

Understanding Dynamics of Food Insecurity and Vulnerability in Chepang Community

Chan Bahadur Gurung¹

¹Freelance Researcher, Kathmandu, Nepal

Corresponding Author

Chan Bahadur Gurung

Email: dr.gurungchan@gmail.com

<https://orcid.org/0000-0002-2911-0989>

Received Date 2 August 2022

Accepted Date 22 September 2022

Published Date 29 September 2022

ABSTRACT

Chepangs are one of the highly marginalized indigenous peoples of Nepal who are vulnerable in terms of food security and have been living in environments characterized by high risk of various shocks. This study examines the dynamics of food insecurity and vulnerability in Chepang community. The study uses a mixed method approach. Data were obtained by using semi structured household questionnaire and key informant interview checklist. The household questionnaire included modules on household demographics, migration, housing facilities, assets and access to credit facilities, agriculture, income, expenditure, food sources and consumption patterns, shocks and food security. The questionnaire also contained questions on maternal and child health and nutrition. For child anthropometry, height and weight were also measured of all children below 5 years (6-59 months). About 90 percent of the sampled households reported food insecurity. Overall, assets deprivation, recurrent phenomena of covariate and idiosyncratic shocks, unfavorable state policies, and socio-cultural factors, low profile of education, larger family size, lack of income, higher expenditure on foods, low consumption patterns, and poor access to health care, water and sanitation facilities etc. are the major determinants of vulnerability of households to food insecurity. These factors were, in turn, determined by the poor resource endowment of the household which they could pursue in meeting their income and food security objectives. 75 percent of expenditure of Chepang households goes to food purchase. This high food expenditure share means that resources and incomes available to the households devotes to food indicating poor access to food. Again, more than 53 percent of the households belongs to the very poor and poor food consumption groups. This means suffering from food energy deficiencies, low dietary diversity, deriving more energy from staples, lacking micronutrients and having very poor and poor consumption patterns and poor food security status. The main coping strategies being adopted include unskilled wage laboring, collection, consumption and marketing of forest foods and products, sales of livestock animals, borrowing money and changing consumption patterns in the study area. This ethnicity based analysis could be of great value to the government, non-governmental organizations and development agencies in the design of effective food security strategies and development programs as policy response both now and in the future.

KEYWORDS

Chepang, Community, Coping strategies, Food insecurity, Indigenous, Livelihoods Vulnerability

INTRODUCTION

Food security is a measure of the availability of food and individuals' ability to access it. It is the "availability at all times of adequate, nourishing, diverse, balanced and moderate food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and

prices (FAO, 2003). Improving food security is an issue of supreme importance to many millions of people worldwide who are suffering from persistent hunger and undernutrition, and to others who are at risk of doing so in the future. The inability to access food of sufficient quantity and quality to satisfy minimum dietary needs is the most basic form of human deprivation. People need to satisfy their hunger and feel secure that their future meals will indeed be available. Thus, the issue of food security is central to any discussion on poverty. Without reduction, poverty becomes a vicious cycle. Poverty deprives people of access to adequate, good-quality food, denying them the nutrition they need to be healthy. Malnutrition undermines productivity, keeps incomes low, and traps people in poverty. The lack of food security is, thus, both a cause and an effect of poverty. The incidence of poverty is higher among indigenous and tribal groups than among the population as a whole (ADB, 2002). Lack of access to food, hunger, and malnutrition are the most visible manifestations of poverty than can be seen across the Chepang community.

The primary lifestyle of the community includes hunting, foraging for wild roots, fishing, and traditional farming near forests (Ellis, 2000). Chepang is considered to be the youngest community to instigate agriculture in Nepal. Chepang is known as people living in hills with difficult physiographic (Rai, 1985). The Chepang are an indigenous Tibeto-Burman ethnic group mainly inhabiting the rugged ridges of the Mahabharata mountain range of central Nepal (Beine, Caughley, & Shrestha, 2012). Two modes of agriculture are practiced in the Chepang community; the first one is their indigenous slash-and-burn farming, and the second one is terrace farming in permanent agricultural land. According to Caughley et al., (1971) Chepang started agrarian life only recently i.e. some 120 years ago; before that, they used to live partly in forests and caves (Caughley, Dahal, & Bandhu, 1971). The maize production can suffice for only six months in a year (Gurung, 1995). In recent years, Chepang has also started commercial vegetable farming on small scale. The important hindrance in their agro-practice is the unavailability of irrigation facilities. Similarly, insufficient land with difficult topography, poor land husbandry, and their traditional lifestyle are other factors limiting food production. Large labor input in agriculture hardly supports their subsistence even at present.

Vulnerability is people's propensity to fall, or stay, below a pre-determined food security threshold. By food security, we understand the physical and economic access at all times to sufficient, safe and nutritious food to meet the dietary needs and food preferences for an active and healthy life (WFS, 1996). It is a function of people's exposure to risks and of their resilience to these. By risks, we understand events or trends that create a measure of instability that may have a negative impact on people's welfare. Resilience is determined by the potential effectiveness of risk management strategies (prevention, mitigation, and coping) in maintaining a person above a minimum welfare threshold or in preventing that person from falling into an even deeper state of ill-being as the result of a negative event or trend. Vulnerable groups comprise people with common characteristics, who are likely to fall or remain below a certain welfare threshold in the near future. While most of those who are presently below the threshold may face a high probability of being so also in the future, as food security and poverty are not static. Several studies show that people move in and out of food insecurity and poverty (Dercon, 1999).

A good understanding of the factors that determine food insecurity today and, more importantly, those which will influence food insecurity in the near future is therefore essential in reducing food insecurity over time. The absence of a comprehensive analysis of food security and vulnerability leads to ineffective targeting and welfare losses. Understanding the characteristics of the poor, the specific nature of the food security problems, and the reasons why their deprivation persists is important for policy measures to tackle food insecurity and poverty. In Nepal, policies that tackle food insecurity at the household level, which stretch from making food available to the rural poor to mitigating transitory economic shocks and diversifying the income base of the rural poor, are seen as the most effective way to reduce poverty. Decision-makers involved in policy-making or interventions to reduce food insecurity are often faced with a shortage of relevant information. Clearly, a great deal of probing investigation is needed to support public policy and action to eradicate poverty, and eliminate endemic food insecurity. Food self-insufficiency and food insecurity along with nutrition security is the most prominent issue in livelihoods. Only a small percentage of Chepang households are fully self-sufficient. Chepangs are the most vulnerable group in terms of food security as they have been living in environments characterized by a high risk of shocks that

cause loss of assets and income. However, no research has been carried out to investigate the bundle of response actions employed by the Chepang households in response to vulnerability to food insecurity and the factors that determine their vulnerability to food insecurity. This study with regard to the vulnerability of the Chepang community to food insecurity was posed as the problem under investigation.

Conceptual Framework

The theoretical background of this study was derived from the sustainable livelihood approach for understanding the dynamics of food insecurity and vulnerability of the Chepang community. A livelihood comprises the capabilities, assets, and activities required for a means of living. It is deemed sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities, assets, and activities both now and in the future, while not undermining the natural resource base. The sustainable livelihoods approach facilitates the identification of practical priorities for actions that are based on the views and interests of those concerned but they are not a panacea. It does not replace other tools, such as participatory development, sector-wide approaches, or integrated rural development. However, it makes the connection between people and the overall enabling environment that influences the outcomes of livelihood strategies. It brings attention to bear on the inherent potential of people in terms of their skills, social networks, and access to physical and financial resources, and ability to influence core institutions. Appreciative inquiry—originally developed as a tool for industry to avoid negative approaches to problem-solving—extends this constructive outlook. Appreciative inquiry is a highly inclusive process that maximizes the positive in which a community takes responsibility for generating and gathering information and then forms strategies based on the most positive experiences of the past.

Entitlement Endowments

The household was recognized as the basic unit of analysis that included more than one individual, who shared economic activities necessary for the survival of the household and for the generation of well-being for its members (Rudie, 1995). Rudie's definition of a household is adopted for this study because of its emphasis on provision for primary needs and joint management of resources. Therefore food security management at the household level is a kind of generation of well-being for all members of the household. Sen (1981) defines ownership relations as a kind of 'entitlement' relations, which connects one set of ownerships to another through certain rules of legitimacy. Endowments are defined as the stock of different forms of capital that an agent possesses (Sen, 1981). At the household level entitlement endowment is the summation of all capital – the initial resource bundle – possessed by all household members. The sustainable livelihoods framework helps to organize the factors that constrain or enhance livelihood opportunities and shows how they relate to one another. A central notion is that different households have different access to livelihood assets, which the sustainable livelihood approach aims to expand.

Transforming Structures (Institutions) and Process

Livelihood strategies and outcomes are not just dependent on access to capital assets or constrained by the vulnerability context; they are also transformed by the environment of structures and processes. Structures are the public and private sector organizations that set and implement policy and legislation; deliver services; and purchase, trade, and perform all manner of other functions that affect livelihoods. Processes embrace the laws, regulations, policies, operational arrangements, agreements, societal norms, and practices that, in turn, determine the way in which structures operate. Policy-determining structures cannot be effective in the absence of appropriate institutions and processes through which policies can be implemented. Processes are important to every aspect of livelihood. They provide incentives that stimulate people to make better choices. They grant or deny access to assets. They enable people to transform one type of asset into another through markets. One of the main problems the poor and vulnerable face is that the processes which frame their livelihoods may systematically restrict them unless the government adopts pro-poor policies that, in turn, filter down to legislation and even less formal processes. Through policies and planning approaches (processes), all transforming structures act in the community to facilitate the

entitlement changes to change their initial resource bundle to food and income through resource allocation.

Livelihood Strategies and Outcome

Livelihood strategies are the combination of activities that people choose to undertake in order to achieve their livelihood goals or livelihood strategies aim to achieve livelihood outcomes. Potential livelihood outcomes can include more income, increased well-being, reduced vulnerability, improved food security, more sustainable use of the natural resources base, and recovered human dignity, between which there may again also be conflict. Decisions on livelihood strategies may invoke natural-resource-based activities, non-natural resource-based and off-farm activities, migration and remittances, pensions and grants, intensification versus diversification, and short-term versus long-term outcomes, some of which may compete. Livelihoods approaches try to understand the strategies pursued and the factors behind people’s decisions; to reinforce the positive aspects of these strategies and mitigate against constraints. The choice of strategies is a dynamic process in which people combine activities to meet their changing needs. The interaction between the household’s entitlement endowment, transforming structures, and processes determine the livelihood strategies or activities set by the particular household.

Vulnerability Context

Vulnerability is characterized as insecurity in the well-being of individuals, households, and communities in the face of changes in their external environment. People move in and out of poverty and the concept of vulnerability captures the processes of change better than poverty line measurements. The vulnerability has two facets: an external side of shocks, seasonality, and critical trends; and an internal side of defenselessness caused by a lack of ability and means to cope with these. The vulnerability context includes shocks, seasonality, and critical trends. Vulnerability always begins with a notion of risk. Risk is characterized by a known or unknown probability distribution of events. The risk of the shortfall can be expressed as a probability statement regarding the failure to attain a certain well-being threshold in the future (Christiaensen & Boisvert, 2000). Therefore, vulnerability to food insecurity indicates probability of failure to attain a certain threshold level of nutritional requirement for healthy life in the future. One important aspect of being food insecure is a high level of exposure to risk of adverse events and lack of the means to cope with them. The aim of an effective food security policy is to ensure that all households have an adequate dietary intake and can acquire it without being subjected to excessive risks. Vulnerability to food insecurity exists mainly due to the ineffective policies and planning approach of transforming structures. It can be alleviated through supporting vulnerable people to build up their entitlement endowments and minimize the risks associated in different sectors (Figure 1).

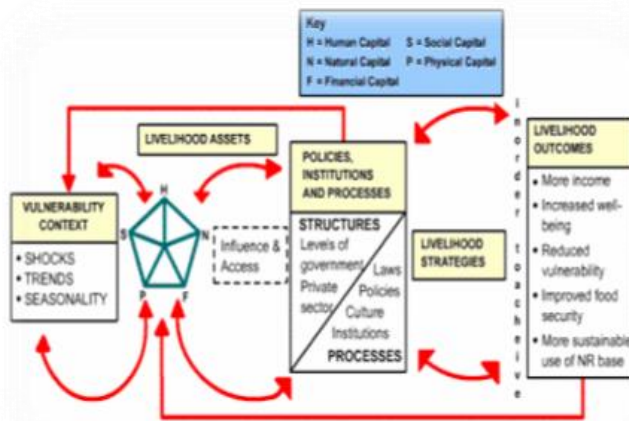


Figure 1: Sustainable Livelihood Framework
 (Source: DFID, 2001)

DATA AND METHODS

The Study Site and Sample

Gathering data from a wide range of informants derived from various locations help maintain anonymity of all involved. Therefore, the study was undertaken in 2 each Chepang prevalent former VDCs of Chitwan and Gorkha districts of Nepal. They included Shaktikhor and Siddhi VDCs in Chitwan and Ghyalchowk and Bhumlichowk VDCs in Gorkha. These VDCs have the highest percentage of Chepang people who are food insecure. Chepangs who are dependent on agricultural systems and natural resource base, constituted the target population while the unit of analysis was the households. The household head was the unit of observation. A representative sample size of 105 households was purposively used in this study. Out of this, 31, 23, 21 and 30 sampled households were attributed to Shaktikhor, Siddhi, Ghyalchowk and Bhumlichowk VDCs respectively. Purposive sampling procedure was employed. Two each VDCs namely Shaktikhor and Siddhi in Chitwan and Ghyalchowk and Bhumlichowk in Gorkha were selected for the research purposes. 40 Key informant interviews were also taken.

Sources, Techniques and Analysis of Data

Data and information were collected from both primary and secondary sources. Two data collection tools were employed as the major techniques for the primary data collection. They were: (i) household questionnaire along with anthropometric module for the measurement of health and nutrition status, and (ii) check list for key informant interview. The household questionnaire included modules on household demography, education, health, migration, housing, income activities, household expenditures, household asset ownership, risk exposure and response, asset holdings, and food consumption patterns. Furthermore, it collected information on women and child health and nutrition. For child anthropometry, height and weight/length were measured of all children from 6-59 months of age. This information was used to calculate nutritional indices (z-scores) and then to classify children as being stunted, waster and/or underweight. The questionnaire also contained questions on antenatal health care, recent morbidity, vitamin A supplementation etc. The check list was used to collect information from key informants providing an overview of the community access to school, markets and health facilities, along sources of income in the community and migration patterns. Information matching the study purposes from secondary sources was also collected, and triangulated. The secondary sources of data included published literatures, annual reports from development organizations and government agencies, several, email, websites, newspapers and supplemented into the study report. The study tools were initially prepared in English and later translated into Nepali that the integrity of the original meaning was maintained. It was pre-tested in a pilot study.

Multi-stage sampling technique was followed i.e. data were collected at various stages. In addition to the survey, field notes to record qualitative observations concerning the broader context such as physical infrastructure, market access, and food security problems, and gained insights from informal conversations with local residents was also taken. The study adopted mixed method approach using both quantitative and qualitative data. Quantitative data and information were collected at the household and individual level and the qualitative data and information were collected at the community level. The study was descriptive and exploratory in nature. Upon the completion of data collection from the field, the quantitative data were coded, entered, cleaned and verified following processing, analysis and interpretation. Key findings were identified which was followed by report creation. Most of the data were analyzed manually using simple statistical tools like percentage, mean etc. The entire analyses were done having adopted descriptive and exploratory interpretative approaches. A total of 105 questionnaires were used for the final analysis. The distribution of data to meet requirements for multivariate analyses were inspected. Qualitative data from field notes were used to provide a descriptive background of the local context. Multivariate analysis was done for identifying vulnerability and food insecurity.

RESULTS AND DISCUSSIONS

Description of the Context

As revealed, 90 percent of the sample households in the study community were headed by males indicating male dominance. The proportion of dependent population was 55% indicating fewer had to feed larger section of the population in the study community. The average size of the households was 5.8 indicating larger family size. The proportion of illiterate and just literate was above 60 percent which was adversely affecting the household food security. More than 99 percent of Chepangs had their own dwelling to live. 80 percent of the households had walls made from mud bonded –bricks and stones, 91 percent had earthen floors and 65 percent households had roofs with CGI sheets indicating poor quality of dwellings and life thereof. 76 percent of the households are having access to electricity and 93% used firewood as a fuel for cooking. More than 71 percent of the households had traditional oven implying poor health of the women and children, food preparation and nutrition status. About 67 percent of the households had public taps for the household supply of drinking water.

53% of the households used TV as a means of communication. 80% of all key informant interviews indicated having a functioning primary school and 35% reported functioning secondary school. Only the 45 percent of key informant interviews reported the presence of a functioning institutions within their community. 80 percent of them reported feet as the major mode of transport. 17% are having access to a daily food market. Almost all the sampled communities not having periodic food markets closed by. The average time to walk to the closest daily food market was at least 2-3 hours indicating lack of access to market facilities. 35% of all key informant interviews indicated that non-agricultural wage labor—was the main type of work for migrants. People between the ages of 18-30 years were the main age-group migrating from their communities. Overall, 53 percent of the households had at least one absentee. 72.73% out migrating households indicated the main cities of Nepal were the main destinations. Among the sampled households with one or more migrating members, the average of NRs 83436 was remitted to households.

Household Food Security Status in Study Community

Present study showed that 89.52 % of the people suffered from varying degrees of food deficiency during 3-9 months per year indicating poor production and availability of food in Chepang community. The food deficit months in the community was reported to be from Falgun to Shrawan, the most chronic deficit was revealed to be Chaitra and Baisakh. Only 1.9% of sampled HHs had received food aid during last six months of the survey period. Access to food is ensured when households and all individuals within them have adequate resources. The ability to access food rests on two pillars: economic and physical access. Access to food essentially represents the entitlement to food through various measures. The physical access of food is constrained by the lack of availability of food in absence of adequate production and stocks from the markets and from other sources. Economic access to food is also determined by food prices and household's purchasing power including social support. There was also lack of transfers or support from the government, NGOs and community. Food banks were also lacking. Chepang settlements are often geographically isolated owing to difficult topography indicating lack of access to food. Geographical isolation has also resulted in low farm gate prices and low income for households. Chepangs are unable to afford the expensive imported food materials which have also affected their access to food.

Food utilization addresses not only how much food the people eat but also what and how they eat. Good health is a prerequisite for the human body to absorb nutrients effectively. Access to clean water is crucial to preparation of clean, healthy food and maintaining a healthy body. The nutritional status of people was revealed to be severe. The highest incidence of low BMI (<18.5 kg/m²) among a significant numbers of women were found. Women are generally vulnerable to under nutrition during pregnancy and lactation where the food and nutrient requirements are more during that period. Malnutrition status among children is also high. 18.3 percent of the sampled children of 0-24 months age cohort was found wasted. People cannot be considered food secure until they feel so and they do not feel food secure until there is stability of availability, accessibility and proper utilization condition. Food insecurity is a serious problem among Chepang households when there are unfavorable climatic conditions like drought. Food production

fluctuates depending upon the weather situation, and it has become a cause for concern. Lately increased incidence of drought is leading to severe food insecurity. Chepangs were found facing food problem, mainly because of the drought. The political instability, regular strikes and bandhas had exacerbated food insecurity in villages as it adversely impacted on both the production and distribution of food. 35.25% of sampled HHs belonged to unskilled wage labor based livelihood or income group followed by agriculture (25.71%), livestock (19.05%), remittances (6.67%), salaried and skilled work (4.76%), petty trade and commerce (4.76%), natural resources and handicrafts (2.86%) and government pension (0.95%) (Table 1).

Table 1: Distribution of Livelihood Classes by Districts

Livelihood Groups	Total	
	No of HHs	Percent
Agriculture	27	25.71
Unskilled Wage Labor	37	35.24
Remittances	7	6.67
Salaried and Skilled Work	5	4.76
Livestock	20	19.05
Petty Trade and Commerce	5	4.76
Natural Resources and Handicrafts.	3	2.86
Government Pension	1	0.95
Total	105	100.00

(Source: Field Survey, 2019)

Majority of the HHs were dependent on unskilled labor. Due to low level of educational profile, the Chepang people cannot involve in skills requiring jobs and unskilled labor does not require workers to have special training or skills. Hence, they might have engaged in unskilled labor as a major means of livelihoods. The jobs that require unskilled labor are continually shrinking due to technological and societal advances now. Today the job market demands increasing skill levels. The erosion of unskilled labor opportunities has its implication in food insecurity situation. In general those who work as daily wage laborers are highly food insecure as availability of wage work is not always secured. Chepang households belonging to aforesaid 8 different livelihood groups are low income groups. The buying power which is the per capita income is the main determining factor of how much food can be bought by the households. Low incomes and high-level of poverty among the households indicates the poor access to food leading to inadequate nutrition.

Likewise, the adequacy of food can be measured on the basis of total food supply relative to total food requirements. The trends of per capita food availability, per capita food production, self-sufficiency ratio and per capita food consumption provide good indicators of food adequacy and stability. Generally, a greater share of expenditure going towards food indicates limited access to food because food tends to be cheaper than other goods, such as health care, education or investments in productive assets. Analysis of average monthly consumption trends provides enhanced understanding of seasonal vulnerability to food insecurity. With respect to food expenditures, on average, 75 percent of the households' monthly expenditure covers food, the bulk of the outlays go towards cereals (51.7 percent)—in particular rice. Meat accounts for 22 percent, followed by oil/ghee (2.91 percent). Expenditures on pulses, vegetables, fruits, milk and eggs are quite low—indicating that they are available through livestock holdings and own production. The emphasis on cereal purchases also indicates that households do not produce sufficient quantities of such crops.

Household food consumption pattern and changes in diet share in daily consumption are the proxy indicators in assessing the access to food at the household level. As revealed, 20.97% of the HHs were having very poor food consumption patterns. 32.41 % of the total households were found to have poor food consumption patterns. 29.61% of households had fairly good food consumption patterns. Households with

good food consumption were found among a total 13.40 percent of the total households. A small group of households (3.61 percent) presented high dietary diversity characterized by frequent consumption of meat, which was eaten often along with milk/curd and eggs. The study found that more than 53 percent of households consume a homogeneous and nutritionally-poor diet (poor and very poor)—one key element associated with their food insecurity.

Shocks and Unexpected Incidents

Shocks are events that have negative consequences for individuals, households, or communities. Shocks disrupt production potential or ability to acquire income and threaten the food access of affected households. 86% of the households reported experiencing the drought related food insecurity. More than 53% of the sample households reported experiencing floods as a main shock after drought. 44.5% of the sample households experienced food unavailability as a shock. Likewise 21% of households reported landslide and soil erosion. 19.5 percent of the sample households reported that they faced higher cost of agricultural inputs. 19.5 percent of the HHs were found affecting from the higher infestation of insect pest and diseases. 46 percent of the sampled households reported the lack of employment. Consumption smoothing in the face of income shock that a household can maintain the normal level of food consumption. 35 percent of the households reported that the reduced incomes. 31 percent of the households reported loss of employment. 23.5% of the sample households reported illness of the households' members. 7.5% of the households reported serious illness or accident. 4.5% of the sampled households reported death of working members of the households in the study area. Overall, 82% of the households that experienced shocks in last year reported the effects as the loss of income followed by loss of income + assets (13%) and assets only 5 percent. The shock itself seems to have only a short-term negative effect as almost 70 % of households reporting this event had completely or partially recovered the income lost during this period.

Coping Mechanism/Livelihood Strategies

Chronically poor households and those vulnerable to shocks have to rely on coping mechanism and social programs to smooth their consumption to survive. Wage laboring, collection of forest products, sales of livestock animals, borrowing money, seasonal migration and changing consumption patterns are the most common form of the coping strategies adopted by the Chepang community irrespective of the shocks.

CONCLUSIONS

There are many factors that contribute to household food insecurity among Chepang community in the study area. In large part these factors are structural in nature. The overall conclusion of this study is that household vulnerability to food insecurity among Chepang community is contingent on two inter-related issues: food utilization and food access. Food utilization, the ability of households, and their members, to properly absorb food in order to benefit from nutrient and energy content. This, in turn, is primarily a function of the level of education among household members, especially the head of household, knowledge of care practices, time constraints of women, and health and living conditions. Food access is the ability of households, and their members, to be able to produce or purchase a sufficient amount and diversity of food items as well as access of other goods and services that contribute towards overall wellbeing. This outcome is dependent upon the types of livelihood strategies being pursued by households and their effectiveness, as well as the ability of such households to recover from periodic shocks. Moreover, food access is also affected by chronic poverty that is pervasive throughout Chepang households in the study area. Current study focuses only on examining the dynamics of vulnerability and food insecurity among Chepang community in two districts of Nepal alone. Further, larger scale studies may be needed by taking larger samples in order to highlight many other dimensions of food security of the Chepang community.

ACKNOWLEDGEMENTS

I thank God the Almighty for providing me with the courage, strength, guidance and patience throughout the study period, for I understand without him we could not be able to accomplish this study. I am very much

thankful to Mr. Padam Budha, who accompanied and helped me in field data collection. I owe a debt of gratitude to the respondents and key informants who despite of busy work schedules provided me their time and information for this study. I would like to thank Mr. Bhim Kumar Shrestha for providing statistical advice and analysis especially for calculating the BMI of sample women and malnutrition (wasting, underweight and stunting) status of children below 5 years by using SPSS software.

REFERENCES

- ADB. (2002). Annual report. Manila: Asian Development Bank.
- Beine, D., Caughley, R., & Shrestha, D. (2012). Chepang then and now: Life and change among the Chepang of Nepal. Blurb Books.
- Caughley, R. C., Dahal, B. M., & Bandhu, C. M. (1971). Notes on Chepang culture. *Journal of Tribhuvan University*, 6(1), 85.
- Christiaensen, L., & Boisvert, R. (2000). On measuring household food vulnerability: Case evidence from Northern Malt. Working Paper. Ithaca, NY: Cornell University, Department of Agricultural Resource and Managerial Economics.
- Dercon, S. (1999). Vulnerability, seasonality and poverty in Ethiopia. Centre for the study of African economies. Oxford: Oxford University Press.
- Ellis, F. (2000). Rural livelihood and diversity in developing countries. Oxford: Oxford University Press.
- FAO. (2003). Trade reforms and food security: Conceptualizing the linkages. Rome: Food and Agriculture Organization.
- Gurung, G. (1995). Report from a Chepang village: Society culture and environment. Kathmandu, Nepal.
- Rai, N. K. (1985). Peoples of the stones, the Chepangs of the Central Nepal. Center for Nepal and Asian Studies (CNAS). Kathmandu: Tribhuvan University.
- Rudie, I. (1995). The significance of eating: Cooperation, support and reputation in Kelantan Malay households. In W. J. (ed.). *Male and female in developing Southeast Asia*. Oxford: Berge Publishers.
- Sen, A. (1981). *Poverty and femine: An essay on entitlement and deprivation*. New York: Oxford University Press.
- WFS. (1996). Declaration on world food security plan of action. Rome, Italy: World Food Summit, FAO.