

RURAL POVERTY RESEARCH PAPER SERIES

Number 4

December 1986

RURAL POVERTY AND THE POOR IN NEPAL:
COMPARATIVE CASE STUDY OF A HILL AND TARAI VILLAGE

Dr. Bishnu Bhandari
Mr. Narayan Kunwar
Mr. Badri B. S. Dongol

HMG-USAID-GTZ-IDRC-WINROCK PROJECT
STRENGTHENING INSTITUTIONAL CAPACITY IN THE
FOOD AND AGRICULTURAL SECTOR IN NEPAL

FOREWORD

This Rural Poverty Research Paper Series is funded through the project, "Strengthening Institutional Capacity in the Food and Agricultural Sector in Nepal," a cooperative effort by the Ministry of Agriculture (MOA) of His Majesty's Government of Nepal and the Winrock International Institute for Agricultural Development. This project has been made possible by substantial financial support from the U.S. Agency for International Development (USAID), the German Agency for Technical Cooperation (GTZ), the Canadian International Development Research Centre (IDRC), and the Ford Foundation.

One of the most important activities of this project is funding for problem-oriented research by young professional staff of agricultural agencies of the MOA and related institutions, as well as for concerned individuals in the private sector. This research is carried out with the active professional assistance of the Winrock staff.

The purpose of this Rural Poverty Research Paper Series is to make the results of the research activities related to rural poverty available to a larger audience, and to acquaint younger staff and students with advanced methods of research and statistical analysis. It is also hoped that publication of the Series will stimulate discussion among policymakers and thereby assist in the formulation of policies which are suitable to the development of Nepal's agriculture.

The views expressed in this Rural Poverty Research Paper Series are those of the authors, and do not necessarily reflect the views of their parent institution.

Michael B. Wallace
Series Editor

RURAL POVERTY RESEARCH PAPER SERIES

Number 4

December 1986

RURAL POVERTY AND THE POOR IN NEPAL:
COMPARATIVE CASE STUDY OF A HILL AND TARAI VILLAGE

Dr. Bishnu Bhandari
Mr. Narayan Kunwar
Mr. Badri B. S. Dongol

HMG-USAID-GTZ-IDRC-FORD-WINROCK PROJECT
STRENGTHENING INSTITUTIONAL CAPACITY IN THE
FOOD AND AGRICULTURAL SECTOR IN NEPAL

TABLE OF CONTENTS

	Page
AESTRACT	1
INTRODUCTION	2
OBJECTIVES	3
HYPOTHESES	4
METHODOLOGY	4
RESULTS AND DISCUSSION	5
Family Characteristics	5
Magnitude of Rural Poverty	6
Family Conditions During Last Five Years	8
Perception of Poor as Poor	9
Hardships the Poor Experience	10
Coping with Poverty	11
Visits of JT/JTA and Social Workers	11
Expectation of Family Conditions for Next Five Years	14
Quality of Life	15
SUMMARY AND CONCLUSIONS	16
POLICY RECOMMENDATIONS	17
LIMITATIONS	18
REFERENCES	18

LIST OF TABLES

Table 1. Family Characteristics and Landholding	5
Table 2. Family Characteristics and Caste	6
Table 3. Landholding and Daily Calorie Intake	6
Table 4. Daily Calorie Intake by Caste	7
Table 5. Landholding and Malnourishment	8
Table 6. Caste and Malnourishment	8
Table 7. Landholding and Condition During Last Five Years	9
Table 8. Caste and Condition During Last Five Years	9
Table 9. Landholding and Visits by JT/JTA	12
Table 10. Caste and Visits by JT/JTA	12
Table 11. Landholding and Visits of Social Workers	13
Table 12. Caste and Visits of Social Workers	13
Table 13. Landholding and Expectations for Next Five Years	14
Table 14. Caste and Expectations for Next Five Years	14
Table 15. Landholding and Level of Satisfaction	15
Table 16. Caste and Level of Satisfaction	15

RURAL POVERTY AND THE POOR IN NEPAL:

COMPARATIVE CASE STUDY OF A HILL AND TARAI VILLAGE

Dr. Bishnu Bhandari*
Mr. Narayan Kunwar*
Mr. Badri B. S. Dongol*

ABSTRACT

This study is designed to investigate the magnitude of rural poverty as measured by the average amount of daily calorie intake consumed by household members and by the occurrence of malnourishment in households. The study aims at identification of the rural poor and poverty prevalent in the Tarai (Parbatipur Village Panchayat) and hill (Abu Village Panchayat) villages of Nepal. Fifty-six household heads were selected by the researchers using stratified sampling techniques.

Our findings suggest that the estimated average daily calorie intake per person per day is higher in the Tarai than in the hills, that calorie intake is positively related with the increasing size of landholding and status of caste groupings. The occurrence of malnourishment in the household is 75 percent in the hills, compared to 71 percent in the Tarai. Malnourishment is related to both caste groupings and landholding size in the hills only. The results of the visits made by JT/JTA and social workers, family conditions during the last five years, and the expectation of family conditions in the next five years are also discussed. The quality of life experienced by these household heads is higher in the hill region than in the Tarai region and their differences are statistically significant at the five percent level.

This study concludes that the landless, near-landless, and lower caste household heads in the Tarai and the near-landless and lower caste household heads in the hills are the ones who are identified as the rural poor, with marginal households following the suit. The study also addresses hardships the poor experience and means to cope up with their chronic poverty. Some suggestions to alleviate the malnourishment and to increase the average calorie intake per person per day in the household and effectively implement the agricultural extension program are also discussed.

*Dr. Bishnu Bhandari, Mr. Narayan Kunwar, and Mr. Badri B. S. Dongol are all faculty members at the Institute of Agriculture and Animal Science, Tribhuvan University, Rampur, Nepal.

INTRODUCTION

Nepal is a poor country with more than 80 percent of its people living in rural areas and depending on agriculture for livelihood. Annual per capita income is only US\$150 as of 1985. Regmi (1974:13) points out that a large number of peasant families in Nepal live somewhere between subsistence and destitution. Nearly 46 percent of the people have become either landless or near-landless (Bhandari, 1985). One of the most serious problems the country is facing today is the rapid population growth at a rate of 2.6 percent per year. About 60 percent of the children under five years of age are suffering from protein-calorie malnutrition. Almost ten percent of them are suffering from third degree malnutrition (Bhandari, 1984).

The infant mortality rate was 148 per 1000 live births in 1981. At least 20 percent of the children die before reaching the age of five and the majority of these deaths are due to malnutrition. This has been acknowledged as a major problem in Nepal (NNCC, 1978).

Land has been the most important source of wealth, status and power. However, it has been distributed in a highly unequal fashion which has generated social inequality in rural communities. Nepalese farmers are poor by any standard with 55 percent of them living below a subsistence of \$60 per capita because of high population growth in recent years and limited cultivable land in the country, Nepalese farmers are becoming poorer and poorer. Hunter (1978:3) comments on the growing misery of the rural population in Asian countries:

In densely populated areas of Asia, small farmers are becoming marginal farmers; marginal farmers are becoming landless laborers; among laborers under-employment grows as the population pressure on land steadily increases.

Performance in the agricultural sector is frustrating, as there was only 1.1 percent growth with a target of 3.5 percent during the Fifth Plan (APROSC, 1977). In the hills, there are 1053 persons per square kilometer of arable land, compared to 823 persons per square kilometer in rural Bangladesh (UNICEF, 1983:4). The average size of arable holding per family is only 0.4 hectare. In cultivated land per person, Nepal is one of the most land-poor countries in the world (Khan, 1977).

Kaplan (1982) points out that the landless and near-landless categories in Nepal have been growing in both absolute numbers and as a percentage of rural families. In commenting upon the importance of landownership in South Asian countries, Esmail (1978:2) writes that:

While education, political contacts and family backgrounds are of some importance, the most significant asset in rural areas is the ownership and control of land. Landownership conveys both social status and economic opportunities... it can usually convert into power. Political power, in turn, frequently translates into the ownership and control of land... Land is not the only source of wealth, status and power in rural areas, but it is by far the most important.

Bunting (1976:39) suggests that the central problem in development is neither agriculture nor population. Indeed, it is poverty.

Bhandari (1985:98), from his data from Chitwan reports that rural inequality in terms of landownership as shown by the Gini coefficient has been increasing steadily from 0.65 in 1964 to 0.76 in 1983.

Poverty is a serious problem in Nepal which has affected about 40 percent of the households, and 34 percent of the population is below the poverty line as reported in National Planning Commission report (NPC, 1978). Since a large majority of the population lives in rural areas, it is obvious that the concept of poverty implies rural poverty in the Nepalese context. Rural poverty is linked to landownership as land is the most important source of status, power and wealth in an agrarian society like that of Nepal.

The present study is a comparative investigation of the extent of the rural poverty prevalent in the hills and Tarai regions of Nepal, an identification of the rural poor, their expectations about the future, their hardships and methods of coping with chronic poverty. This study concentrates on average daily calorie intake and prevalence of malnourishment in households. It examines the effectiveness of the grassroot level agricultural and social services programs, especially designed to alleviate poverty within the rural population.

OBJECTIVES

The authors have developed the following specific objectives:

- 1) Determine the extent of rural poverty as measured by the average daily calorie intake and the prevalence of malnutrition in the households in order to identify the rural poor in two regions;
- 2) Examine family conditions during the last five years and type of hardships experienced due to poverty;
- 3) Investigate ways and means they adopt to cope with poverty;
- 4) Ascertain expectations about family conditions in the next five years;
- 5) Analyze the effectiveness of the grassroot level agricultural extension and social services programs such as JTA, Health and Family Planning Workers;
- 6) Examine the quality of life expressed in the levels of satisfaction experienced by the household heads, and
- 7) Suggest some policy recommendations to the government to alleviate the rural poverty in these regions.

HYPOTHESES

Besides examining rural poverty within the hills and the Tarai, this study also tests the following hypotheses:

1. The average calorie intake per person per day is higher in the Tarai than in the hill region.
2. The degree of malnutrition in the household is higher in the hills than in the Tarai.
3. The JT/JTA (Junior Technician/Junior Technical Assistant) and social workers contact a higher percentage of rural household heads in the Tarai than they do in the hills.
4. Household heads in the Tarai have higher expectations about family conditions in the next five years than household heads in the hills.
5. The quality of life reported by household heads expressed by the level of satisfaction is higher in the hills than in the Tarai.

METHODOLOGY

The setting. The study was executed in two districts of Nepal: Chitwan in the inner Tarai and Tanahun in the hill region. To compare rural poverty existing in these two regions, one ward in each district was selected: ward number one within Parbatipur Panchayat in Chitwan and ward number six within Abu Panchayat in Tanahun. Household heads of these wards were enumerated along with the amount of landownership.

Parbatipur Panchayat is about 15 kilometers from Bharatpur, the district headquarter of Chitwan, and is connected by a motorable gravel road, while Abu Panchayat is the area lying around and about the junction of the Gorkha and Pritvi Highways called Abu Khaireni. Abu is about three-hours walk from this junction up in the hills. After having enumerated households in these wards, household heads were classified as landless, near-landless, marginal and small farm households. As there were no landless households in Abu Panchayat, only three categories of these households were used for hill regions.

A questionnaire was developed in Nepali and pre-tested by the researchers to make sure that the questions were simple, easy to understand, and relevant to the field conditions. About five percent of the households were interviewed for pre-testing the questionnaire. On the basis of pre-testing, the questionnaires were revised. Finally, the questionnaires were translated into English.

Sample. The degree of landownership and heterogeneous caste groups were used to select the wards in the Panchayats. Stratified random sampling techniques were used to select 34 households in Chitwan and 22 in the hill region. Altogether, 56 households were interviewed. About two percent of the total sample were post-surveyed by the researcher in to verify the data. In this study, ward and village are used interchangeably.

Operationalization of Variables. On the basis of landownership, household heads were categorized into landless, near-landless, marginal, and small farm categories. Those who neither own nor work any land, relying mainly on wage employment as casual agricultural laborers for their livelihood are classified as landless households; those who own up to 0.6 bigha of land as near-landless households; those who own 0.6 to 1.4 bigha of land as marginal households; and those who own more than 1.4 bigha of land as small farm households.

Three caste categories were used: Brahman and Kshetry; Newar, Gurung and Magar; and lower caste. Brahman and Kshetry castes were combined because these castes actually do not show any clear-cut variation in their socioeconomic and cultural characteristics. The lower caste households who are treated as untouchables include Damia, Sarki, Kami, and Sunar. The Newar, Gurung, and Magar groups are a category of households lying between higher and lower castes.

RESULTS AND DISCUSSION

Family Characteristics

Tables 1 and 2 describe family characteristics according to landholding category and caste groupings. According to Table 1, family size and dependency ratio are higher in the hills than in the Tarai. The family size increases with the increase in the landholding category in both regions, while the dependency ratio decreases with its increase excluding the near-landless category in the Tarai.

Data in Table 2 indicate that the family size of Newar, Gurung, and Magar is larger than other caste groupings in both regions. In the Tarai, dependency ratio decreases with decrease in caste status, while in the hills there are no consistent patterns in its distribution. Lower castes in the hills show highest dependency ratio.

Table 1. Family Characteristics and Landholding

	Landless	Near-landless	Marginal	Small	Total
Mean Family Size					
Tarai	6.8	6.4	8.8	8.1	6.7
Hill	-	6.7	7.0	7.5	6.9
Dependency Ratio					
Tarai	.8	.9	.9	.9	.9
Hill	-	1.5	1.2	1.0	1.3

Table 2. Family Characteristics and Caste

	Brahman and Kshetry	Newar, Gurung Magar	Lower Caste	Total
Mean Family Size				
Tarai	6.4	7.8	7.0	6.7
Hill	5.6	7.0	6.7	6.9
Dependency Ratio				
Tarai	1.2	0.8	0.7	0.9
Hill	1.3	1.0	1.8	1.3

Magnitude of Rural Poverty

Housewives were asked the kind of foods the family members ate the previous day. Food items and quantities were recorded as reported by the housewives. Then, the quantity of food items were converted into grams and total calories calculated. Total calories were divided by the number of family members who took meals that day. In this calculation two children under 12 years of age were considered as one adult. Table 3 indicates that average calorie intake per person per day is slightly higher in the Tarai than in the hills. Thus, the hypothesis that average calorie intake per person per day is higher in the Tarai than in the hills is upheld.

Average calorie intake per person per day is positively correlated with landholding size in both the Tarai and hills. Average calorie intake per person per day is 1924 for landless households in the Tarai, which is 14.7 percent less than the average calorie intake of 2256 per person per day recommended for Nepal. (Singh, 1983:48; Rai, 1984:2). Similarly, the near-landless consume less than the recommended calories, but the other two landholding categories take more than the recommended intake per person per day.

Table 3. Landholding and Daily Calorie Intake

	Estimated average calorie intake		Deficiency(-)/Surplus(+) (percent)*	
	Tarai	Hill	Tarai	Hill
Landless	1924	-	-14.7	-
Near-landless	2230	2220	-1.2	-1.6
Marginal	2436	2291	+7.9	+1.6
Small	2609	2362	+15.6	+4.6
Total	2298	2264	+1.9	+0.4

*Based on calorie requirement of 2256 per person per day.

According to caste groupings, estimated average calorie intake per person per day is correlated with the increase in the status of caste in both regions (Table 2). However, it is observed that only the lower caste households show calorie intake deficiency in the hills. On the contrary, lower caste and Newar, Gurung, Magar households in the Tarai show deficiency in their average daily calorie intake. Both caste and landholding size show positive relationship with average calorie intake per person per day.

The larger family size and dependency ratio are possibly the important factors explaining the slightly low average calorie intake per person per day in the hills rather than in the Tarai.

Table 4. Daily Calorie Intake by Caste

	Estimated average calorie intake		Deficiency(-)/Surplus(+) (percent)	
	Tarai	Hill	Tarai	Hill
Brahmin/Kshetry	2279	2380	+1.0	+5.4
Newar/Gurung/Magar	2186	2270	-3.1	+0.6
Lower caste	2139	2203	-5.2	-2.3
Total	2298	2264	+1.9	+4.7

*Based on calorie requirement of 2256 per person per day.

The measurements of children under five for height, weight and age in months were recorded. The children whose measurements Waterlow standard--a standard used to examine the prevalence of protein-calorie malnutrition (PCM)--was employed to determine the prevalence of PCM in children. All those children falling below 80 percent of the standard weight for height were classified as malnourished children. A household having more than one malnourished child was categorized as a malnourished household and otherwise categorized as a normal one (Table 5). Although the results are not statistically significant, it is evident that the prevalence of PCM is slightly higher in the hills than in the Tarai. For example, 75 percent of the households are malnourished in the hills compared to 71 percent in the Tarai.

Thus, the null hypothesis that the occurrence of malnourishment in the household is higher in the hills than is in the Tarai holds. Also, the percentage of the malnourished households decreases with the increase in the size of the landholding in the hills and the results are statistically significant. Data from the Tarai do not show any consistent pattern of occurrence of malnourishment in the households.

Low average daily calorie intake per person, higher dependency ratio and slightly larger mean family size explain the prevalence of PCM in the households in the hills.

Table 5. Landholding and Malnourishment (percent)

	Tarai			Hill		
	Normal	Malnour- ished	N	Normal	Malnour- ished	N
Landless	22	78	9	-	-	-
Near-landless	50	50	8	20	80	10
Marginal	25	75	8	33	67	6
Small	22	78	9	50	50	4
Total	29	71	34	25	75	20

Hill Chi-square = 3.8 NS Tarai Chi-square = 6.3 p < 0.05
 Chi-square (for Hill and Tarai) = 0.9 DF = 1 NS

The results in Table 6 also are not statistically significant. However, the percentage of malnourished households increases with the decrease in caste status in the hills. Unlike in the hills, the data are not consistent in the Tarai.

Table 6. Caste and Malnourishment (percent)

	Tarai			Hill		
	Normal	Malnour- ished	N	Normal	Malnour- ished	N
Brahman/Kshetry	29	71	17	50	50	6
Newar/Gurung/Magar	40	60	5	43	57	7
Total	29	71	34	25	75	20

Hill Chi-square = 1.3 NS Tarai Chi-square = 2.4 NS
 Chi-square (for Hill and Tarai) = 0.9 DF = 1 NS

Family Conditions During the Last Five Years

The household heads were asked about their family conditions during the last five years. Their answers were recorded as either improved, or worsened, or the same. The results are presented in Table 7, and are not statistically significant. However, the data indicate that the percentages of the household heads reporting worsening family conditions for both regions are higher than those reporting improvement in the conditions and increases with the decrease of landholding size. Yet, the percentage of them reporting worse family conditions is higher in the Tarai than in the hills. And, the landless household heads are the most reporting worse family conditions.

Results according to caste groupings are presented in Table 8. These results are not statistically significant. However, the family conditions improves with the increase of caste status in the hills, as opposed to the Tarai, where worsening of the family conditions decreases with the decrease of the caste status. It is the lower caste household heads who reported worse family conditions in both regions.

Table 7. Landholding and Condition During Last Five Years

	Tarai				Hill			
	Improved	Worse	Same	N	Improved	Worse	Same	N
Landless	-	89	11	9	-	-	-	-
Near-landless	-	50	50	8	-	60	40	10
Marginal	30	56	14	7	50	33	17	6
Small	12	44	44	9	50	17	33	6
Total	12	58	30	33	27	41	32	22

Chi-square for Hill and Tarai = 2.5 DF = 2 NS

Table 8. Caste and Condition During Last Five Years

	Family Condition							
	Tarai				Hill			
	Improved	Worse	Same	N	Improved	Worse	Same	N
Brahman/Kshetry	19	25	56	16	57	29	14	7
Newar/Gurung/Magar	20	60	20	5	25	25	50	8
Lower caste	-	100	-	12	-	71	29	7
Total	12	58	30	33	27	41	32	22

Chi-square for Hill and Tarai = 2.5 DF = 2 NS

The possession of productive animals was one of the factors in predisposing the improvement in household conditions in the hills during the last five years, together with the increased crop productivity and off-farm employment in school and farm services.

Regarding the worsening family condition, one of the main factors mentioned by Tarai respondents is large family size composed mainly of children under 12 years of age, who neither can work in the fields nor earn a cash income. Other factors mentioned by marginal and small farm owners are gradually decreasing soil fertility caused by inadequate application of farm yard manure--dependent on raising of livestock--and flight of able-bodied youths from the village. Tending animals is subject to the availability of pasture land, which is diminishing.

Landless and near-landless respondents frequently mentioned their inability to rent in land for more than one agricultural year. The landowners do not rent out the land because they fear that tillers may claim tenancy rights if it is rented out to them. Either the tenancy has to be renewed each year or new land has to be found for renting.

Perception of the Poor as Poor

The authors asked the respondents, "Compared to status, prestige, property, and landholding size of your neighbors, how do you consider yourself--poor, rich or in-between?" Their answers were recorded as poor, rich, or in-between. Those respondents who reported as poor were again asked, "Why do you consider yourselves poor? We found some common answers such as the high dependency ratio, inability to celebrate festi-

vals with pomp and show, and inability to send their children to school after primary school--which is free in Nepal. Some landowning household heads also reported that lack of perennial irrigation facilities, together with gradually decreasing soil fertility and diminishing public pasture land have entrapped them in poverty. The landless household head workers reported lack of daily employment to get necessary wages for their livelihood.

Hardships the Poor Experience

The respondents were asked about the hardships they have to put up with in their daily life due to poverty. The degree of hardships they reported greatly vary according to their comparisons of their status with those of the better off. Despite the variation of hardships, there is some consensus among those who consider themselves as poor. The consensus is the feeling that poverty has made them unable to give their children even middle school education, and that it has put them in a financial crisis especially when members in the families get sick or when the children get sick. Under such conditions, most poor households cannot afford to buy medicines. None of the respondents reported that they were starving. Somehow, they have been able to eat two meals a day. Their sole concern is to fill their bellies, not to supply the nutritional needs of their body. That is why their calorie intake is so low.

The other severe hardship they experience is the celebration of the festivals such as Dasain. They need to spend a large amount of money to buy expensive food items such as meat and good quality rice and new clothes for their family members. Most of the poor people have to borrow at a high interest rate.

Customs such as inviting relatives for a feast during festivals and other occasions is again the most difficult situation the poor have to face. In a country where kinships still dominate the society a person has to invite a large number of relatives. This hardship is severe at the time of Dasain festival.

The houses of poor people can be easily recognized. A rice straw mat, a pillow filled with rice husk and filthy quilt and blanket make their "Odne and Ochhyaune." They possess only earthen pots and some aluminum utensils. A jute sack cradle is often seen hanging from the roof of a thatched house.

Many respondents said that they have no provision for "tomorrow." They said that they cannot afford for "tomorrow." They are mostly concerned for the need of "today." They have to fight a war for "today's" survival. They cannot invest in bullocks or buffaloes for the future.

The small farm household heads experience shortage of labor to perform farming activities, as they cannot rely on small children in the family to help. They neither find laborers nor can afford to hire them to do the daily farm operation. All those who are able to work leave villages to find off-farm employment for better wages. Those who stay in the villages work in their own farms. Thus, the only ways to operate their farms is through exchanging and sharing of labor with others.

The rural households also experience the difficulty of getting inputs such as seed and fertilizer from the nearby cooperatives at the time of need. In spite of all these, the rural poor do not show any feeling of deprivation or inadequacy. The only time they feel poor is when they have shortage of food and problems of buying "Latta Kapada and Nun Tel," and when there is illness in the households.

Coping with Poverty

Regardless of their caste status and size of the landholding, all the respondents explained how they manage to cope with the problems of poverty. Those who have some land raise buffaloes, young bulls and goats. They sell them whenever they are in need of cash. Sometime they may not be able to get cash immediately from selling these animals due to shortage of cash in the village. Generally they sell their animals in the wet season, and receiving the money in the winter. Also, these people raise small animals such as chickens. They sell the chicken and eggs for immediate cash. Some households raise ducks and pigeons which provide a small amount of cash income.

In addition, poor households sell milk, ghee and curd to make money and buy "Marmasala, Nun Tel and Lattakapada" (spices, condiments salt, kerosene oil and clothes). They also cultivate vegetables on small scale and sell them locally.

Some poor households deal with poverty by raising the animals such as buffalo, cows and goats of others. Calves and kids from these animals are divided equally between tenants and the owners. Another popular practice among the poor households is the care of another's animals at a time when the owner does not need them, thus receiving some fringe benefits such as manure.

Still another important way of coping with poverty mentioned by the respondents is borrowing money from the local moneylenders and businessmen. These money lenders become the patron of the village, and lend money at a high interest rates. As a result, they are highly successful in superficially redistributing the village crises, as well as accumulating profits. Once the poor people borrow money, they get entangled in the claws of money lenders, often falling into lifelong debt. These debts are generally transferred to the sons and from sons to grandsons. This is how a poor man is born in debt and usually dies in debt.

Often poor households foreclose their land, property, and gold ornaments to get cash to fulfill their social and cultural obligations.

Visits of JT/JTA and Social Workers

This section examines the effectiveness of grassroots level government programs, including field visits of the JT/JTA in agricultural programs as well as workers in health, family planning and malaria control, i.e., social workers. The household heads were asked how often the JT/JTA or social workers visit them. Table 9 shows that only 16 percent of the households in the Tarai reported that JT/JTA have visited them, compared to 36 percent in the hills.

Why is it that JT/JTA visit more in the hills than in the Tarai? It might be due to easier transportation in the Tarai, where farmers freely go to nearby cooperatives, a progressive farm, or an agricultural assistant, acquiring necessary knowledge and skills. Their visits to these places often gives them more information than the academically trained JT/JTA. Thus, the JT/JTA develop an inferiority complex, which discourages their visits to farmers in the Tarai. Many of the respondents reported that JT/JTA do not have enough knowledge of local farming practices.

The results are statistically significant, and the null hypothesis that the JT/JTA contact a higher percentage of household heads in the Tarai than they do in the hills is rejected. A higher percentage of all the household heads reported that they were never visited by the JT/JTA. However, the JT/JTA's number of visits increases with the increase in the size of the landholding in the Tarai, while data in the hills do not show any consistent patterns.

Table 9. Landholding and Visits by JT/JTA (percent)

	Visits by JT/JTA					
	Tarai			Hill		
	Yes	No	N	Yes	No	N
Landless	-	-	-	-	-	-
Near-landless	-	100	8	40	60	10
Marginal	13	87	8	17	83	6
Small	33	67	9	50	50	6
Total	16	84	25	36	64	22

Tarai Chi-square = 2.8 NS

Chi-square (for Hill and Tarai) = 22.0 DF = 1 p < .05

In terms of caste groupings (Table 10), none of the lower caste household heads were contacted by JT/JTA in the Tarai. However, the situation is different in the hills where 29 percent of them were contacted by the JT/JTA. Their visits to the higher caste households in the Tarai was greater than those in the hills. The results are also statistically significant and caste is not related with visits of JT/JTA in the field.

Table 10. Caste and Visits by JT/JTA (percent)

	Visits by JT/JTA					
	Tarai			Hill		
	Yes	No	N	Yes	No	N
Brahman/Kshetry	20	80	15	57	43	7
Newar/Gurung/Magar	20	80	5	25	75	8
Lower caste	-	100	5	29	71	7
Total	16	84	25	36	64	22

Chi-square for Hill and Tarai = 22.0 DF = 1 p < .05

Table 11 indicates a significant difference in visits of social workers by geographical regions. Almost all the households were visited by these social workers in the Tarai, compared to only 50 percent of the households in the hills. The data clearly show that the social workers visits are dependent on geographical location, and the results are statistically significant. Thus, the null hypothesis that social workers contact a higher percentage of rural household heads in the Tarai than they do in the hills is upheld. The visits of social workers are positively related to landholding size, excepting landless household heads in the Tarai. However, data do not show any consistent patterns in the hills.

Table 11. Landholders and Visits of Social Workers (percent)

	Visits by Social Workers							
	Tarai				Hill			
	Regu- larly	Some- time	Never	N	Regu- larly	Some- time	Never	N
Landless	63	37	-	8	-	-	-	-
Near-landless	37	63	-	8	10	40	50	10
Marginal	50	50	-	8	-	50	50	6
Small	89	11	-	9	-	50	50	6
Total	61	39	-	33	5	45	50	22

Chi-square for Hill and Tarai = 24.5 DF = 2 p < .05

As indicated in Table 12, the percentage of the households visited regularly by social workers in the Tarai and sometimes in the hills decreases with the increase of caste status. Yet, 50 percent of the household heads are never visited. Thus, caste best explains visits by social workers to the household heads in villages of both regions. The positive relationships may be because social workers visit higher caste household heads more often than lower caste household heads due to the latter's untouchable status in the society.

Unlike JT/JTA, social workers visit household heads more in the Tarai than in the hills due to easy accessibility and good road system in the Tarai.

Table 12. Caste and Visits of Social Workers (percent)

	Visits by Social Workers							
	Tarai				Hill			
	Regu- larly	Some- time	Never	N	Regu- larly	Some- time	Never	N
Brahman/Kshetry	65	35	-	17	-	57	43	7
Newar/Gurung/Magar	60	40	-	5	-	50	50	8
Lower caste	58	42	-	12	14	29	57	7
Total	61	39	-	34	5	45	50	22

Chi-square for Hill and Tarai = 24.4 DF = 2 p < .05

Expectation of Family Conditions for Next Five Years

The household heads when asked about their expectations of their family conditions in the next five years, a higher percentage of them in both the geographical regions expect their family conditions will improve (Table 13). However, as the results are not statistically significant, the null hypothesis that Tarai household heads have higher expectations about family conditions in the next five years than the hill household heads is rejected. Even in the lack of statistical significance test in the hills, it is seen that expectation of their family condition in the next five years is positively related to landholding size. In the Tarai, results are statistically significant.

Expectations of family conditions in next five years are cross tabulated with caste (Table 14). These results are not statistically significant. The data show that the percentage of these optimistic household heads decreases with lower caste status in the hills as well as in the Tarai. Possibly, the high expectation in Nepal may be due to their growing children, the changing conditions brought about by developmental efforts in the fields of education, availability of basic health services, development of communication, transportation system and so on. The both landholding size and caste groupings explain the life expectations of their family conditions in the next five years.

Table 13. Landholding and Expectations for Next Five Years (percent)

	Tarai			Hill		
	Better	Worse	N	Better	Worse	N
Landless	22	78	9	-	-	-
Near-landless	38	62	8	40	60	10
Marginal	75	25	8	67	33	6
Small	89	11	9	83	17	6
Total	56	44	34	59	41	22

Tarai Chi-square = 10.4 $p < .05$ Hill Chi-square = 2.9 NS
 Chi-square for hill and Tarai = 0.06 DF = 1 NS

Table 14. Caste and Expectations for Next Five Years (percent)

	Tarai			Hill		
	Will Improve	Will Not Improve	N	Will Improve	Will Not Improve	N
Brahman/Kshetry	71	29	17	71	29	7
Newar/Gurung/Magar	60	40	5	63	37	8
Lower caste	33	67	12	43	57	7
Total	56	44	34	59	41	22

Tarai Chi-square = 4.4 NS Hill Chi-square = 0.6 NS
 Chi-square for hill and Tarai = 0.06 DF = 2 NS

Quality of Life

Regardless of family situation reported earlier, household heads were asked how satisfied they were about life in general. The results, presented in Table 16, are statistically significant. Because 45 percent of the household heads in the hills experienced satisfaction in their life in general as opposed to three percent in the Tarai, the level of satisfaction felt by the household heads is higher in the hills than in the Tarai. In Tarai, the percentage of dissatisfied household heads is negative and that of indifferent ones are positive as related to the size of landholding. The data, however, do not show any consistent pattern in the hills.

Table 15. Landholding and Level of Satisfaction

	Tarai				Hill			
	Satis- fied	Dis- satis- fied	Indif- ferent	N	Satis- fied	Dis- satis- fied	Indif- ferent	N
Landless	-	89	11	9	-	-	-	-
Near-landless	13	62	25	8	30	20	50	10
Marginal	-	62	38	8	66	17	17	6
Small	-	22	78	9	50	33	17	6
Total	3	59	38	34	45	23	32	22

Chi-square for Hill and Tarai = 16.3 DF = 2 p < 0.05

Data in Table 16 do not show any consistent pattern by caste. However, the highest percentage of lower caste household heads are dissatisfied with their life in general in the Tarai, while Brahman and Kshetry are dissatisfied in the hills. Thus the size of landholding is a better explanatory variable in determining quality of life than the caste groupings.

Table 16. Caste and Level of Satisfaction

	Tarai				Hill			
	Satis- fied	Dis- satis- fied	Indif- ferent	N	Satis- fied	Dis- satis- fied	Indif- ferent	N
Brahman/Kshetry	-	59	41	17	57	43	-	7
Newar/Gurung/Magar	20	-	30	5	63	-	37	8
Lower caste	-	83	17	12	14	29	57	7
Total	3	59	38	34	45	23	32	22

Chi-square for Hill and Tarai = 16.3 DF = 2 p < .05

SUMMARY AND CONCLUSIONS

The findings suggest that the estimated average calorie intake per person per day increases with increase in the landholding size and the status of caste groupings. Only the landless, near-landless, and lower castes show deficiencies in the recommended average daily calorie intake per person, which varies from 1.2 to 14.7 percent. Also, the percentage of the household heads daily calorie intake per person is slightly higher in the Tarai than in the hills.

The percentage of malnourished households is slightly higher in the hills than in the Tarai region. Also, the size of landholding relates to malnourishment in the hills only. Similarly, the prevalence of malnourishment also decreases with the lower caste groups in the hills.

The percentage of household heads reporting worsened life condition is higher in the Tarai than in the hills. Worsening family condition decreases with lower caste groups in the Tarai.

Household heads who perceive themselves as poor attribute poverty to large family size mostly composed of underaged children not acceptable for daily wage earning, lack of food and clothing and small landholding. The poor experience severe hardship to buy medicine and "Maramasala, Lata Kapada and Nun Tel," to send their children to school and to celebrate festivals. Flight of the working manpower from the family to urban areas for employment--creating a shortage of man power--is another serious problem.

Regardless of these bitter experiences, somehow they manage to cope with poverty by selling animals and animal products, renting animals on a fifty-fifty basis, borrowing money from local money lenders, and sharing and exchanging of labor with each other in the village.

The hill household heads are visited more by government workers than the Tarai household heads. Frequency of their visits increases with larger landholding in the Tarai. Farmer's mobility is possibly the sole reason of not being visited by JT/JTA. On the other hand, visits of social workers to the household heads is dependent upon geographical region. A higher percentage of the household heads are visited regularly by social workers in the Tarai than are those in the hill region. Their visits are positively related to the size of landholding in the Tarai and increases with the higher castes. But their occasional visit decreases with lower castes in the hills.

A higher percentage of the hill household heads are positive and optimistic about the future than the Tarai household heads. In both geographical regions, the percentage of the household heads who reported that their family conditions "will improve" increases with the increasing landholding size and caste status.

The quality of life as experienced by the household heads is dependent upon the geographical region. The hill household heads appear to be much more satisfied with their life than the Tarai household heads. The percentage of the Tarai household heads reporting dissatisfaction over their life in general decreases with the decrease of the size of the landholding. The hill household heads reporting neither satisfied nor

dissatisfied decreases with the increase in the size of the landholding and the status of caste groupings.

The original objective posed was identification of the rural poor. The socioeconomic information collected here may not be sufficient to pinpoint the rural poor, especially in a rural social stratification system like of Nepal. However, if the empirical data provides some basis for identification of the poor, then those who consume less than the recommended calorie intake of 2256 per person per day and those who show the prevalence of malnutrition among their children are the poor. The poor household heads believe that their family conditions have not improved at all during the last five years. Poverty has put rural people in such a spot where they do not even have the respite to think of coming out of it or being rescued from it. Many household heads have inherited poverty from their forefathers and fear that it will be transferred to their sons and from sons to grandsons. They are not even positive or optimistic about better family conditions in the future.

The landless and near-landless households in the Tarai, near-landless in the hills and lower castes in both geographic regions are rural poor. They are the people, who consume less than the recommended calorie intake per person per day and have at least one malnourished child in their households. Because of these reasons, they have not been able to improve their family conditions during the last five years. Nor do they have any higher expectations about their family conditions in the next five years. These household heads are not generally satisfied with their life.

POLICY RECOMMENDATIONS

(1) Malnourishment is a serious problem in Nepal. Knowledge about nutrients in the diet, especially in the diet of the young children is lacking. Many of these children are under five years of age. These malnourished children are present virtually in every household. Our efforts should be geared toward alleviating prevalence of malnutrition in Nepal through the process of educating people both formally and informally. Without awareness of this fact, it is difficult to produce sound and able manpower needed for the development of the country.

(2) Cereals provide about four-fifths of calorie requirements in Nepal (Rai, 1984:2). Their importance can not be underestimated for human life. And without increasing cereals production, the level of calorie consumption cannot be raised. It can be raised only through producing more per unit of area. More could be produced only through the provision of perennial irrigation facilities. At least with these facilities the current level of productivity could be increased. Small scale irrigation facilities be created at the village level and provision made to manage it by local people.

(3) Almost all the households are engaged in farming and report hardships in their daily life. A majority of these households are not even contacted by the grassroot level agricultural workers. This is a real dilemma. Even by increasing the numbers of JTI/JTA or by decreasing the area to be covered by them would not serve the needs of the farmers. What needs to be done is the involvement and active participation of the

farmers in implementing extension programs in their areas. This responsibility has already been given to the agricultural assistants in the panchayat levels. Appointing more assistants in the panchayat would gradually replace the necessity of the JT/JTA. This step would be a positive step towards people's participation in agricultural development.

(4) It is widely said that the existing extension program in Nepal is individual oriented, and is more accessible to rich farmers, thus isolating benefits in the hands of a few. It is true not only in the agricultural development programs but also in other rural development programs. So, benefits should be distributed equally to people living on all rungs of the social ladder, it is necessary to change the focus of agricultural development programs from individual oriented to community oriented ones, where the community as a whole is considered to be the target. This approach may, regardless of the stratification in the rural area, be able to distribute benefits or risk to the people of all segments in the village.

LIMITATIONS

(1) The data on average daily calorie intake per person was taken from a small sample of households for a single day through recall technique and it ignores the weekly, monthly and seasonal variations of calorie intakes in the household. Similarly, the food allocation system within the family, working and nonworking members in the family, male and female etc have not been considered in this study. This is a frontier for further research.

(2) Another limitation of the study is related to the measurement of the prevalence of malnourishment in the households. The report does not include the number of children malnourished in the family, differences in sex, age, consumption patterns, and seasonal variations. It is important that a nutritional study be carried out representing different geographical locations using an appropriate standard to determine the nutritional status of the children in Nepal.

REFERENCES

- APROSC. Nepal: Trained Manpower for Agricultural Sector, Vol. I. Kathmandu, Nepal. 1977.
- Bhandari, Bishnu. "Socioeconomic Characteristics and Nutritional Status of Nepalese Children in Chitwan." Unpublished M.S. Thesis. University of Wisconsin, Madison. 1984.
- . "Landownership and Social Inequality in the Rural Tarai Area of Nepal." Unpublished Ph. D. Thesis. University of Wisconsin, Madison. 1985.
- Bunting, M.H. "Change in Agriculture, 1968-74," in Policy and Practice in Rural Development. eds. Guy Hunter, A. H. Brunting, and A. H. Bottrall. USA: Land Less Studies. 1976.

- Esman, M.J. "Landless and Near-landless in Developing Countries." INL No. 1, Ithaca, New York: Cornell University. 1978.
- Hanumantha Rao, G. "Caste and Poverty: A Case Study of Scheduled Caste in a Delta Village," in Social Work Perspectives on Poverty, ed. E. R. Singh. New Delhi: Concept Publishing Company. 1980
- Hunter, Guy. Agricultural Development and the Rural Poor. London: Overseas Development Institute. 1978.
- International Labor Organization. Poverty and Landless in Rural Asia. Geneva: ILO, 1977.
- . Profiles of Rural Poverty. Geneva: ILO. 1979
- Islam, R.A.; A.R. Khan and E. Lee. "Employment and Development in Nepal." Bangkok: ILO-ARTEP. 1982.
- Kaplan, Paul and N.R. Shrestha. "The Sukumbasi Movement in Nepal: Fire From Below," Journal of Contemporary Asia, Vol. 12, No. 1, pp. 756-99. 1982.
- Khan, A.R. "Poverty and Inequality in Rural Bangladesh," in Poverty and Landlessness in Rural Asia. Geneva: ILO. 1977.
- National Nutrition Coordination Committee (NNCC). "National Nutrition Strategies, Pokhara." Kathmandu, Nepal. 1978.
- National Planning Commission Secretariat (NPC). A Survey of Employment, Income Distribution and Consumption Patterns in Nepal. Kathmandu, Nepal. 1978.
- Minha, V.S. "The Economic Dimension of Poverty," in Social Work Perspectives on Poverty, ed. R. R. Singh. New Delhi: Concept Publishing Company. 1980.
- Pathak, S. "Conceptions and Misconceptions of Poverty," in Social Work Perspectives on Poverty, edited by R. R. Singh. New Delhi: Concept Publishing Company. 1980.
- Regmi, M.C. Landownership. Berkeley: University of California Press. 1974.
- Rai, L. M. "Development Activities for Improving Nutritional Studies in Nepal" Nepalma Khadya Samasya Tatha Samadhanharu. The Fourth World Food Day Committee, Nepal, (Aswin 30, 2041). 1984.
- Singh, I.J. "The Landless Poor." World Bank, Washington. 1983.
- Singh, R.B. "A Review of Nepal's Efforts in Poverty Alleviation." In-depth Series No. 13. FAO of the United States. 1983.
- UNICEF. "The Small Farm Family." Kathmandu, Nepal. 1983.

Papers in this Series:

1. Bholu N. Pokharel and Ganesh P. Shivakoti, "Impact of Development Efforts and Agricultural Wage Labor," December 1986.
2. Jagadish Timisina and Murari Suvedi, "Contribution of Cropping Systems Program Research and Extension to the Rural Poor: A Case Study of Ratnanagar Cropping Systems Site," December 1986.
3. Murari Suvedi, "Poorest of the Poor: A Comparative Study of Rural Poverty in Two Villages," December 1986.
4. Bishnu Bandari, Narayan Kunwar, and Badri B.S. Dongol, "Rural Poverty and the Poor in Nepal," December 1986.

Winrock International Institute for Agricultural Development was established in 1985 through the merging of the Agricultural Development Council (A/D/C), the International Agricultural Development Service (IADS), and the Winrock International Livestock Research and Training Center. Winrock International's mission is to improve agriculture for the benefit of people--to help increase the productivity, improve the nutrition, and advance the well-being of men, women, and children throughout the world. Winrock International's main areas of emphasis are human resources, renewable resources, food policy, animal agriculture and farming systems, and agricultural research and extension.

Winrock International Institute
for Agricultural Development

Route 3, Petit Jean Mtn.
Morrilton, AR 72110-9537
U.S.A.

P.O. Box 1312
Kathmandu
Nepal