per allocation of budget
    - Maintains accounts of expenditures
    - Prepares and submits monthly statement of expenditures
  - Participates in the annual audit of account.
4. Members of the Pharmaceutical Consultative Council include representatives from the: Ministry of Forests, National Planning Commission, Ministry of Health, Ministry of Finance, Ministry of Industry and Commerce, the Chief of Royal Drugs Limited, three nominated members, and the Manager of the Pharmacy Department. Reference: Nepal Press Digest, Ltd. "Pharmaceutical Consultative Council and Pharmaceuticals Advisory Board Formation Rules, 1980," Nepal Recorder, Year 4, No. 19, Kathmandu: Nepal Press Digest, Ltd., July 25, 1980, pp. 181-86.
  5. The following are examples of variables which might be included in an algorithm to allow a more efficient allocation of HMG drugs:

- Population densities (by age and sex) within certain distances from HMG health facilities.
- Epidemiologic profile of local areas.
- Prior utilization rates of HMG health facilities by persons within different age and sex groups.

The extent to which an algorithm could be refined would depend on the availability of reliable data, of microcomputers, and of personnel to manipulate and analyze the data for use in policy-making decisions.

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APPENDIX A  
LIST OF PERSONS CONTACTED

APPENDIX A

LIST OF PERSONS CONTACTED

HIS MAJESTY'S GOVERNMENT OF NEPAL

Centre for Economic Development and Administration

Govinda Ram Agarwal, Director

Mahesh Prasad Banskota

Bhawani Dhungana

Family Planning/Maternal and Child Health Project

Hem Hemal, Chief, IE & C Division

Kokila Vaidya, Deputy Chief

Institute of Medicine

Mathura Shrestha, Professor of Community Medicine

Integrated Community Health Services Development Project

Suniti Acharya, Deputy Chief

Sita Ram Choudry, Financial Section Officer

Sri Bista Shrestha, Head, Statistics, Planning and Evaluation Section

Ministry of Finance

Biswa Nath Sapkota, Section Chief

Ministry of Health

H.D. Pradhan, Chief, Indent and Procurement

B.B. Singh, Chief, Financial Services

B.M. Vaidya, Chief, Planning Unit

National Planning Commission

Upendra Man Malla, Honorable Member

National Social Services Co-ordinating Council

C.B. Gurung, Chief

Nepalese Embassy to the United States

Rita Thapa, former Chief, ICHP

Punerbas Resettlement Company

Narayani Bahadur Bista, Administrative Chief

Sadja Co-operative

Sabitri Thapa, Chief

U.S. EMBASSY, USAID MISSION, PEACE CORPS

Peter Burleigh, Charge d'Affairs, U.S. Embassy

Dennis Brennan, Director, USAID/N

Gerold van der Vlugt, Director, Health and Family Planning Office (H/FP)

Sigrid Anderson, H/FP

Gladys Gilbert, H/FP

Shubha Banskota, Program Office

William Douglas, RAD

Carl Hunter, H/FP

Buckley Lai

Laura McPherson, RAD

Bob Mills, Program Office

David Mutchler, POP

Charlotte Zelinkov, Health Office, Peace Corps

U.S. CONTRACT STAFF

Abraham David, National Population Commission

Ann Evans, Contraceptive Prevalence Survey, Westinghouse

Peter J. Fenney, International Human Assistance Program

James Messick, Contraceptive Retail Sales, Westinghouse

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Margaret Neuse, RTSA/A, University of Hawaii

F. Curtiss Swezy, Consultant, APHA

Philip O. Weeks, University of Hawaii

UNITED NATIONS

Dal Bahadur Bista, UNFPA

Lynn Bennett, UNICEF

Stuart McNab, UNICEF

U Han Tun, WHO

PRIVATE VOLUNTARY AGENCY REPRESENTATIVES

Thomas Achard, Swiss Association for Technical Assistance

Gobinda Adikari, United Mission to Nepal

Thomas Arens, World Neighbors

Rosemary Carnhan, CHP, Palpa District, United Mission to Nepal

Andrew Cassels, British-Nepal Medical Trust

Elizabeth Hawley, Himalayan Trust

Michael Henderson, Save the Children

Jonathan Innes, Economist, KHARDEP

Ellis Kelley, Dooley Foundation

Miriam Krantz, United Mission to Nepal

Matthew Michaelson, Save the Children, U.K.

Sigrun Mogedal, United Mission to Nepal

Pursottam Pradhan, United Mission to Nepal

Shyam Rangit, United Mission to Nepal

John Reekie, Himalayan Trust

Stella Saint, Dooley Foundation

Gary Shaye, Save the Children Foundation, U.S.A.

Dudley Spain, Save the Children, U.K.

Julie Willmette, United Mission to Nepal

Staffs of the Asrang, Badegaon and Bungmati Health Posts and  
CHP Central Office

OTHERS

Howard Barnum, PHN, World Bank

Donald Belcher, University of Washington, Seattle

Stephen Bezruchka, Seattle

Katherine Boyd, ASIA/PD, AID/W

Margaret Britton, Consultant

George Curlin, ASIA/TR, AID/W

David Dunlop, Boston University

Alan Fairbank, Boston University

Peter Heller, International Monetary Fund

Judith Justice, University of California, Berkeley

Graham Kerr, USAID/Cairo

Edward Mach, SHS, World Health Organization, Geneva

William Oldham, USAID/Cairo, former director of H/FP Office for  
USAID/N

Robert Parker, Johns Hopkins School of Hygiene and Public Health

Carol Peasley, AID/W

Duane Smith, SHS, World Health Organization (formerly MSH Chief  
of Party in Nepal)

Daniel Taylor-Ide, Woodlands Institute

Dhruba B. Thapa, Institute of Management, Development and Research,  
PUNE, india

Jeremy Warford, PHN, World Bank

Appendix B  
ADDITIONAL TABLES

TABLE B.1  
CULTIVATED LAND PER CAPITA, 1960-2000  
 (hectares per capita)<sup>a</sup>

	1960	1980	2000
Hills and Mountains	...	.13	.08
Terai	...	.32	.19
Nepal	.25	.20	.16

<sup>a/</sup> Assuming continued high fertility rate of 6.3 births per woman as revealed in the 1976 Fertility Survey, and assuming increase of cultivated land from 2.8 million hectares in 1980 to 3.15 million hectares in 2000.

Source: The Futures Group, The Kingdom of Nepal: The Effects of Population Factors on Economic and Social Development (Washington, D.C., April 1980).

This document was furnished by the Population Commission of Nepal.

TABLE B.2

ECONOMICALLY ACTIVE POPULATION CLASSIFIED BY  
INDUSTRY, OCCUPATION, AND EMPLOYMENT STATUS, 1971

<u>Industry</u>	<u>Persons Engaged</u> <u>(thousand)</u>	<u>Percentage</u> <u>Distribution</u>
Agriculture, hunting, etc	4,519	94.4
Services	138	2.8
Trade and commerce	67	1.4
Manufacturing	52	1.1
Transport, storage, etc.	10	0.2
Construction	5	0.1
Electricity, gas, etc.	2	-
 <u>Occupation</u>		
Farming and related	4,580	94.4
Production workers	106	2.2
Sales and related	60	1.2
Clerical	47	1.0
Services	34	0.7
Professional and technical	25	0.5
Administration	1	-
 <u>Employment status</u>		
Self employed	4,170	85.9
Employee	453	9.3
Unpaid family workers	208	4.3
Employer	22	0.5

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Source: Central Bureau of Statistics, Population Census 1971,  
Abstracts, 1975.

TABLE B.3

SOURCES OF AVERAGE HOUSEHOLD INCOME  
AND PER CAPITA INCOME IN THE HILLS  
AND THE TERAI

Source of income	Hills				Terai			
	Household income		Per capita income		Household income		Per capita income	
	NRs.	Percent total	NRs.	Percent total	NRs.	Percent total	NRs.	Percent total
Crop production	759.5	45.2	139.0	45.2	1366.6	57.0	240.1	57.0
Animal husbandry	309.6	18.4	56.6	18.4	49.4	2.1	88.7	2.1
Agricultural wages & salaries	163.1	9.7	29.8	9.7	479.9	20.1	84.3	20.1
Nonagricultural wages & salaries	297.7	17.7	54.5	17.7	306.4	12.8	53.8	12.8
Nonagricultural household enterprise	19.7	1.2	3.6	1.2	85.5	3.6	15.0	3.6
Pensions	67.6	4.0	12.4	4.0	59.5	2.5	10.5	2.5
Remittances	44.3	2.6	8.1	2.6	45.7	1.9	8.0	1.9
Other sources	19.7	1.2	3.6	1.2	0.3	0.0	0.0	0.0
Total	1681.2	100.0	307.6	100.0	2393.3	100.0	420.4	100.0

Source: Nepal Rural Household Survey of 8 villages (Asian Regional Team for Employment Promotion, June 1976)

Note: These were the findings of the survey conducted during January-May 1974.

FOREIGN AID DISBURSEMENT BY SOURCES  
1975/76-1979-80

(In Million Rs.)

Sources	1975/76			1976/77			1977/78			1978/79			1979/80 (Estimates.)		
	Grant	Loan	Total	Grant	Loan	Total									
<b>A)</b> Bilateral	307.7	23.0	330.7	344.8	26.1	370.9	372.6	84.1	456.7	457.4	81.4	538.8	793.0	141.8	934.8
Canada	0.5	—	0.5	2.0	—	2.0	6.7	—	6.7	9.5	—	9.5	60.9	—	60.9
China	49.4	—	49.4	105.9	—	105.9	76.2	—	76.2	40.3	—	40.3	84.4	—	84.4
Denmark	—	1.1	1.1	—	1.3	1.3	—	25.0	25.0	—	—	—	—	3.0	3.0
Federal Republic of															
Germany	30.2	13.0	43.2	13.5	4.3	17.8	17.0	2.9	19.9	27.6	—	27.6	105.1	—	105.1
India	100.8	3.1	103.9	115.0	2.6	117.6	117.7	0.1	117.8	121.4	—	121.4	143.2	—	142.3
Japan	11.0	—	11.0	18.3	—	18.3	1.2	—	1.2	28.6	45.8	74.4	22.9	53.8	76.7
Kuwait	—	—	—	4.0	—	4.0	—	56.1	56.1	—	35.6	35.6	—	80.0	80.0
Switzerland	2.1	3.8	5.9	1.8	17.9	19.7	3.9	—	3.9	34.0	—	34.0	51.1	—	51.1
United Kingdom	28.8	2.0	30.8	35.4	—	35.4	73.9	—	73.9	114.4	—	114.4	197.0	—	197.0
United States of America	84.7	—	84.7	42.8	—	42.8	66.6	—	66.6	54.7	—	54.7	70.2	—	70.2
Other countries	0.2	—	0.2	4.0	—	4.0	3.6	—	3.6	0.9	—	0.9	14.7	5.0	19.7
Others**	—	—	—	2.1	—	2.1	5.8	—	5.8	26.0	—	26.0	43.5	—	43.5
<b>A)</b> Multilateral	52.0	122.9	174.9	47.7	138.3	186.0	94.0	297.7	391.7	141.9	308.7	450.6	175.3	766.1	941.4
Asian Development Bank	—	88.1	88.1	—	64.1	64.1	—	80.1	80.1	—	88.9	88.9	—	253.3	253.3
International Development															
Agency	—	34.8	34.8	—	74.2	74.2	—	165.6	165.6	—	203.2	203.2	—	448.1	448.1
OPEC Fund	—	—	—	—	—	—	—	52.0	52.0	—	16.6	16.6	—	21.3	21.3
UNCDF	—	—	—	—	—	—	—	—	—	8.4	—	8.4	6.5	—	6.5
UNDP	31.8	—	31.8	30.4	—	30.4	36.8	—	36.8	55.9	—	55.9	51.9	—	51.9
UNICEF	4.0	—	4.0	7.3	—	7.3	17.7	—	17.7	24.5	—	24.5	31.1	—	31.1
World Food Programme	6.1	—	6.1	7.4	—	7.4	37.0	—	37.0	38.8	—	38.8	35.6	—	35.6
World Health Organization	0.8	—	0.8	0.6	—	0.6	0.5	—	0.5	2.1	—	2.1	0.6	—	0.6
Others	9.3	—	9.3	2.0	—	2.0	2.0	—	2.0	12.2	—	12.2	49.6	43.4	93.0
<b>Total (A+B)</b>	<b>359.7</b>	<b>145.9</b>	<b>505.6</b>	<b>392.6</b>	<b>164.3</b>	<b>556.9</b>	<b>466.6</b>	<b>381.8</b>	<b>858.4</b>	<b>599.3</b>	<b>390.1</b>	<b>989.4</b>	<b>968.3</b>	<b>907.9</b>	<b>1876.2</b>

\* Includes Yugoslavia, USSR, Austria, Australia, Netherland, and North Korea.

\*\* Under Nepal—India Mutual Benefit Agreement.

† Includes EEC, UNFPA, FAO & other institutions.

Note : (a) Technical Aid is not included.

(b) Figures have been rounded off.

Source : Ministry of Finance.

TABLE B.5

CHEMICAL AND DRY IMPORTS  
AS A PERCENT OF TOTAL IMPORTS  
1974/75 - 1979/80  
(NRs millions)

	<u>1974/5</u>	<u>1975/6</u>	<u>1976/7</u>	<u>1977/8</u>	<u>1978/9</u>	<u>1979/80</u>
TOTAL IMPORTS (CIF) FROM INDIA	1,475.7	1,227.1	1,343.5	1,556.3	1,581.7	1,348.9
Chemicals and Drugs (%)	(9.1)	(9.4)	(10.5)	(10.9)	(12.3)	(14.3)
TOTAL IMPORTS (CIF) FROM OTHER COUNTRIES	---	---	---	---	128.1	---
Chemicals and Drugs	---	---	---	---	(27.9)	---
TOTAL IMPORTS	---	---	---	---	1,709.8	---
Chemicals and Drugs	---	---	---	---	(13.4)	---

Source: Asian Development Bank. Economic Memorandum on Nepal, Manila: ADB(NEP:Ec-5), Appendix Tables 45 and 47.

TABLE B.6

HEALTH SECTOR AS A PERCENT OF TOTAL EXPENDITURES  
THIRD, FOURTH AND FIFTH DEVELOPMENT PLANS

<u>DEVELOPMENT PLAN</u>	<u>EXPENDITURES (Rs. Millions)</u>		
	<u>TOTAL (T)</u>	<u>HEALTH (H)</u>	<u>(H) AS A % OF (T)</u>
3rd Plan (1965/66 - 1969/70) <sup>1</sup>	2,471.4	128.3	5.2%
4th Plan (1970/71 - 1974/75) <sup>2</sup>	5,381.9	268.8	5.0%
5th Plan (1975/76 - 1979/80) <sup>2</sup>	13,481.3	663.8	4.9%

Sources: 1) Huang, Y. et. al. Nepal, Development Performance and Prospects, Washington, D.C.: South Asia Regional Office, World Bank, February, 1979; p. 100.

2) Ministry of Finance/HMG. Economic Surveys, FY 1977-78, 1979-80.

TABLE B.7

PLANNED DONOR SUPPORT FOR IMPROVEMENT OF FP/MCH SERVICES  
(SIXTH PLAN PERIOD, 1980-1985)

<u>Support Source</u>	<u>Organization/Management</u>	<u>Training</u>	<u>Finance</u>	<u>Supply Logistics</u>	<u>Manpower</u>	<u>Service Delivery</u>
	Research and Evaluation Planning	Training Centers Training Staff	Budget Income Financial Management	Logistics Facilities Contraceptives Medicines Surgical Equipment	Service Delivery Surgical Specialists Paramedics	Facilities Equipment (Personnel) (Training)
USAID <sup>1</sup> TA: Participants FP Services Administration Training Methodology Short Term Overseas Training	Senior FP/Health Advisor LT* Program Evaluation and Research Specialist ST* Data Management and Computer Specialist <sup>4</sup>		(\$4.5 Million Budget Support) Financial Man- agement Specialist <sup>4</sup> LT*	(\$4.0 Basic Pharma- ceuticals) <sup>3</sup> Contraceptives (AID/W) <sup>5</sup> Commodity Management Specialist <sup>4</sup> LT*		\$0.2 Camp Equipment VSC (\$0.3 Air Charter, VSC) Family Planning Specialists LT* FP Surgical Specialist ST*
WIFPA <sup>2</sup> (P-12)(P-13) (P-15)	Establish Infertility Clinic Kathmandu P-13 Individual Training for Physicians Surgical/Lab Equip- ment Renovation Hospital Rooms Laparoscope (Diagnostic) Evaluation (W/FPA) P-13 Feedback on Injectables Evaluation (P-13) Side Effects. Start- .....	(Training of 120 Physicians VSC-See Service Delivery) (P-12) (6 Laparoscopy Teams Trained; see Service Delivery (P-13) (Train 24 Para- Medics in Vasectomy; see Service Delivery) (P-13) (Upgrade Institute of Medicine; see ICIP) (P-15)	(\$110,880 Honoraria for VSC) P-12	Supplementary Drugs and Supplies for FP/MCH through 211 Health Posts/780 VHs (P-12) Medical Equipment for 105 HPs (P-12) Furniture for 211 HPs (P-12) Supplementary Drugs for FP/MCH for 23 DHPs (10,000 Vials (Depo-Provera) (P-12)	(6 Laparoscopy Teams Trained; see Service Delivery, P-13) (Physicians Training in VSC 90 Males and 20 Females; see P-12) (Paramedic Train- ing in Vasectomy; see P-13, Ser- vice Delivery.	Renovation of 19 Operating Theaters for VSC (If Trained MO present) (P-12) (Honoraria for VSC; see Financial) (P-12) Physician Training in VSC (P-12) 90 Males: Vasectomy 20 Females: mini- laparoscopy 6 Laparoscopy Team Training (p-13) (Overseas and In- country)

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<u>Support Source</u>	<u>Organization/Management</u>	<u>Training</u>	<u>Finance</u>	<u>Supply Logistics</u>	<u>Manpower</u>	<u>Service Delivery</u>
UNICEF	UNICEF will provide MCH drugs for rural health services (not shown in supply/logistics column).			Mini-Lab Kits Table, Cabinet for 19 District Hospitals (P-12)		(Food for 130, Clients in FP; see P-13)
WHO: 1980/81 Budget <sup>6</sup> \$338,200 Family Health	WHO will provide support to MCH activities in 1980-81, with emphasis on consultants, training, and health education (not shown in manpower column).			Tents, 8-100 Clients (P-13)		Paramedic Training in Vasectomy (24) in FPAN Clinics (P-13)
				Mini-buses (4) Client Transport (P-13)		
				Emergency Laparoscopy Kits (12) (P-13)		
				Food for Clients (130,000) WFP (P-13)		
				Facilities and Equipment for 40 District Hospitals for VSC (P-13) 30 Mini-Lap, 90 Vasectomy Kits		
				Equipment for Mobile Camps (P-13) 70 Mini-Lap Kits, 210 Vasectomy Kits for District FPOs		
				151 Bicycles for Camps (P-13)		
				12 Generators (P-13)		
				Renovate 20 Operating Theaters for Mini-Lap and Vasectomy (P-13)		
				Contraceptives (P-13)		
				50,000 Vials Depo-Provera, Syringes, Needles		

<sup>1</sup> Dollar/Rupee figures are in millions and are illustrative only, pending project approval. Figures in parentheses (000) are Rupee expenditures.

<sup>2</sup> Letter/number in parentheses (P-12) refers to specific proposals now being considered.

<sup>3</sup> Pharmaceuticals for health services; presumably portion will go to FP/MCH, especially Panchayat-based health workers.

<sup>4</sup> Dual role; also work with ICIP.

<sup>5</sup> AID/W will provide pills and condoms as required and justified by USAID/W, using central funding.

<sup>6</sup> Dollar figures budgeted only: Source: WHO Major Program Summary.

• Advisors.

PLANNED DONOR SUPPORT FOR IMPROVEMENT OF  
INTEGRATED HEALTH SERVICES NETWORK (INCLUDING AYURVEDIC)  
(SIXTH PLAN PERIOD, 1980-1985)

<u>Support Source</u>	<u>Organization/Management</u>	<u>Training</u>	<u>Finance</u>	<u>Supply/Logistics</u>	<u>Manpower</u>	<u>Service Delivery</u>
	Project Status Headquarters Staffing Headquarters Facilities Planning/Evaluation	Headquarters Capacity Upgrading Pathlalya Additional Training Centers (Institute of Medicine) Specialized Training	Project Status Budget Increase TA/DA Financial Management	Logistics Facilities Contraceptive Supply Supply of Medicines (Ayurvedic) Surgical Equipment Specialized Program Support (EPI) (Malaria) Logistics Management	Service Delivery Surgical Specialists Specialized Training	Facilities Equipment Personnel Training R & E
USAID/II <sup>1</sup>						
TA: Participants (LT) Public Health Administra- tion Training Methods Health Education Malaria Specialist Logistics Management (indent Procurement) Health Plan Business Administra- tion Public Ad- ministration	(\$0.2 Health Planning Unit Studies) Health Planning Equipment ICHP Management Equipment Health/FP Advisor (LT)* Survey/Special Study Advisor (ST)* Program Evaluation and Research Specialist (ST)* Data Management/Computer Specialist (ST)* Health Planning Advisor (ST)*	\$0.120 Health Education Training Supply Health Education Trainer (LT)*	(\$3.5 Budget Support Financial Management Specialist (LT)*)	(\$0.5 TEM) Facilities) (\$4.0 Basic Pharmaceuticals) <sup>3</sup> (\$0.1 MNEO, Insecticide Safeguard) (\$0.77 Medical Supply Facilities, 50, District) (\$0.10 Cold Rooms-Region, Warehouse-3) \$4.6 Malaria Insecticide and Commodities Trucks (4) Refrigerators (100) \$0.10 Refrigerator Units, Regional (3) Commodity Management	Paraprofessional Health Trainer (LT)*	(\$0.15 Special Field Operations) (\$1.0-50 Health Posts, Stores, Health Center/ Hospital)

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<u>Support Source</u>	<u>Organizational/Management</u>	<u>Training</u>	<u>Finance</u>	<u>Supply/Logistics</u>	<u>Manpower</u>	<u>Service Delivery</u>
<u>UNDP/WHO/UNIDO</u> (HEP/78/009/C/ 01/14 (Start Date 1 Nov. 1979) \$407,000 UNDP \$1,000,000 Netherlands	WHO proposes the following activities in 1980-81: \$878,000 Health Services Development; \$742,400 Community Disease Prevention-Control Malaria, TB Leprosy, EPI; \$387,700, Environmental Health (Water Supply); \$525,100, Health Manpower	Train Village Health Worker in Ayurvedic Medicines		"Buffer" Stock of Medicines - 19 Districts Pilot Integrated Distribution for Drugs in 3 Districts IV Fluid Production Nepalgunj Expand Drug Manufacturing Capacity of Royal Drugs, Ltd.		
WHO (1980-81 Budget) 4		Upgrade Pathlayla Centers (in process-1979)		See UNDP/WHO/UNIDO above		(Construct 50 Health Posts) (in-process, 1979)
Netherlands		Training Center, East				
U.K.						

1 Dollar/Rupee figures are in millions and are illustrative only, pending project approval. Figures in parentheses (000) are to be Rupee inputs.

2 Letter/number in parentheses (P-11) refers to specific program proposals now being considered.

3 Pharmaceuticals for health services; presumably ICIP will share with FP/NCH.

4 Dollar figures budgeted only. Source: WHO Major Program Summary.

<u>Support Source</u>	<u>Organizational/Management</u>	<u>Training</u>	<u>Finance</u>	<u>Supply/Logistics</u>	<u>Manpower</u>	<u>Service Delivery</u>
<u>UNFPA</u> <sup>2</sup> (P-11)(P-12), (P-14)(P-15) Pre-Condition Development Project Status Project Director Appointed Create all Positions Sliding Scale of Support	Rental of Headquarters Office Space (P-11) Construction of Headquarters Office (P-11) Vehicle/Motor and Bicycles (P-11) Furniture and Equipment for Headquarters (P-11) New Personnel 20 - Gazetted 51 - non-Gazetted Cost Share (P-11) Fellowships (4) for Section Heads (P-11) Training Facility in Headquarters Building (P-14)	Upgrade Pathlalya (P-14) Warehouse Construction of Centers-West and Far West (P-14) Equipment Centers Training Management (P-14) Upgrade Training Capacity Institute of Medicine (P-15)		Supplementary Transport 211 IPs (P-12)	Basic Training for VHVs and others 476 new IPs for 23 Districts (Total all types, 3,510-three years) (P-14) Refresh Training VHVs HIs etc. (P-14)	Study of use of Traditional Practitioner for Delivery of Services (P-19)
<u>UNICEF</u>				Equipment for Rehydration Packets (Royal Drugs) Regional Storage Facilities Basic Drugs Supplies for MCH/Paramedics Vaccines for EPI Cold Chain Equipment Chemicals/Equipment for Rural Health Labs Consultant on TEMO Facility Regional Warehouses Upgrading (3 plus contract)	Training of Lab Technicians Training Storekeepers (40 per year)	Rural Health Laboratories (42)

Source: Grant, R.Y. et al. An Evaluation of AID-Financed Health and Family Planning Projects in Nepal. January-March 1980, pp. 147-48, (APHA Assignment #582015/583008).

TABLE B.8  
AVERAGE ANNUAL FAMILY EXPENDITURE PER FARM FAMILY  
INCLUDING THE ITEM OF FOOD PRODUCTS,  
1969-1970

(Amount in Rs.)

Item	OVERALL		HILLS		TERAI	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
Food Products	2,652	77.75	1,826	73.51	3,054	79.10
Clothing, shoes, bedding, etc.	201	5.89	158	6.36	222	5.75
Household utensils, furniture, etc.	13	0.38	4	0.16	17	0.44
Educational expenses	31	0.91	38	1.53	28	0.73
Medical expenses	64	1.88	41	1.65	75	1.94
Lighting and fuel	101	2.96	133	5.36	86	2.23
Transport and communication	12	0.35	17	0.68	9	0.23
Rents and taxes	113	3.31	14	0.56	161	4.17
Drinks and beverages	145	4.25	169	6.80	133	3.44
Entertainment expenses	61	1.79	68	2.75	57	1.48
Legal expenses	4	0.12	3	0.12	4	0.10
Other family expenditures, i.e., marriage, death, ceremonies, etc.	14	0.41	13	0.52	15	0.39
<b>TOTAL</b>	<b>3,411</b>	<b>100.00</b>	<b>2,484</b>	<b>100.00</b>	<b>3,861</b>	<b>100.00</b>

SOURCE: Nepal Rastra Bank. Agricultural Credit Survey, Vol. IV, Kathmandu: Research Department, NRB, 1972; p. 147.

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TABLE B.9

AVERAGE ANNUAL FAMILY EXPENDITURE PER FARM FAMILY  
EXCLUDING THE ITEM OF FOOD PRODUCTS,  
1969-70

(Amount in Rs.)

	OVERALL		HILLS		TERAI	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
Clothing, shoes, bedding, etc.	201	26.48	158	24.03	222	27.51
Household utensils, furniture, etc.	13	1.71	4	0.61	17	2.11
Educational expenses	31	4.08	38	5.77	28	3.47
Medical expenses	64	8.43	41	6.23	75	9.29
Lighting and fuel	101	13.32	113	20.21	86	10.66
Transport and communication	12	1.58	17	2.58	9	1.12
Rents and taxes	113	14.89	14	2.13	161	19.95
Drinks and beverages	145	19.10	169	25.68	133	16.48
Entertainment expenses	61	8.04	68	10.33	57	7.06
Legal expenses	4	0.53	3	0.45	4	0.50
Other family expenditure, i.e., marriage, death, ceremonies, etc.	14	1.84	13	1.98	15	1.85
<b>TOTAL</b>	<b>759</b>	<b>100.00</b>	<b>658</b>	<b>100.00</b>	<b>807</b>	<b>100.00</b>

SOURCE: Nepal Rastra Bank. Agricultural Credit Survey, Vol. IV, Kathmandu: Research Department, NRB, 1972; p. 151.

TABLE B.10

BASIS UNDER WHICH HEALTH POSTS WITH  
TEMPORARY BUILDINGS ARE USING  
THEIR BUILDING,  
1978-1979

Responses	Respondents	
	N	%
Provided by local people	12	14
Provided by panchayat	42	49
Rented by HMG	22	26
Other	10	11

SOURCE: HMG/MOH. Mid-Term Health Review, 2035, Research and Evaluation of Health and Health Services Mid-Fifth Plan Period (2031-2036). June 1979, p. 178.

TABLE B.11

BASIS UNDER WHICH LAND WAS PROVIDED  
TO HEALTH POSTS THAT HAVE PERMANENT  
STRUCTURES,  
1978-1979

Responses	Respondents	
	N	%
By local people	8	11
By Panchayat	4	5
Purchased by Panchayat	7	9
Purchased by HMG	11	15
Other	37	49
No response	8	11

TABLE B.12

BASIS UNDER WHICH THE BUILDING WAS  
PROVIDED TO HEALTH POSTS THAT HAVE  
PERMANENT STRUCTURES,  
1978-1979

Responses	Respondents	
	N	%
Built by local people without HMG contribution	11	15
Built by joint cooperation of local people and HMG	19	25
Donated by local persons	11	15
Purchased by HMG	12	16
Constructed by HMG	22	29

SOURCE: HMG/MOH. Mid-Term Health Review, 2035, Research and Evaluation of Health and Health Services Mid-Fifth Plan Period (2031-2036) June 1979. p. 178.

TABLE B.13  
 MONETARY CONTRIBUTORS BY REGION (TERAI AND HILLS),  
 1978-1979

Region	HHs within 4 Hours Walk from a Health Post	No. of Contributors	Percentage of HHs
All Terai	774	68	9
All Hills	1355	62	5
TOTAL	2129	130	6

NOTE: HH denotes "households."

SOURCE: HMG/MOH. Mid-Term Health Review, 2035, Research and Evaluation of Health and Health Services Mid-Fifth Plan Period (2031-2036). June 1979, p. 189.

TABLE B.14

PERCENT OF CONTRIBUTING AND ALL  
HOUSEHOLDS GIVING MORE THAN RS. 50,  
1978-1979

	N=	% Which Contributed Money (130)	% of Total Contributing Households (351)	% of Total Households (2129)
Up to Rs.50/ -	121	93	34	6
More than Rs.50/ -	9	7	3	0
Total	130	100	37	6

SOURCE: HMG/MOH. Mid-Term Health Review, 2035, Research and Evaluation of Health and Health Services Mid-Fifth Plan Period (2031-2036). June 1979, p. 189.

TABLE B.15  
HEALTH POST

REGULAR BUDGET BREAKDOWN 2034/35  
(1977-1979)

Item	Per Health Post Cost (in Nepali Rupees)						TOTAL
	I-Stage (65)	E-Stage (75)	2033/34 Converted E-Stage (52)	D-Stage (Add to E-Stage) (50)	2034/35 E-Stage (52)	Non- Integrated (182)	
1 Salary	52,661	21,245	32,261	5,881	32,261	19,853	1,18,09,147
2 Allowances	4,200	6,125	10,092	1,768	10,092	8,213	32,72,055
3 Daily Field Allowances	30,768	-	-	-	-	-	19,99,920
4 Services	500	300	300	-	300	300	1,40,800
5 Rent	450	-	1,000	-	1,000	600	2,32,050
6 Repair & Maintenance	400	400	400	-	400	400	1,70,400
7.1 Office Materials	1,800	1,200	1,200	-	1,200	800	4,67,000
7.2 Newspapers	100	100	100	-	100	100	42,600
7.3.1 Fuel for Vehicles	-	-	-	-	-	-	-
7.3.2 Fuel for Other Use	1,000	800	800	-	800	800	3,53,800
7.4 Clothing and Food	-	-	-	-	-	-	-
7.5 Other Goods	1,200	1,200	1,200	-	1,200	1,000	4,69,600
8 Drugs, Supplies, Prizes	12,000	10,000	10,000	-	10,000	10,000	43,90,000
9 Contingencies	2,000	1,500	1,500	-	1,500	1,000	5,67,500
10.1 Furniture	1,000	1,000	500	-	500	500	2,83,000
10.2 Means of Transport	-	-	-	-	-	-	-
10.3 Machinery & Spares	-	-	-	-	-	-	-
11.1 Purchase of Land	-	-	-	-	-	-	-
12.1 Building and Construction	-	-	-	-	-	-	-
<b>TOTAL UNIT COST</b>	<b>1,08,079</b>	<b>43,870</b>	<b>59,353</b>	<b>7,649</b>	<b>59,353</b>	<b>43,566</b>	

NOTE: Health posts go through a number of stages (i.e., non-integrated, E-stage, D-stage, I-stage) in the course of including vertical program activities in their services. Inclusion of vertical program activities implies higher levels of staffing and materials.

SOURCE: Community Health Integration Division/DHS/HMG. Budget Request and Supporting Information, 2034/5, Kathmandu: Department of Health Services.

## HEALTH POST

DEVELOPMENT BUDGET BREAKDOWN 2034/35  
(1977-1979)

Item	Per Health Post Cost (in Nepali Rupees)						Other Costs	TOTAL
	I-Stage (65)	E-Stage (75)	2033/34 Converted E-Stage (52)	D-Stage (Add to E-Stage) (50)	2034/35 Converted E-Stage (52)	New E-Stage (50)		
1 Salary	-	-	-	-	-	21,245#	-	5,31,125
2 Allowances	-	-	-	-	-	6,125#	-	1,53,125
3 Daily Field Allowances	-	18,750	27,480	5,400	27,480	18,750#	-	41,53,440
4 Services	-	-	-	-	-	300#	-	7,500
5 Rent	-	-	-	-	-	-	-	-
6 Repair & Maintenance	-	-	-	-	-	400#	-	10,000
7.1 Office Materials	-	-	-	-	-	1,200#	-	30,000
7.2 Newspapers	-	-	-	-	-	100#	-	2,500
7.3.1 Fuel for Vehicles	-	-	-	-	-	-	-	-
7.3.2 Fuel for Other Use	-	-	-	-	-	800#	-	20,000
7.4 Clothing & Food	-	-	-	-	-	-	-	-
7.5 Other Goods	-	-	-	-	-	1,200*	-	60,000
8 Drugs, Supplies, Prizes	-	-	-	-	-	10,000*	-	5,00,000
9 Contingencies	-	-	-	-	-	1,500#	-	37,500
10.1 Furniture	-	-	-	-	-	3,000*	-	1,50,000
10.2 Means of Transport	500	-	-	-	-	-	-	32,500
10.3 Machinery & Spares	-	-	-	-	-	-	-	-
11.1 Purchase of Land	-	-	-	-	-	-	-	-
12.1 Building & Construction	-	-	-	-	-	-	73,00,000	73,00,000
TOTAL UNIT COST	500	18,750	27,480	5,400	27,480	50,420# 14,200* 64,620		

NOTE: Health posts go through a number of stages (i.e., non-integrated, E-stage, D-stage, I-stage) in the course of including vertical program activities in their services. Inclusion of vertical program activities implies higher levels of staffing and materials.

SOURCE: Community Health Integration Division/DHS/HMG. Budget Request and Supporting Information, 2034/5. Kathmandu: Department of Health Services.

TABLE B.17

COMPARISON OF INTERNATIONAL COMPARISON OF TAXATION (ICT) INDICES<sup>1</sup>

<u>Low ICT Index (less than 0.89)</u>	<u>Medium ITC Index (0.89-1.09)</u>	<u>High ITC Index (greater than 1.09)</u>
Bangladesh	Burma	Benin
C.A.R.	Burundi	Cameroon
Ecuador	Costa Rica	Congo
Egypt	Dominican Republic	Guinea
El Salvador	Ghana	Guyana
Gambia, The	Jamaica	India
Guatemala	Jordan	Kenya
Honduras	Mali	Morocco
Indonesia	Peru	Pakistan
Liberia	Senegal	Sudan
Malawi	Sierra Leone	Tanzania
Nepal	Sri Lanka	Tunisia
Nicaragua	Swaziland	Upper Volta
Panama	Thailand	Zaire
Philippines	Yemen	Zambia
Rwanda		
Togo		

Notes: 1. An ICT index is a measure of a country's "tax effort" calculated by dividing (a) the ratio of tax revenues to GNP by (b) an estimate of the "taxable capacity" of the country. Thus indices below 1 represent a theoretically poor tax effort, and those over 1 a theoretically extraordinary effort. For a discussion of the limitations of the ICT see: Wolgin, J. AID Policy Towards the Recurrent Cost Problem in Developing Countries, draft, July 1981, pp. 13-14. The table above comes from page 15 of this report.

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APPENDIX C  
STATUS OF OTHER HEALTH SERVICES  
FINANCING EFFORTS IN NEPAL

19/11

## APPENDIX C

### STATUS OF OTHER HEALTH SERVICES FINANCING EFFORTS IN NEPAL

This appendix will present the limited information available to the author about other health projects which have an element of local financing in them.

#### 1. Family Planning Association of Nepal and World Neighbors

The Baudha-Bahunipati Family Welfare Project, implemented by the Family Planning Association of Nepal and sponsored by World Neighbors and other organizations, provides agricultural extension and health services to 32 panchayats of the Sindhupalchowk and Kavre districts. A registration fee of Rs. 2 is charged per person per year for use of the services of one of four welfare centers. It is intended that this charge should generate revenues to equal about 25 percent of the purchase value of the drugs given to the four centers.

#### 2. Himalayan Trust

The Himalayan Trust (HT) initiated and is currently maintaining the Kunde Hospital in the Khumbu Valley of eastern Nepal. The hospital provides medical care and VHW outreach services to a population of approximately 3,000 Nepalese in the surrounding three panchayats and to foreigners trekking to the Everest region. These tourists are charged a variety of fees depending upon the service provided.

At the time of construction of the hospital, the local villages pledged to provide one tin of potatoes and one load of firewood per house per year. Further, when the VHW services were initiated in the 1970's, the panchayats were to have provided for the salaries of the VHWs (300-400 Rs./month).

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However, the HT did not enforce nor have the panchayats kept these agreements. Some households contribute food on an ad hoc basis. The question of whether the Kunde Hospital and VHW clinics should actually institute a charge scheme is currently under consideration. (Reekie, R.J., M.D., July 8, 1981, personal communication.)

3. Save the Children Foundation, UK (SCF/UK)

As of June 1981, the medical and administrative boards of the three SCF/UK hospitals in Baglung, Dhankuta, and Surkhet were considering instituting some sort of mechanism whereby individual or community resources could be collected for the support of the curative services delivered by the facilities. However, a policy with respect to payment for services had not been decided upon.

4. Save the Children Foundation, USA

Among the rural development activities that the Save the Children Foundation of the United States (SCF/US) is sponsoring in the Deurali panchayat of the Gorkha District is the training of Community Health Leaders and operation of a facility where simple medical treatment is given and drugs are dispensed.

On June 1, 1981, the Village Health Committee of the Deurali panchayat met to discuss how monies would be collected to pay for the resupply of drugs used at their new health center. A synopsis of the main points of their discussion follows as an example of the concerns of villagers with respect to paying for health services or drugs.

It was first proposed that an annual collection be made of Rs. 20 per

household, which would entitle members of the household to free drugs. However, refunds would not be made if the household did not require drugs during the year. A payment of Rs. 5 would also be required each time a person visited the health center, regardless of the seriousness of the complaint.

This proposal was rejected by the other committee members for the following reasons:

- It would be too difficult for households to pay the Rs. 20 all at one time.
- Rs. 5 was too expensive for a visit to the health center if the treatment required was minor.
- People would feel that they had to use the services because they had already paid for them and this might lead to inappropriate use of services.
- It would be awkward if the total collection of money was insufficient to replace the drugs used and people were unable to get drugs at the end of the year.
- People would wonder why they had to pay so much for health center services when they were referred to larger hospitals for more serious illnesses and also had to pay for treatment there.

It was then proposed that the monies be collected by selling the drugs at their original market price and that people be required to pay only when they were ill and obtained the drugs. It was argued that drugs would be cheaper than if the people bought them in the city, because the Health Committee could buy and sell the drugs at wholesale prices.

Some people thought this plan was undesirable as some of the poor might have to sell their land or animals in order to pay bills for drugs of Rs. 100 to 200. Others thought that people would prefer to take this risk than to pay the lower fixed Rs. 20 fee, when they might not require services during the year. The Village Health Committee then discussed how it might assist the poor pay their bills, e.g., by extending credit to the poor and allowing them to pay off their bills over time. No one thought that people should go untreated because they were poor.

A question was raised about how the Health Committee should use the money collected from the villagers. It was stated the money should not be used for the benefit of committee members nor for the government, but should be used solely for providing drugs for the villagers of the panchayat.

The Committee finally agreed on a 3-month trial of the following plan:

- People would be required to pay 25 paisa for each visit to the health center.
- Supplies for the treatment of minor complaints (e.g., bandages and iodine) would be supplied free unless they cost more than 25 paisa.
- People would have to pay the full cost of drugs which cost more than 25 paisa.
- People who came from panchayats other than Deurali would have to pay the same fees.
- If after the 3-month trial period there were complaints or problems, the Committee would meet to discuss and deal with these.

In addition to discussing the question of collecting monies for drugs, the Committee reaffirmed how important it was for the panchayat to have a health facility close to their villages at which drugs and services would be available. They also emphasized the important role of the Health Committee in deciding and implementing policies to maintain the effective operation of the new health center.