

CHAPTER ONE

INTRODUCTION

Background of the Study

Hunger is the most commonly used term to describe the social condition of people that frequently experience, or live with the threat of experiencing; the physical sensation of desiring food. In its common usage, hunger describes the subjective feeling of discomfort that follows a period without eating; however even temporary periods of hunger can be debilitating to longer human growth and development term. “Acute hunger is when lack of food is short term and is often caused by shocks, whereas, chronic hunger is a constant or recurrent lack of food” (Fanzo and Pronyk, 2010: 68).

Among various goals and targets of MDGs, hunger eradication certainly occupies a special place, because hunger more than other aspects of poverty directly erode human dignity and undermines the foundation of human society. At least on sixth of humanity is still threatened by vulnerability to hunger. Insufficiency of food dramatically affects millions of people both in rural areas and in urban centres of poor countries, with unacceptable human, economic, social and political consequences (Bonfligliloli, 2007).

Hunger eradication is key to development. While people are hungry, all other development activities are thwarted. The hungry can concentrate little other than their next meal. Hungry mothers give birth to hungry

children, who, if they live long enough, grow into hungry adults (WFP, 2010).

Since the world is enjoying the achievements of Twenty-First century, one billion people throughout the world are still suffering from fulfilling their most urgent appetite--hunger. The figure is more than the population of USA, Canada and the entire European Union, and, of which ninety percent live in developing countries (FAO, 2009). The estimate of the number of people who will suffer chronic hunger in the year 2011 is 925 million, according to the FAO – down from 1.023 billion in 2009. The decline was primarily attributable to better economic prospects in 2010 and the fall in food prices since mid-2008 (WFP, 2011).

With the world's population still increasing, a declining proportion of people who are hungry can mask an increase in the number. In fact, developing countries as a group have seen an overall setback in terms of the number of hungry people (from 827 million in 1990–92 to 906 million in 2010). As of 2005–07 (the most recent period for which complete data are available), the Congo, Ghana, Mali and Nigeria had already achieved MDG 1 in sub-Saharan Africa, and Ethiopia and others were close to doing so.

In Asia, Armenia, Myanmar and Vietnam had achieved the target reduction and others were coming close, including China. In Latin America and the Caribbean, Guyana, Jamaica and Nicaragua had succeeded in reducing the prevalence of hunger by half and Brazil, among others, was approaching this objective. The fact that nearly a billion people remain hungry even after the recent food and financial crises have largely passed indicates a deeper structural problem that

gravely threatens the ability to achieve internationally agreed goals on hunger reduction (FAO, 2010).

According to an estimate (WFP/NeKSAP, 2011) fifteen percent of the population in Nepal is food-insecure, with the highest prevalence in the hills and mountains of the mid-western and far-western regions, where 900,000 people are affected, despite a cereal surplus in 2010/11. “In many areas annual production is sufficient for basic food needs for three to six months” (ibid, 2011).

Accordingly, “9.6 percent increase in the consumer price index over the past two years has reduced purchasing power; inflation is exacerbated because there are few roads in rural areas” (NRB, 2010). In some hill and mountain districts the price of coarse rice has been up to 185 percent higher than in Nepal’s main agricultural production belt;9 markets in these areas are often at least a day’s walk from people’s homes” (ibid, 2010).

Agriculture is Nepal’s dominant but least productive sector: “two-thirds of the work force is engaged in agriculture but it generates only a quarter of GDP” (ADB, 2011). In the past decade, the budget allocation to agriculture has been 3 percent or less, and donor support has declined. “Most remittances from migrants are not used for productive investment” (ibid, 2011). Low investment in agriculture has limited the adoption of technology and inputs; with limited arable land per capita, this has serious consequences for food production.

Low agricultural investment leads to high dependence on weather: “favourable weather resulted in a cereal surplus in 2010/11 while

droughts and floods contributed to cereal deficits in four of the past six years” (WFP, NeKSAP, 2011). Expected increases in the frequency, intensity and duration of extreme weather conditions could diminish yields in vulnerable regions, and increase food price volatility, health and nutrition risks, and water scarcity. The National Adaptation Programme of Action identifies food security as one of the sectors most vulnerable to climate change.

The Nepal Food Corporation (NFC) of the Ministry of Commerce and Supplies is responsible for stabilizing markets, managing a food security reserve and selling subsidized rice to beneficiaries. “In 2009 and 2010, it made available 16,000 mt of rice; the national cereal deficit was 330,000 mt. Government cash-based social safety nets reach less than 12 percent of the population” (MoAC, 2009/10).

Malnutrition prevalence continues to be high: “41 percent of children under 5 are stunted, 29 percent are underweight, and 11 percent are wasted; the prevalence of wasting has remained unchanged since 1996” (MohP, 2011). Chronic malnutrition—stunting—in the hills and mountains of the mid-western and far-western regions is extreme, with prevalence between 50 and 70 percent. Anemia affects 46 percent of children aged 6-59 months and 35 percent of women of reproductive age” (ibid, 2011), with very little change over the past five years.

“The Karnali region, which is located in the mountains of the Mid-Western Development Region, suffered hunger deaths in 1997 when about 1400 people died due to famine. Food crises are still reported from time to time in this region” (Upreti *et al.*, 2010).

One of the targets of the first Millennium Development Goals (MDG) is to reduce the proportion of people who suffer from hunger by half between 1990 and 2015, with hunger measured as the proportion of the population who are undernourished and the prevalence of children under five who are underweight.

Hunger is mostly associated with the level of poverty of the family, community or the country concerned. Therefore the United Nations Millennium Declarations (UNMD, 2000) identifies hunger and poverty as inseparable problems which reflected in the UNMD documents as both claim first goal of the MDGs, followed by other seven.

The first goal entitled: “Eradicating Extreme Poverty and Hunger by 2015”, has been subdivided into three quantifiable targets:

Target 1a: Reduce by half the proportion of people living on less than a dollar a day.

Proportion of population below \$1 (PPP) per day

Poverty gap ratio

Share of poorest quintile in national consumption

Target 1b: Achieve full and productive employment and decent work for all, including women and young people.

Growth rate of GDP per person employed

Employment-to-population ratio

Proportion of employed people living below \$1 (PPP) per day

Proportion of own-account and contributing family workers in total employment.

Target 1c: Reduce by half the proportion of people who suffer from hunger.

Prevalence of underweight children under-five years of age

Proportion of population below minimum level of dietary energy consumption

To measure the situation of hunger, three indicators are formulated. They are:

-) prevalence of Underweight children aged 6-59 months proportion of population below minimum dietary energy consumption;
-) Proportion of stunted children aged 6-59 months children.

Realization of hunger eradication as a multidimensional concept did not come abruptly; it rather emerged as a long historical process from which it evolved into current shape. Incorporation of hunger eradication in the MDGs is also an outcome of long international experience eradicating global hunger. From 1970s to the early 1990s the policy related to hunger eradication was directed to the supply side only. The policymakers believed that the problem of hunger is aggravated by low production vis-à-vis rising population (see Box 1.1). It was only after 1990s, the policymakers started taking demand side into consideration. Then the priority shifted toward enriching entitlements through poverty reduction. Following the World Food Summit in 1996, Food Security reasserted itself as a global policy concern along with the first MDG, “to Halve the between 1995 and 2015, the proportion of people who suffer from hunger”.

The MDG on hunger requires that the proportion of people suffering from hunger be halved between 1990 and 2015. Behind this apparently simple statement lies much complexity: the food intake required to remove hunger is generally recognized to differ between rural and urban areas;

the problem is not only one of supply of food (and the composition of supply), but of the reliability of supply, and of access: despite the fact that food is produced in rural areas, food security in many countries is higher in urban areas where power to access is higher. There are also serious questions of food utilization, whether micronutrient intake is sufficient in quantity and balance to allow adequate absorption of available micronutrients (ODS, 2003).

Box 1.1 Development Perspective on Food Security

-) 1970s: Focus on Food Supply (as a logical response to the African famine of the early 1970s).
-) 1980s: Focus on access to food. Recognition that food insecurity is mainly due to inadequate food production or availability at the national and regional level.
-) Early 1990s: Structural adjustment and market liberalization betrayed to generate economic growth and reduce future vulnerabilities to food crises.
-) 1990s: Increasing emphasis on poverty reduction rather than food insecurity in international development discourse, while the safety nets approach is gradually replaced by a more comprehensive social protection approach.
-) 2000: Following the World Food Summit in 1996, Food Security reasserted itself as a global policy concern (linked to social, political, economic and institutional factors) along with the first MDG, to “ Halve, between 1995 and 2015, the proportion of people who suffer from hunger”.

Source: UNCDF, 2007

Food security is conventionally viewed in terms of three components, food availability, and food access and food utilization.

Food availability is the sum of domestic production, imports (both commercial and food aid) and changes in national stock.

Food access is a measure of people’s entitlement to food, which is the amount they can produce (net of feed, seed and losses), purchase or otherwise receive (e.g. through public food distribution systems).

Food utilization relates to the capacity of an individual to absorb and utilize the nutrients in the food s/he consumes, and is determined by practices, beliefs, eating habits, hygiene, sanitation and health.

The World Bank advanced that food security is “access by all people at all times to enough food for an active and healthy life” (WB, 1986, quoted by Tiwari, 2006). “Based on this definition, food security has basically three dimensions: availability, access and utilization. Food availability generally refers to production, and physical availability of food; and utilization refers to proper use of food in households. Thus, food availability is community level concern, its access is household level, and utilization is an individual level concern” (Tiwari, 2006: 48).

Nepal, with a population of 26,494,504 27 (CBS, 2012), is a food-deficit country struggling through a complicated peace process after the end of an 11-year civil war. “About three quarters of the population lives in rural areas where the majority of farms are family smallholdings, often subdivided in response to the strong population growth of recent decades. The average size is less than one hectare and more than 60% of the farms are entirely dependent on the timing of rainfall for irrigation” (WFP, 2010).

The Maoist conflict had its roots in impoverished rural areas which, as a result, became cut off from government or donor development programmes. Subsequent political stagnation has impeded much-needed investment. For example, Nepal’s inadequate road system is recognized as a significant constraint to development.

Sustained high food prices have put Nepal's poor, nearly 7 million people who spend almost 80 percent of their income on food, on the edge of hunger. Many of these same people were highly affected by the conflict and a series of natural disasters leaving them with few coping mechanisms to deal with high food prices (ibid, 2010).

The areas consistently causing the greatest concern are those in the mid and far-west hill and mountain regions. Inaccessible and prone to winter drought, these regions display hunger indicators on a par with the most troubled areas of Africa. Much of the winter crop is vulnerable to drought whilst the much larger summer production depends on a favourable monsoon. Flooding is a regular hazard (ibid, 2010).

Statement of the Problem

The problem of food insecurity is not a new phenomenon in Nepal. The country has become food-deficient since the 1990s. Extreme poverty and hunger are particularly significant issues for Nepal given that the country has long suffered vulnerabilities in all three aspects of food security - availability, access and utilization.

Various factors come into play in determining the situation of hunger in Nepal. One must identify its nature before attempting to resolve the problem. Experiences of various countries across Sub-Saharan Africa and Asia suggest that both supply and demand side factors have something to do with the causes of food crisis. In the demand side, it is the income level of the people which is hindering them to purchase adequate food to sustain a healthy and productive life. While in the supply side, the distributional obstacles causing inadequate food supply to those who can afford. Therefore the present study attempts to explore the root causes of

the problem, identifying whether demand, supply or both side constraints deepening the problem of hunger in Nepal.

Within the broad framework of demand and supply side constraints, various factors ranging from political, cultural to social and economic all elements have to do with the causes of hunger in Nepal. Hence, the present study will make a modest attempt towards unfolding the root causes of hunger given the socioeconomic setting of the country.

Nepal has been a quick signatory to the commitments at international forums, but when it comes to implementation, inherent sluggishness is revised. The situation of hunger eradication as well is no more convincing one. Uncertainty still persists over halving the number of hungry people by 2015, provided that the country already consumed its more than two-thirds of globally accepted timeframe with disappointing results.

This research will seek to critically analyze the country's effort in achieving MDG of Hunger eradication.

Objective and Research Question of the Study

The general objective of the present study is to analyze Nepal's effort towards eradicating hunger and malnutrition in the light of achieving MDGs by 2015. The specific objectives raise following research questions:

1. What are the major dimensions of hunger in Nepal?
2. What are the major constraints of hunger eradication in Nepal?
3. What are the efforts made by Nepal in achieving MDG of hunger eradication?

Significance of the Study

MDGs are the globally accepted time bound and quantified targets for addressing extreme poverty in its many dimensions. Scholars, leaders and people in general are skeptical about whether Nepal would be able to attain the MDGs by 2015. Having realized the importance of MDGs in general and hunger eradication in particular, the present study will attempt to critically analyze the efforts made in the path of achieving MDG of Hunger Eradication.

Many of the studies in the field of hunger account for only the 'availability of food' in an aggregate level as a barometer to analyze the situation of hunger. But the present study will be a modest attempt toward analyzing the situation using all three dimensions of food security viz. availability, access and utilization of food.

Limitations of the Study

Every research work has its own limitations, therefore the proposed study also have some limitations.

-) This is the Master' Degree dissertation therefore the limitations of resources and time are obvious.
-) The whole study is based on secondary data.
-) In the case of unavailability of data at the exact point of time, the analysis has been based on the data of closest point.

CHAPTER TWO

REVIEW OF LITERATURE

Most of the literature in the past related the problem of hunger only with the availability aspect. It was only after the writings of Amartya Sen, entitlement approach came into limelight. The approach highlighted that it is not unavailability of food *per se* solely responsible for the deepening of food insecurity throughout the world. It is the purchasing power of the people coupled with distributional flaws that aggravating the same. World Bank, later on, put forward three dimensional approaches to hunger: availability, access and utilization of food. This chapter therefore intends to analyze the literature according to three-dimensional approach, thematically accompanied by short review of Progress Reports and liberalization policy and its impact on agriculture and overall food availability in the country.

A good deal of theoretical development in analyzing the problem of hunger could be noticed in the literature reviewed. The Malthusian ‘aggregate food availability’ approach was challenged and almost established by Amartya Sen as he introduced ‘entitlement approach’ in identifying and analyzing the same. The approach has been successfully exploited by various Nepali academics as well. Later on, World Bank’s three-dimensional requirement to food security i.e. availability, access and utilization grabbed the fame.

Availability of Food

Most of the unpublished literatures have analyzed the problem in terms of availability of food in comparison with growing population. Since, theoretical development in the field of food security was only in its

infancy stage, most of these literatures have focused on distribution of food grain in an aggregate level.

Analyzing distribution, production and consumption of food grain in Nepal, Koirala (1979), however, recognizes improved seeds, facility of irrigation, fertilizers and mechanized farming are crucial in raising productivity and hence creating food security in the country. He, however, ends up recommending public distribution system through cooperative stock-house with fair price are urgently needed to make sure food grain is easily accessed by the vulnerable groups or community.

Projecting the demand for selected food grains in Nepal, Bhattarai (1981) expects the demand for wheat and maize to rise but paddy to decline. Bhattarai (1981), Basnet (1982) and Rajkarnikar (1979), in their Master's Degree research, are skeptical about the availability of food in the future given ever increasing population of the country. Their estimate show the shortages of even wheat and maize –on which government might feel somewhat relieved—if government's inherent sluggishness in mechanizing the agriculture sector is further continued. Rajkarnikar (1979) is, however, optimistic about the fact that the situation of those vulnerable districts could be improved to 42 percent if concerted efforts are made.

They alert policymakers over possible famine in the future, if present condition lasts for a longer time. Basnet (1982), however, attributes heavy influx of Indian citizens to Nepal as a result of open border being equally responsible for intensifying the problem of food crisis. Similarly, existence of broker and middlemen in expropriating the benefits is

another crucial factor causing low performance food agriculture sector hence increased food insecurity.

The same problem has been perceived by Khadka (1985) as he worries, “[t]he increase in population pressure is quite clear since there’s in addition to growth rate, an increasing complicated border and free mobility of the population created an opportunity to exploit the untapped markets for skilled labour in such activities as construction, vegetable vending, petty services. This activity is increasing with urban growth and it has created the problem of concentrated and irregular supply of food grains because supply of food grains because supply goes where there’s scope of price negotiation. These blocks the supply of grain to other areas of the country aggravates price hikes as people store grain even at soaring prices for fear of future shortages.”

Using linear programming method for estimating the production of food grain in various districts Rajkarnikar (1979) depicts similar picture as his findings show 75 percent of his selected districts fall short to food self-sufficiency level.

The Basic Need aspect of the food problem has been identified by Dhakal (1989) as he realizes sufficient and nutritious food as essential for healthy and productive life. Given those requirements, the study assesses the feasibility of Basic Need Programme with disappointing findings. He attributes deficiency of funds, unequal distribution of land contributing low level of productivity and political favour in every segment of delivery mechanism ranging from centre to local level, attributed to intensify the problem. When any district or region plunges into the severe food insecurity, the donor agency or the government hurries up in

providing adequate food to the needy one. The urgency of food is not unjustifiable from any angle in the welfare state. But in doing so, “the government should not discourage the traditional flow of food grain and disturb the local food consumption pattern. The type of food to be distributed must concur with the traditional consumption pattern.” (Lee, 1973). Suggesting a longer perspective to avoid dependency, his recommendations to National Food Corporation include:

-) the government food distribution programmes should not disturb the movement of food grain by local dealers;
-) the quantity must be of manageable size for the government transportation assistance; and
-) except for an emergency situation, the food should be sold at reasonable market price but it should not glut the local market.

Over the decades, Nepal has succeeded in increasing the production of cereal crops. But this increase in the production of crops has been largely due to extension of arable land rather than productivity. P. S. George (1994), in analyzing the situation of food security in South Asia, explores, “[t]he extension phase of agricultural development has been ended in South Asia, with the possible exception of Nepal.”

Access to Food

Access to food refers to people’s capability to spend their resources in disposal to avoid hunger for now and never. This approach was popularized by famous economist Amartya Sen as an entitlement approach. The approach has vehemently criticized the one-way approach to hunger eradication i.e. only ensuring per-capita availability of food at national level. The entitlement approach rather focuses on stable and prolonged sources of income.

In this connection, Sen's argument in conceptualizing hunger is mention-worthy as he states, "[a] person has to starve if his entitlement set does not include any commodity bundle with enough food." He further argues, "[a] person is reduced to starvation if some change either to starvation if some change either in his endowment (e.g. alienation of land, or loss of labour due to ill health etc.) or in his exchange entitlement mapping (e.g. fall in wages, rise in food prices, loss of employment, drop in the price of the goods he produces and sells), makes it no longer possible for him to acquire any commodity bundle with enough food." (Dreaze *et al*, 2006).

The availability of food itself is not the solution to the problem food insecurity as WFP (2006) finds out there are various factors, "ranging from food consumption and livelihood strategies to access to key social services such as health and education." A prominent economist Amartya Sen as well has put forward same argument as he argues, "[m]oving food into famine area will not in itself do much to cure starvation, since what needs to be created is food entitlement and not just food availability" (Sen, 1982).

In usual case, shortages of goods and services exist when supply fall short compared to its demand. But Sen (1982) explains a different story. "The failure of the market mechanism to help famine victims has puzzled non-interventionist public servants. During the Orissa Famine of 1855-6, Commissioner Ravenshaw expressed astonishment at the lack of food movement into the famine area despite what he understood to be 'the ordinary rules of political economy says no such thing, since there is no incentive for the traders to move food to main victims as they lack purchasing power.'"

The widespread failure of policies resorting to Malthusian perspective in estimating the situation of hunger has been vehemently criticized by modern economics. “The modern approach of addressing the situation has been more than ‘availability of food’ in an aggregate level—exchange of entitlement. The entitlement approach is very close to ‘access’ dimension of food security” (Adhikari, Bohle; 1999).

Making an effort to unfold the myths in Hunger, Lappé and (1979) assert, “[f]or the last several years we have grappled with the question “why hunger?” Analyses that call for increasing or improving present development assistance, or, for reducing our consumption; so that the hungry might eat left us with gnawing doubts. We finally had to conclude that:

-) Every country in the world has the resources necessary for its people to free themselves from hunger.
-) Food security cannot be measured in grain reserves or production figures.
-) A nation’s per capita food production can increase and yet more people can be hungrier.
-) Official foreign development assistance can contribute to the increased impoverishment of the very groups it claims to be helping most.

Availability of food in a particular area does not necessarily end hunger. This is evident from the fact that most hungry people live in rural areas where food is produced. Similarly, food is available in market, but “people stay hungry because they lack entitlements and economic access. Indeed, there is disparity in food security among regions, communities, households and individual of a household” (Tiwari, 2006).

Adhikari (2008) explores an important aspect of food insecurity as he writes, “freedom from fear of going hungry is also one of the criteria of food security, and if there’s vulnerability, this fear will increase, leading to food insecurity.” He agrees with the entitlement approach pioneered by Amartya Sen hence realizes, “food security depends on the individuals and households having a reliable and sustainable source of livelihood.”

Nepal’s challenges in achieving the first MDG have been well realized by Sharma *et al.* (2006: 18) as he writes, “[r]eduction of poverty and hunger by half.....is one of the key goals among the MDGs. For Nepal it is a daunting task as the incidence of poverty and hunger stood high to begin with, and reduction rates have remained far behind the required rates over the last decade.”

Emphasizing the ‘access’ dimension of food security, Sharma *et al.* (ibid) further writes, “[e]nhancing entitlement among the poor, and nutritional awareness and knowledge along with improvement in health and sanitation conditions are must in the fight to hunger. Mere availability of food, but limited access and inefficient utilization will leave Nepali population in the state of hunger even if, in poverty measures, there may be achievements.”

Given the food habit and purchasing power of many Nepali people, WFP (2006) argues, “[s]tudies indicate that food insecure households will purchase cereals over other food items since they are cheaper and more filling. This means that not only are food expenditures high but they are also targeted towards items with high energy and low nutritional value.

Thus, an analysis of these outlays is a critical input in determining the types of households that are likely to be vulnerable to food security.”

Utilization of Food

Many of the studies carried out in macro level recognize a household as being one unit of the whole study area. But very rare efforts have been made to analyze the problem situated within the household. That is to say, intra-household distribution of hunger seeks the answer to the question, whether all the member of the households have *equally* filled their bellies? Intra-household distribution of food related resources has been one of the main indicators to ensure household food security.

The urgency of in-depth study of food-sharing within family is well-realized by Shrestha (2000), as she puts, “macro analysis of food security focuses on food production as it determines supply related to the need of the population. However, placed within the context of household resource allocation, dynamics, food security is associated with day-to-day household activities and decision to produce, purchase and use food to meet the needs of the household members. It also relates to such aspects as to ‘who-does-what’ to produce food, to earn cash for purchases of food, who goes to the market for purchasing food and prepare food within rural household and the respective contribution of women and men in these areas (study areas) and the subsequent benefit to them.” Shrestha realizes distribution of hunger has been unequally distributed to the female members of the household compared to their male counterpart which is deepening the problem of hunger in household level.

As female members carry out more household work and yet get low quantity and quality of food. This fact has been well-accounted by

Shrestha (2000) as, “although, women’s input or contribution to the household work is considerably high, they do not get to enjoy the same amount of benefit in return. Women get less priority in receiving the required amount of daily intake of food despite the fact that they are the main producers of food and also the initiators in making decisions about sharing and distribution of cooked food to the family members.” However, Shrestha (2000) worries as she argues, “most of the research conducted in Nepal have focused on the households as the unit of analysis, ignoring or overlooking the intra-household gender dimensions with implications for food security”.

Household food security is the most critical to ensure food security in a macro level. Various factors come into play in determining the level of vulnerability in the household level. That involve: “access to resources (land and water), ecological setting, road-accessibility, marketing opportunities, and common property resources” (Adhikari, Bohle; 1999). They, however, attribute access to land and water as, “[t]he main factor affecting risk exposure of households.” Similarly they recognize climatic condition of the area equally crucial, because it affects people’s “strategy to survive.”

On the aggregate demand side, population and income growth are two important factors contributing to the growth of food demand. According to speculative estimates of the World Bank (1993), Sri-Lanka would achieve a net reproduction rate of one by 2000, Bangladesh and India by 2015 and Pakistan and Nepal by 2030 (George, 1994).

Pinpointing the weaknesses in ‘per capita food availability’ Tiwari (2006) argues, “[o]n the surface of it, a country is said to as food secure when its

‘per capita food availability is adequate, but it does not mean that its every citizen is food secure. Achieving food security and attaining MDGs of reducing poverty and hunger requires food security at individual level.’

As consumption is heavily relied upon the level of income, the pattern of consumption is also depended upon the same. As the world experienced economic growth in 2004-2007, the dietary transition unfolded an interesting result. “A dietary transition from cereals towards more animal protein has also increased demand for feed crops; such as maize in emerging countries. The demand for maize mainly for feeding the meat providing animals diverted the supply from men to animals” (FAO, 2008).

Debates over hunger eradication and food security in general often ends up recommending developing countries to enhance their agricultural capacity creating sustained growth. However, *The Economist* (2011: 55-56) tells different story. “Agriculture growth reduced the proportion of underweight children, whereas non- agricultural growth does not. But when it comes to stunting, it is the other way round: GDP growth produces the benefit; agriculture does not. As a way to cut malnutrition, farming seems nothing special. This is so “because many people in poor countries buy not grow, their food—especially the higher value, more nutritious kinds, such as meat and vegetable. So, extra income counts. Agriculture helps, but not, it seems, by enough (ibid).

Progress Reports

Progress towards MDGs is reflected in the three progress reports published in 2002, 2005 and 2010 respectively. The first Progress Report was organized along with format developed by the UN Development Group Office (UNDGO) for Country Reports. The second and third Progress Reports were prepared by National Planning Commission (NPC) with the help of UN Country Team.

So far as the first Progress Report published in 2002 is concerned, “through the setting of baseline and numerical targets, it provides a unique opportunity to reflect on Nepal’s achievements over the last decade, to identify challenges and opportunities and to indicate in a concise form priority for development assistance. It also points out areas for improvement of the monitoring and evaluation system” (UNDP, 2002). Various trends are based on information at three points in time: 1990, 2000 and 2015 except goals related to gender equality and access to primary and secondary education. The country’s performance in reducing hunger and malnutrition, reflected in the first Progress Report, is somewhat mixed one. As the report reveals, “[a]lthough there are multiple and independent data sources, it can be seen that nutritional deficiency affect approximately half of all children. While nutritional deficiency among under-5 children appears to be slowly declining since 1990, under-nutrition still remains a severe problem” (ibid). However, “significant progress has also been reported in meeting some of these deficiencies through supplementary medical interventions. It is estimated that reductions in childhood mortality can reach 23 percent through periodic Vitamin ‘A’ supplementation” (ibid). Despite some improvements, the report depicts somewhat pessimistic picture in an effort to hunger eradication. “Despite some improvements, it appears

unlikely that overall food insecurity and child under-nutrition will be halved by 2015” (ibid).

In 2005, Nepal published Second Progress Report with support from UN Country Team. The Report uses the set of MDG indicators agreed on at the global level, while some indicators have been adapted to reflect the local context. Growing feminization of agriculture sector due to Maoist insurgency contributed to low production of food grain. “Because a key feature of food security is access to sufficient food by all people at all times, various health, nutrition, and consumption surveys examine access. It is possible that households not producing sufficient food can be consuming sufficient food through exchange systems, such as by the purchase/ exchange of food, or by borrowing food or money to purchase food” (NPC/UN, 2005). The Report claims that increasing access to food or resources can be attributed to growing labour migration. “ A study shows that on average, a household can provide itself with food from its own farming activities for only 6-7 months, and as a result many households resort to labour migration either to foreign countries or to urban areas of Nepal” (Adhikari/Bohle, 1999, Quoted by ibid).

Based on the rather older data (Nepal Micronutrient Status Survey 1998) the Report states that 90% of Nepalese children are suffering from one or another form of malnutrition. It also recognizes wide disparities across regions and ecological zones. Hilly regions are more vulnerable than Terai regions in all 3 manifestations of malnutrition viz. stunting, wasting and underweight. The Report attributes inadequate availability of calories and high burden of disease for general malnutrition (also referred to as protein-energy malnutrition). The problem is much serious in the case of pregnant and lactating women. Nutritional status of children below five

years is also not convincing one. The Report visualizes only modest improvement since 1975, when the first nationwide survey was conducted. “It is clear that the proportion of underweight children has reduced hardly to at all when baseline value for 1990 and status in 2001 are compared” (ibid). The Report finally infers that “given the modest reduction in child mortality over the last decades, it seems unlikely that Nepal will achieve the target of reducing by 50% the proportion of people who suffer from hunger by 2015” (ibid, 2005).

Nepal published its third Progress Report in 2010 which reviews the five years from the beginning of 2005. “This period was marked by political instability, changes in economic policies, the absence of local elected bodies, the energy crisis and price hikes, and the need for development budget heavily focused on post-conflict reconstruction and rehabilitation” (NPC/UN, 2010). Since, second Progress Report visualized somewhat pessimistic picture in the path of hunger eradication given the very sluggish improvements towards alleviating malnutrition. The findings of Third Progress Report, however, revealed some optimistic findings. “Of the three indicators used to measure hunger, two show that the MDG target is achievable with a little more effort to raise current trends. Data indicate that 22.5 percent of the population is undernourished (MoHP et al. 2007), against the target of 25 percent by the end of 2015. The slow declining trend in the proportion of underweight children, currently 38.6 percent suggests that the target will be difficult to achieve (MoHP et al. 2007). However, the data on proportion of stunted children indicate it will be difficult to achieve the target” (ibid, 2010).

Trade, Liberalization and Hunger

The changes in trade policy and degree of liberalism have twofold implications to the agriculture sector of the economy. Firstly, increased liberalism leaves protected agriculture sector exposed to the international market. Such an exposition demands cutting edge competitiveness both in price war and quality control. Lifted subsidy in inputs, abrupt exposition to international competition and lack of agricultural research leave farmer no option other than mere spectator of heavy influx of imported grain to the country and piling up unsold domestic production—leading unfavourable balance of trade and hence low incentives to domestic farmers. Secondly, the household can purchase the required food grain at a lower price resulting adequacy and diversity of food consumption. Therefore, there exists trade-off between low priced imported food grain and perpetuating dependency on import.

The dispute over the impact of trade liberalization on food security has been a matter of debate among economists from when economies of the world started integrating. Unlike other tradable goods and services, trade of food in developing countries need special care given the deepening problem of hunger in those countries. “Given the neo-liberal context of the late twentieth century, increasing output is often allocated to the export market rather than to domestic purchasers” (Young, 1997). Worried about the distributional deficiencies in many developing countries, he further puts, “in a world in which the level of production is more than adequate to eradicate hunger, increased production is not the critical linchpin to alleviating hunger.”

“As agriculture trade liberalization is forced by the three major factors viz. domestic pressure from the developed, influence of ideologies and

faster communications, it [has been] suggested that the trade policy should be judged primarily in the context of whether the policy is conducive for improving the economic and social stability in the country” (Singh, 2002). He suggests developing countries, mainly South Asian, to put staple food under the category of ‘non-tradable’.

Given the growing influence of Neo-liberalization, Egaitso (1996), however, is skeptical about its contribution in eradicating hunger. As he argues, “[f]reer trade of farm products may not automatically lead to the final solution of the world food problem by itself but, in contrary, hamper the efforts for ‘Food for All’—the supreme policy objective declared in the 1996 World Food Summit—especially in the long run.”

However, Egaitso is not wholly dissatisfied with the trade liberalization *per se* but he intends to state, “[t]his does not mean the rejection or denial of trade liberalization as a fundamental principle of world economic development. However, it should be noted that trade liberalization is not a policy objective by itself but one of the policy instruments for the improvement of world economic situation while “Food for All” is the prime objective for human society in the Twenty First century which should be placed above any other economic consideration. If there could be any contradiction between food security and trade liberalization, the latter must be modified from the viewpoint of the former.”

Unlike other consumable goods, food cannot be restricted on the ground of favorable terms of trade in any welfare state. Therefore regardless the country is rich or poor, they import food grain in a huge amount to feed their native fellows. In this context ‘food comes first’. However, heavy reliance on such import has some problematic implications as well. Since

the country's agriculture land cannot provide food grain to its people, the land remains neglected for long time causing gradually declining arability. The problem is aggravated when the exporting country itself experiences food shortages then the importing country is left with no option other than starving. "Therefore, division of food production among nations based on purely economic consideration may mean a risk of famine for regular food-buyers under very unfavorable situation" (ibid).

When it comes to Nepal, the impact of trade liberalization of food security has been somewhat mixed one. "This shows up in the improvements in several aggregate indicators like per capita extent of malnourishment. The overall impact however has been limited" (Pyakuryal/Thapa/Roy; 2005).

Considering the reasons for the limited impact on securing food security are twofold. "First, Nepal shares a long porous border with India. Thus restrictive trade policies have only a limited bite. Secondly, the regions in Nepal are segregated from each other. The remote areas in the hills and the mountainous have not been benefited from liberalization while the Terai reaped most of the benefits" (ibid, 2005).

CHAPTER THREE

RESEARCH METHODOLOGY

A systematic research study obviates proper methodology to achieve the predetermined objectives. Research methodology is a sequential procedure and methods to be adopted in a systematic study.

Research Design

The present research follows descriptive research design. The term descriptive research refers to the type of research question, design, and data analysis that will be applied to a given topic.

Since, descriptive research attempts to answer the questions: “what is” and “what was” going on. Therefore, the study attempts to answer the questions concerning government efforts in reducing poverty in the past—after the Millennium Declaration—and in the future—till the globally accepted timeframe i.e. in 2015 is reached.

Descriptive research does not fit neatly into the definition of either quantitative or qualitative research methodologies, but instead it can utilize elements of both, often within the same study. Therefore, significant amount of quantitative comparison has been carried out in the present study. Such comparison helps to examine country’s progress overtime. Within the same framework, the descriptive research design attempts to identify the major problems and constraints in the path of reducing hunger.

Conceptual Framework

The present study proposes to use World Bank’s framework for identifying and analyzing the situation of food insecurity in Nepal.

The World Bank defines food security as: “access by all people at all times to enough food for an active and healthy life”. Based on this definition, food security has basically three dimensions:

-) Availability
-) Access
-) Utilization

Food availability generally refers to the production and physical availability of food crops in a geographical area; access refers to economic access to food; and utilization refers to proper use of food in households. Thus, food availability is a community level concern, its access is a household level, and utilization is an individual level concern.

Analysis of Data

This study is based on the secondary data published by various national and international institutions. Simple statistical tools are used to express the findings more intuitive and conspicuous. The available data are presented, classified and analyzed in order to fulfill the objective of the study. For the purpose of easily understanding, collected data will be tabulated and presented into graph, where necessary. The present research is applied in nature; the findings of this piece of work may be useful for various policy decisions in solving the problem of food insecurity in Nepal.

Sources of Data

The present study primarily relies on the Nepal Living Standard Survey III (2010/11) published by Central Bureau of Statistics, Nepal and supplemented by following other sources:

1. Human Development Report, annually published by UNDP;
2. Various issues of MDGs Progress Reports;

3. Various publications of Central Bureau of Statistics;
4. Economic Survey, an annual report published by Government of Nepal;
5. Country Reports published by WFP and FAO;
6. Annual Reports published by Ministry of Agriculture Development;
7. Periodical Plans, published by National Planning Commission

CHAPTER FOUR

AVAILABILITY OF FOOD

Availability of food is the major dimension of food security. Sufficient food availability is the first order condition for the same. This chapter attempts to identify various sources of food and its present status in Nepal. The sources of food mainly involve domestic production, import and food aid. The chapter also attempts to analyze the production trends of major food crops and its availability vis-à-vis total requirement.

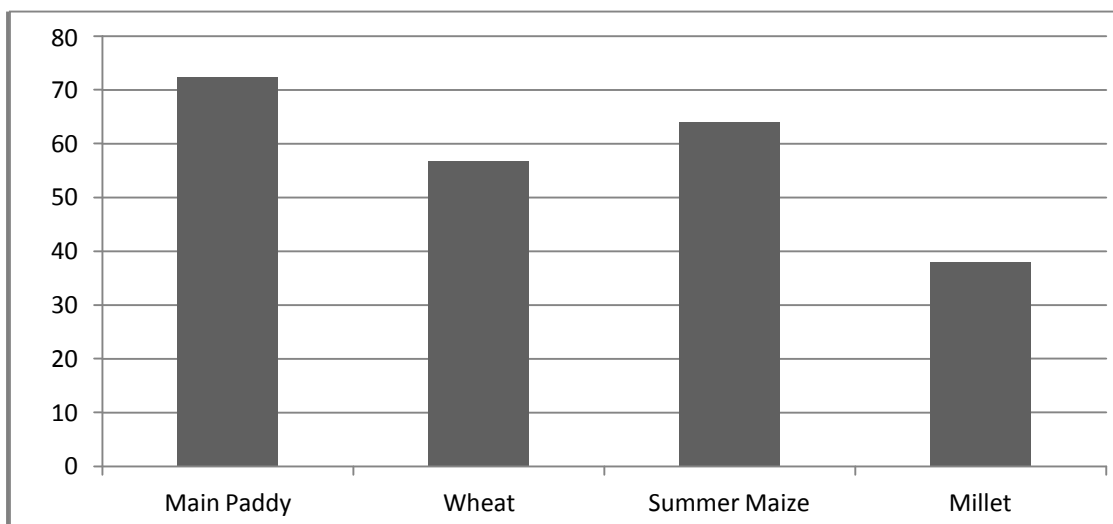
Availability of food refers to the possibility of feeding oneself (individual, household or other units) either directly or other natural resources, or through distribution, processing and marketing system that can move food from the site of production to where it is needed (Upreti *et al.*, 2010). Various factors have something to do in determining the availability of food in the country concerned. Sharma *et al.* (2006) has highlighted some of them. “The low agricultural production, inefficient distribution mechanism and lack of transport network has eroded the national food production in Nepal and reduced per-capita food availability which remains very uneven among geographical regions making some of the hill districts vulnerable to food insecurity (ibid). Tiwari (2006: 49), however, has identified “domestic production, import and food aid” as main determinant of the domestic food supply in Nepal.”

Domestic Production

Domestically Produced crops are the main source of available food in the country. Agricultural sector accounted for 35.1 percent of total GDP in the year 2011/12 (MoF, 2010) implying larger scope for agricultural activities in the future as well. “The food production [in Nepal] is cereal

led, 65 percent of total agricultural production is comprised of food crop production” (ibid; Quoted by Upreti *et al.*, 2010).

Figure 4.1 Percentage of agricultural households cultivating selected crops



Source: CBS, NLSS III, 2010/2011, 2011 October

Rice, wheat, maize, millet and barley are the main staple food of Nepal. However, threat of increment in these staple crops is not satisfactory. “Although food production and crop yield has marginally increased over the years it is barely keeping pace with the population growth around 2.3 percent and crop yield is one of the lowest in South Asia, and depends much on the pattern of monsoon” (Adhikari, 2010).The problem is aggravated by “[p]redominance of rain fed agriculture—only 35 percent of land is irrigated year round, and traditional farming practices have stagnated the growth in agricultural production eroding the surplus both at the national and regional levels” (ibid). Whatever increment could be seen is due to extensive rather than intensive farming. The yields of major cereal crops are very negligible. Deforestation has triggered the extension of arable land which resulted into increased production.

According to MoAD, over the period of 13 years, the area cultivating paddy reduced by almost 2 percent compared to FY 2011/12. While the yield of paddy over the same period grew by slightly more than 18 percentage. This implies the fact that the productivity of the main cereal crop is growing overtime. For the same time period the land cultivating maize expanded by 5.37 while its yield was 28 percent. The yield of wheat grew by 25 percent. Though, the land cultivating millet expanded by 6.5 percent, the yield of the crop is sluggish 3.97 percent. Lower yield of winter crop has some serious implications. Firstly, the people living in upper hills and the Himalayas are more vulnerable to food insecurity. Secondly, they are more dependent on charity-food. Finally, they are undermining their capabilities to grow food by themselves and further weakening sustainable solution to the problem. This implies the fact that lower productivity and higher incidence of food insecurity in upper hill regions.

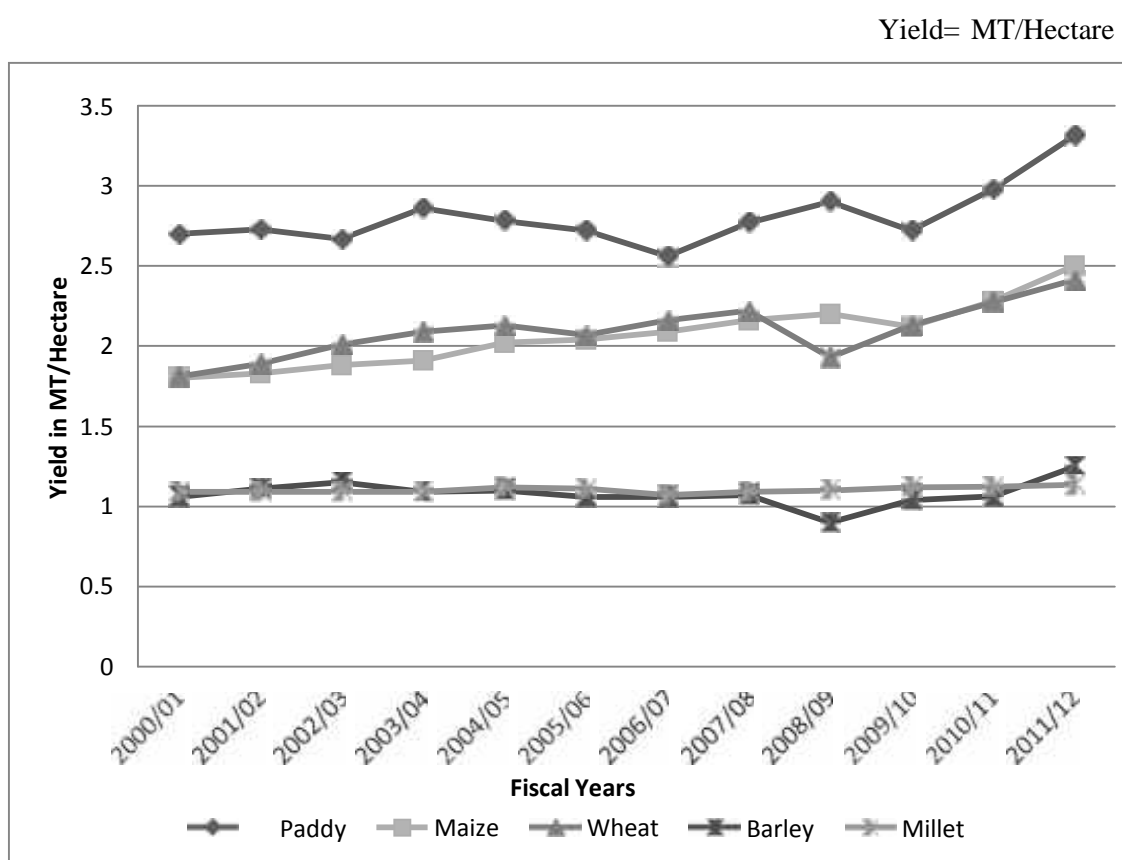
In the Figure 4.2, it is clearly depicted that throughout a decade the productivity of major cereal crops like paddy, maize, wheat etc. remained somewhat stagnant. The productivity of rice has faced several ups and downs but this has been now in increasing trend. Besides paddy, the productivities of other cereal crops are rather identical. The situation is prominent in the case of barley and millet—the productivity of both crops has been hardly above one Metric Ton per hectare. Meanwhile, the productivity of barley could hardly catch up with one metric ton per hectare in Fiscal Year 2011/12.

The figure has two important implications. Firstly, Paddy which is the principal cereal crop in many Terai districts where the level of irrigated land and its fertility is very high. The Terai region is therefore said to be

the buffer zone of Paddy in Nepal. Secondly, Barley and Millet which are principal crops in many hilly and mountainous districts have very low yield per hectare due to poor quality of soil hence these districts are more vulnerable to food insecurity. This clearly upholds the fact that Nepal has a tremendous task of enhancing its agricultural productivity in the face of growing population and inelastic supply of arable land.

Besides the problem of productivity, agricultural sector in Nepal faces other problems like poor infrastructure, natural calamities and ignorance of agriculture sector by masses of labour force resulted into lack of mechanized and surplus oriented farming. Country which is said to be agriculture-led economy has been heavy reliant of imported food—mainly from India—ironically.

Figure 4.2: The yield of major cereal crops



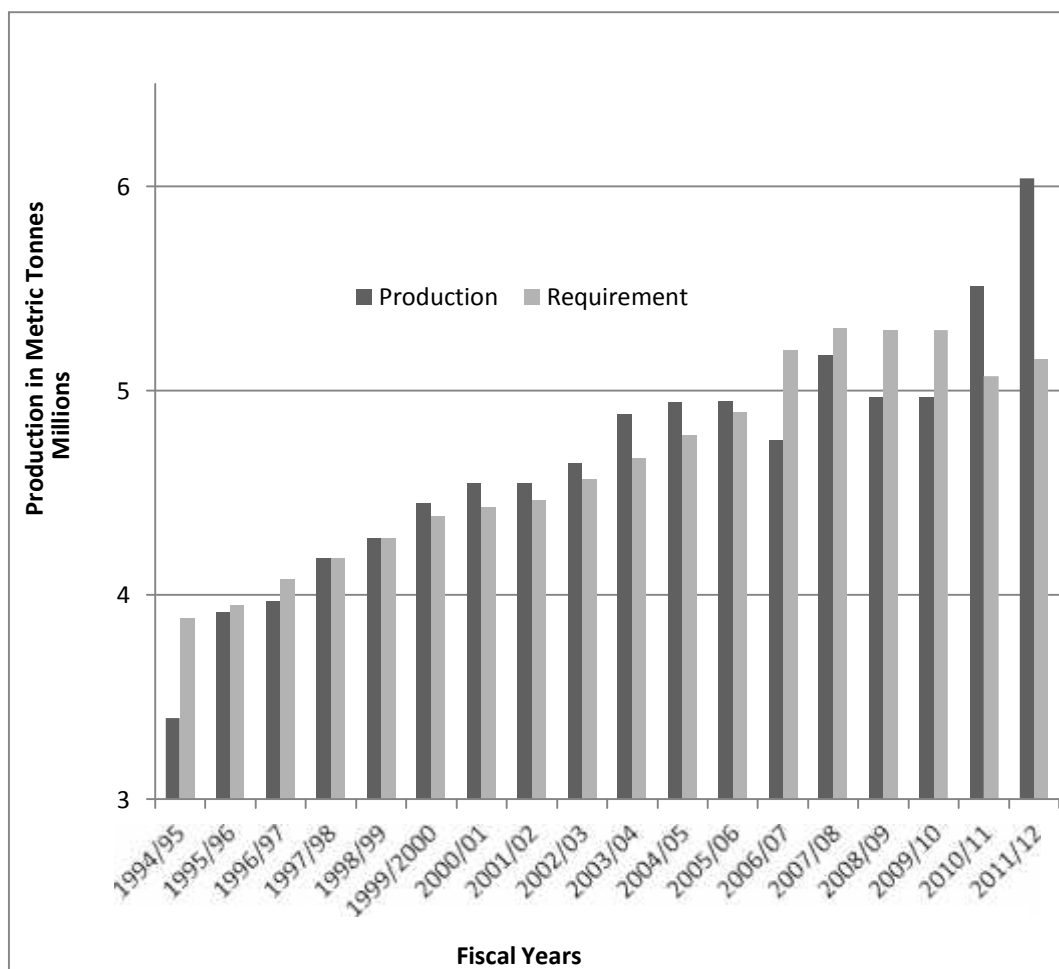
Source: MoAD 2012, Government of Nepal

“Nepal was considered a food secure country until the mid-1980s. This conclusion was drawn because food self-sufficiency was considered a criterion of food security by policymakers and planners in the past” (Upreti *et al.*, 2010). “Since the beginning of the 1990s, the proportion of the population experiencing food deficit has grown rapidly” (Ibid). The situation was prominent when 12.5 percent of food deficit was filed in the fiscal year 1994/95. Nepal underwent food shortages until the turn of New Millennium. After 2000 there has been surplus, though very small, of food though “urban areas and food insecure areas continue to be dependent on Indian markets” (Ibid). “[A]reas in Nepal (Kathmandu and Pokhara) depend heavily on Indian markets for all types of food grain, vegetables, fruits and other food products” (ibid).

The figure 4.3 depicts that production has been growing throughout so is the requirement implying population pressure in the country. The 12.5 percent of deficit in the fiscal year 1994/95 was continuity, though occasional, of the previous deficits caused mainly by drought resulting into rise in price, unfavourable climate and fluctuation in production itself. After a long interval from the fiscal year 1994/95, to 2006/07 negative food balance has been again experienced throughout four consecutive years indicate that more people are plunging into hunger. Though, there’s an estimation of WFP, indicating slight improvement in the fiscal year 2010/11, which is hardly catching up with the requirement. The most prominent deficit could be seen in the fiscal year 1994/95 when the production was 12 percent short of requirement. The production of food crops in Fiscal Year 2010/11 has just caught up the domestic requirement after four consecutive years of deficits. The only significant

surplus can be seen in the Fiscal Year 2011/12. The surplus is nearly 15 percent for the year.

Figure4.3: Domestic production vis-à-vis requirement



Source: MoAD, 2012, Government of Nepal.

Nepal Food Corporation, which is under the Ministry of Industries, Commerce and Supplies, has significant role in distributing staple food, mainly rice, to the masses of people suffering from hunger mainly in Mid and Far-West Development Region. Since, the activities of NFC are centered in district headquarters; hundreds of thousand people residing in the peripheries have hardly been benefitted.

When examined in per capita basis, the food grain deficits were most severe in the Far-Western Hills(142 kg/person), the Far-West Mountains (143 kg/person), the Mid-Western Mountains (158 kg/person), and the Western Mountains (165 kg/person) (FAO/WFP, 2007)

Import of Food

Until 1970s, agricultural exports had a large share in the total foreign exchange earnings. These began to decline and by the 1990s Nepal’s trade balance went negative” (Tiwari, 2000).

Table 4.4: Import of Food Grain *Vis-à-vis* Domestic Production in Metric Ton

Cereals Production	Imported	Domestic
Rice	10,285	2,185,936
Maize	141,992	1,282,438
Wheat	120,689	1,248,333
Barley	11,839	7,529

Source: MoAC, Annual Report, 2011

“A country which was a net exporter of food until the early 1980s now imports food. At present it is estimated by the WFP that Nepal can meet only about 80 percent of its food requirements. However, the government estimates that food production in Nepal can meet the basic requirements of food for its population” (Upreti *et. al.*2010).Although, the comparison of domestic production of rice compared to imported from other countries is negligible (see Table 4.4), “[i]n a study of urban food security, it is revealed that urban areas in Nepal (Kathmandu and Pokhara) depend

heavily on Indian markets for all types of food grains, vegetables, fruits and other food products” (ibid).

According to Trade and Export Promotion Centre, the import of cereal doubled compared to the same period of previous fiscal year. In the seven month period (Shrawan to Magh) of fiscal year 2010/11, Nepal imported the cereals worth of Rs. 2.6 billion compared to 1.27 billion during the same period of fiscal year 2009/10. The rising trend in the import of cereal clearly unfolds the fact that Nepal has been heavily relied upon the food grain from rest of the world, mainly from India. Though there’s a good deal of rise in domestic production, in general case, this had to substitute the import. But this is not happened in the previous year.

According to the Ministry of Agriculture and Co-operatives (MoAC), paddy production increased by 11 percent to 4.46 million tons--worth around Rs 89 billion--during the fiscal year 2010/11 compared to previous year. Paddy production was recorded 4.02 million tons during the fiscal year 2009/10 (See, *Republica National Daily*, Feb 26, 2011).

Similarly, production of other cereal crops like maize and millet hit a new record this year due to rise in productivity and production areas. Maize production increased by 11.45 percent to 2.67 million tons compared to the previous year (ibid). Production of millet also increased to 302,691 tons from last year’s 299,523 tons. But rise in production of major cereal crops did not reflect in the import statistics. This has supported the irony more one produces, more it depends upon others.

Food Aid

One of the primary objectives of food aid is poverty alleviation. This is true independent of the type of food aid. Advocates of food aid argue: it is an effective means of reducing hunger; when used for food for work programmes, it stimulates development; and by reducing the need for food imports it has prevented large cumulative deficits in poor countries. Critics of food aid argue it has increased the dependence of developing countries on food imports. The dumping of surplus production for free or nearly no cost to poorer nations means that the farmers from such countries either cannot produce at competitive prices, or lose the incentive to produce entirely. They also claim that food aid is inefficient—it often fails to reach the neediest and has high administrative costs.

Lowder (2004) is however is not so cynical about food aid but recommends caution and states, “improvements to social welfare may be achieved through distributing targeted rather than programme food aid”.

Nepal has been receiving food aid from both bilateral and multilateral donors. Japan has been providing assistance to the Nepal Government with a primary purpose to procure rice and distribute it to food-deficit areas. Both France and Germany have been furnishing food aid in the form of wheat. China has also entered into the fray of food aid. It is propping Nepal to tackle its food vulnerability by supplying food, sugar and salt in 10 mountainous districts abutting China. India has preferred food aid in the distribution of iodized salt to different regions of the country to check goitre. The US has provided aid through its Food for Peace Program (PL 480) whose purpose is to foster the food security of recipient countries, including Nepal. The multilateral donor which has

been providing food aid to Nepal is the WFP which has extended food assistance comprising of commodities such as wheat flour, edible oil, dried skim milk and wheat soya blend.

The major source of food aid is the WFP that distributes food under its food for work and food for education/training programmes in food deficit districts of Nepal (Tiwari, 2006). “In 2010 WFP [provided] support to 2.2 million people across Nepal, focusing on preventing hunger and meeting food and nutrition needs, empowering local communities to build assets that improve long-term food security, and supporting government and partners to develop and implement effective food security and nutrition strategies” (WFP, 2011). WFP has been distributing food to some food deficit districts of Mid-and Far-Western Development regions under its emergency operations since second of 2006 (ibid).

“[I]t is generally felt that food-for-work is a service delivery programme” (Upreti, *et al.* 2006). “It is estimated that every year about 30,000 unskilled labourers participate in the programme (ibid). About 10,000 metric tons of food is provide annually through this programme. This programme is implemented in 25 districts. “In recent times, some donors (particularly DFID) have withdrawn support for the Food-for-Work Programme, claiming that the infrastructures developed by local people are generally of poor quality” (ibid). WFP is planning to benefit 1,795,976 people residing in the vulnerable areas. These need 81,201 metric tons of food.

Other programmes include ‘school feeding’ and ‘relief and emergency operations’. “These programmes have been implemented as a part of food security for children and to reduce vulnerability during the crisis in

Nepal” (ibid).Increasing food production by marginal or landless farmers has also been one of the approaches to reducing food insecurity. This production could be for home consumption or for sale. There are different programmes in Nepal aimed at achieving this. “These programme include the APP-SP (Agriculture Perspective Plan-Support Programme) and activities to increase access to land initiated by various INGOs and NGOs like Plan International and the Government’s Poverty Alleviation Fund (PAF)” (Upreti *et al.*, 2010).

One of the main objectives of the donor activity in food security is to meet short-term needs related to food. This approach generally avoids the ‘livelihood approach’ to meeting food security. This means that sustainability in food security in conflict-affected areas is still in question. The short term concern of the donor agencies is not helping the sustainable food system; as a result, food deficit area’s dependency on external food aid is growing. At the same time, more and more people are now facing food security problems. In 2009, about 2.2 million people were reported to be facing food security problems (The Kathmandu Post 3 June 2009, pp1 and May 2009, p7, Quoted by ibid.)

Food Grain Balance

Over the past years, the level of production has not kept up with the increasing demand of the growing population. For example, as per the food balance sheet prepared by MoAC including five major cereal grains of rice, maize, wheat, barley and millet, Nepal has been a food deficit country for four of the last five years between 2005/06 and 2009/10. Fiscal Year 2009/10 witnessed the second largest food deficit so far in Nepal, with a net deficit of 330, 000 metric tons. The largest food deficit was recorded in the fiscal year 1994/95 when country’s domestic

production was slightly more than 485 metric tons. From the FY 1989 to 1990 the country witnessed 13 food deficit years, with eight consecutive years of deficit.

Table 4.4 Details of National Edible Grain Production (2000-11) and Impact on Food Balance (In Thousand Metric Tons)

Year	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Total Edible Production	4543.0	4653.4	4884.4	4942.6	4869.4	4753.4	5195.2	5170.4	4967.5	5419.0	6037.7
Requirement	4463.0	4620.0	4671.3	4779.7	4891.0	4941.1	5172.8	5303.3	5297.4	5405.0	5151.4
Balance	80	75.6	213.0	162.8	(21.6)	(187.7)	22.4	(130.0)	(330.0)	44.0	88.6

Note: Figures in the parenthesis imply food deficit.

Source: Statistical Information on Nepalese Agriculture, 2011/12, MoAD, 2012 December.

“National food balance in the past decade has been either marginally surplus or deficit depending on the production outcome which fluctuates primarily due to rainfall situation. The Hill and Mountain regions are more likely to be food deficit and therefore more vulnerable to such fluctuations” (MoAC-WFP, 2010).

Monsoon is a typical meteorological phenomenon, which originates from the Bay of Bengal in the Indian Ocean, and is the cause of most of the rainfall in this region. In Nepal more than 80 percent of the annual precipitation takes place due to this event. Normally, monsoon starts around June 10 and lasts until 3rd week of September.

Rainfall Levels and Natural Disasters

Rainfall and Production

With poor facility of irrigation, Nepal's agricultural production is heavily relies upon the rainfall. Timely monsoon ensures larger production of summer crops mainly paddy—the source of main staple food. “One of the factors that govern the availability of food in particular year is the quantity and timeliness of rain” (Tiwari, 2002). Most of the country has generally favourable rainfall conditions for the major crops: maize, paddy etc. There are areas with inadequate or untimely rainfall affecting these crops. “Water deficit during the grain filling period results in reduced grain weight” (Nayava-Gurung, 2010). However, during the maturity and harvesting period, rainfall has negative impact on maintaining grain quality” (Ibid). It becomes harder to protect harvested crops from damage caused by rainfall. Lower transportation and processing facility stipulate farmers to leave their crops in the field for longer days with increased possibility of being damaged. “During fiscal year 2005/06 food production in Nepal was adversely affected by drought with reported decrease in the average paddy and wheat production of 2.0 percent and 3.3 percent respectively”(Regmi, 2008).

But the situation of rainfall improved in the next fiscal year. “Monsoon that started early brought enough precipitation till late, enabling paddy plantation in non-irrigated areas and boosting area” (MoF, 2008). “Reports from the Department of Hydrology and Meteorology state that months ending in mid-June received 98 percent of rainfall” (Ibid) and more than average rainfall in latter months brought about positive impact on paddy production. “In the next fiscal year (2008/09) enough rainfall during the paddy-growing season, had a positive impact on production of paddy” (MoF, 2009).

The situation deteriorated for paddy production in the fiscal year 2009/10. “[D]elayed monsoon and insufficient rainfall in many parts causing drought in delayed plantation of rice helping decrease the area under paddy cultivation and productivity thereby decreasing overall paddy production” (MoF, 2010). But the climatic condition for winter crops was quite favourable. “January, February and March received less than average rainfall, however, moderated rain in November and January brought about expected rise in winter crops”(Ibid).

This is apparent from the analysis of rainfall behaviour that the level of monsoon rainfall has been experiencing ups and downs so is the production of major crops—mainly paddy. This leaves the farmers no option other than rely on their destiny. This is the indication that the family will have to face drought and hence serious food insecurity in the near future.

Natural Disasters

Problems caused by landslides, floods, submerge are the most general and common features of summer crops in Nepal. About 1,500 ha of land were destroyed by inundation, river bank erosion, and siltation in the fiscal year 2011/12 alone in Nepal.

Table No: 4.5 Area affected by Natural Disaster (in Ha)

Affected Crops	FY 2004*	FY 2005*	FY 2006#	FY2007**	FY 2008##	FY 2009#	FY 2010*	FY 2011*
Paddy	116505	3585	120000	88800	30873	92000	567	859
Maize	1293	20	47	4271	549	1700	563	656
Millet	500	419	0	1451	3.2	0	13	2
Total	118298	4024	120047	94522	31425	93700	1143	1517

Source: Economic Survey, MoF, 2012

*Note: * flood/landslides, # flood/landslides and drought, ** flood/landslides and inundation, ## flood/landslides, inundation and erosion Source: Ministry of Agriculture and Cooperatives*

This clearly shows the fact that agricultural production in Nepal is highly vulnerable to natural disasters. Untimely rain, low level of rain and partly rain are the usual cases. Terai region, which is considered to be the “Buffer Stock” of paddy, is heavily affected by natural disasters mainly floods, inundation and river cutting resulting into under-supply of the grain and hence potential food insecurity.

CHAPTER FIVE

ACCESS TO FOOD

Access refers to economic and social access to food or purchasing and/or the food-gaining capacities of people (Upreti *et al.*, 2010). Sen (1981) used the idea of entitlement and endowments to explain how a person can have access to food. According to Sen, food availability in the market does not guarantee people's access to food for consumption. Therefore, individuals and households only have legitimate command over foods and other commodities if skills, stocks and income. Sen later used the term 'expanded entitlement' to include social networks, kin relations and the like that help in receiving food, especially during time of stress (ibid). of all the sources, land is still main source of entitlement in country like Nepal where more than two thirds of total population is engaged in agriculture and living mostly in rural parts of the country. Poverty Alleviation Fund (PAF) categorizes poor in Nepal in terms of access to food as:

-) Hardcore Poor (Food availability for 3 months)
-) Medium Poor (Food availability for 3-6 months)
-) Poor (Food availability for 6-12 months).

Table 5.1: The Situation of Poverty in Nepal

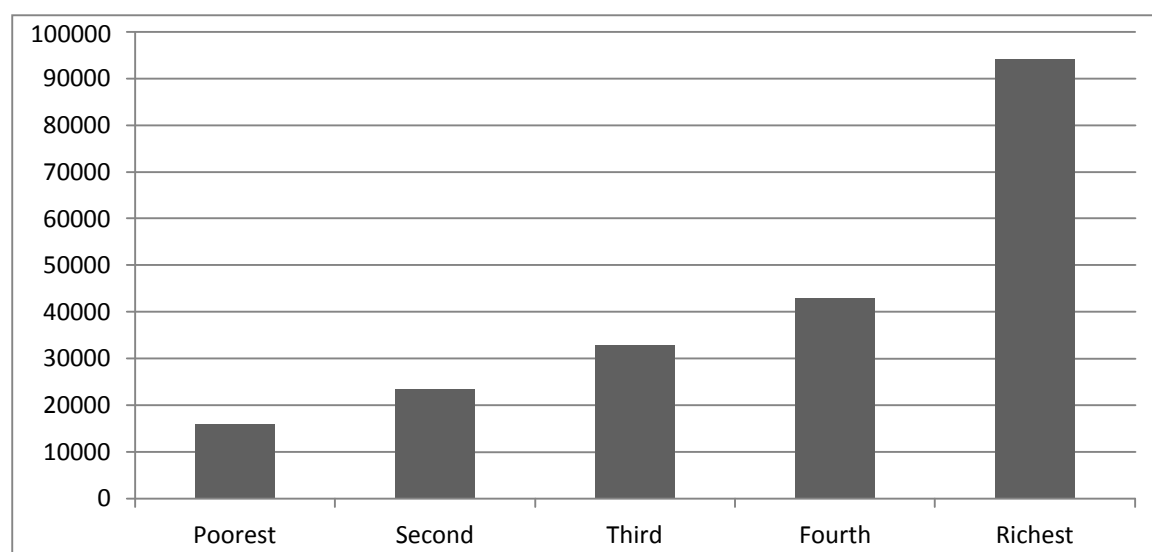
MDGs Indicators Related to Poverty	Baseline 1990	1995	2000	2005	Latest Figure	Target 2015
Population living below US\$1 a day (PPP value) (%)		34	na	24	na	17
Population living below national poverty line (%)		42	38	31	25.14	21

Source: UNDP, 2011

Table 5.1 shows the fact that the population living below national poverty line has declined remarkably i.e. 42 percent in 1990 to 31 in 2005. But there is long way to go to achieve the MDG of poverty eradication. The distribution of income also has serious implication on the access to food.

The income gap between rich and poor is significant among various consumption quintiles. The Figure 5.2 clearly demonstrates that the income of the richest consumption quintile is just below Rs. 100,000 strengthening their food consumption capabilities compared to the lowest consumption quintile which has just surpassed annual income of Rs. 10,000 and are prone to hunger related vulnerabilities.

Figure 5.1 Annual Nominal Per Capita Incomes (Consumption Quintile in Rs.)

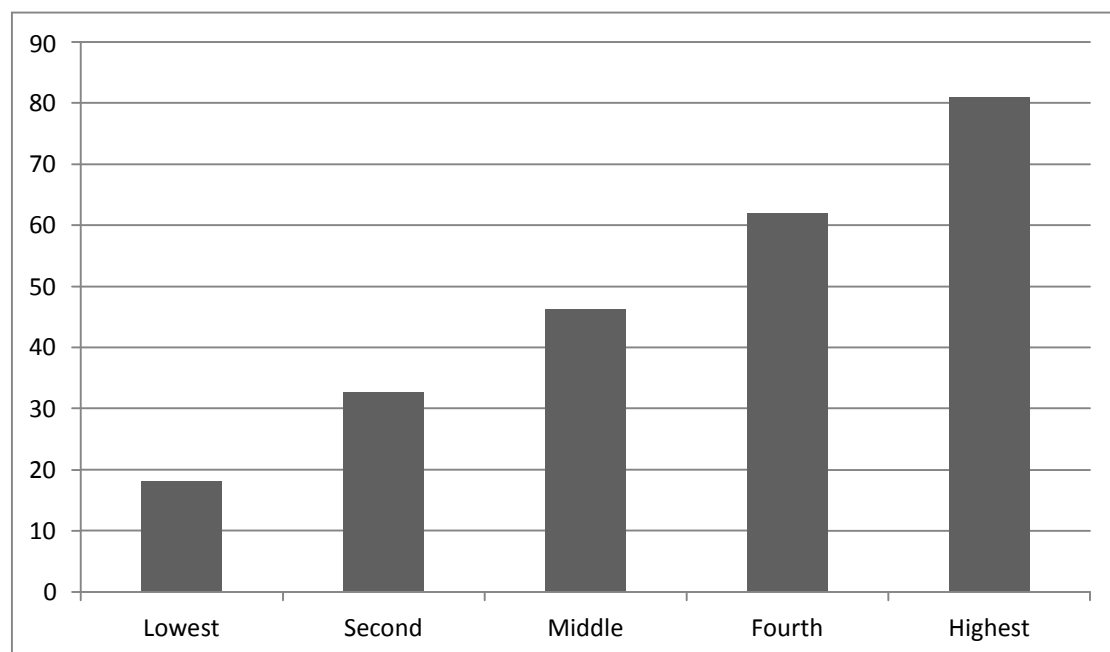


Source: Nepal Living Standard Survey III, 2010/11, Central Bureau of Statistics, Nepal.

According NDHS (2011), 49 percent of households in Nepal are food secure and have access to food year round. Twelve percent of households are mildly food insecure, 23 percent are moderately food insecure, and 16

percent are severely food insecure. Urban households are more food secure (67 percent) than rural households (46 percent). There is clearly (see Figure 5.2) an inverse relationship between level of income and intensity of household food insecurity. There is a huge amount of variation in the household food security in terms of income level.

Figure 5.2 Household food security in wealth quintile



Source: MoHP-New Era-USAID-ICF International (2011)

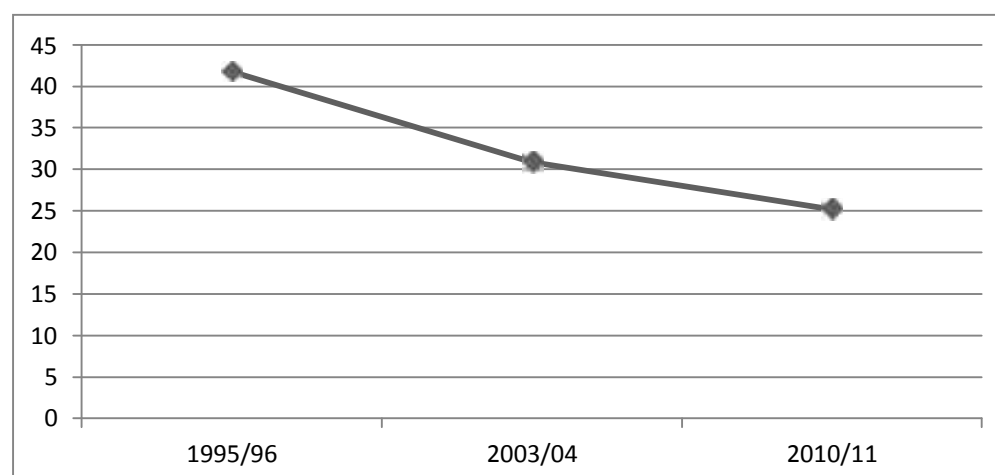
Only 18.1 percent of household are food secured for the poorest quintile. While, 81 percent household of wealthiest quintile are food secured. There are conspicuous differences in the level of household food security among various wealth quintiles. Such variation clearly implies the fact that the economic status of the household is closely associated to its access to sufficient food.

Poverty, Per-Capita Income and its Distribution

“The districts, in which hunger deaths and food insecurity are chronic, also have the lowest HDI in the country” (Upreti *et al.*, 2010). “As a matter of fact, there is a direct end rough correlation between food insecurity and HDI in the districts of Nepal” (ibid).

Nepal is among the poorest countries of the world. According to Human Development Index, the country ranks 157th among 187 countries in the world (UNDP, 2013). The situation of Nepal is worse even in South Asia, ranking 7th among eight countries. The country still falls under the category of ‘Low Human Development’. Over the decade or more, the poverty has been reduced remarkably, mainly due to unprecedented rise in service sector and heavy departure of manpower to the foreign countries. The increased income contributed higher access to basic facilities mainly household consumption and, within it; food consumption has been consistently dominant. The higher access to adequate and diversified food mean lower incidence of hunger and under nutrition. “One important finding of the survey is that the food habit and consumption patterns have changed drastically since 1995/96 when the NLSS-I was conducted. The poor’s consumption of fruits, meat, fish, egg and rice increased substantially over the last 15 years. As a consequence, given that the relatively poor in 2010-11 consume more quality food than the relatively poor in 1995-96” (CBS, 2011). Since, expenses on food account for 61.5 percent (CBS, 2011) of total expenditures; increased income has direct and significant impact of food consumption.

Figure No. 5.3: Poverty Head Count Rate (In Percentage)



Source: Nepal in Figures, 2011, Central Bureau of Statistics, Nepal

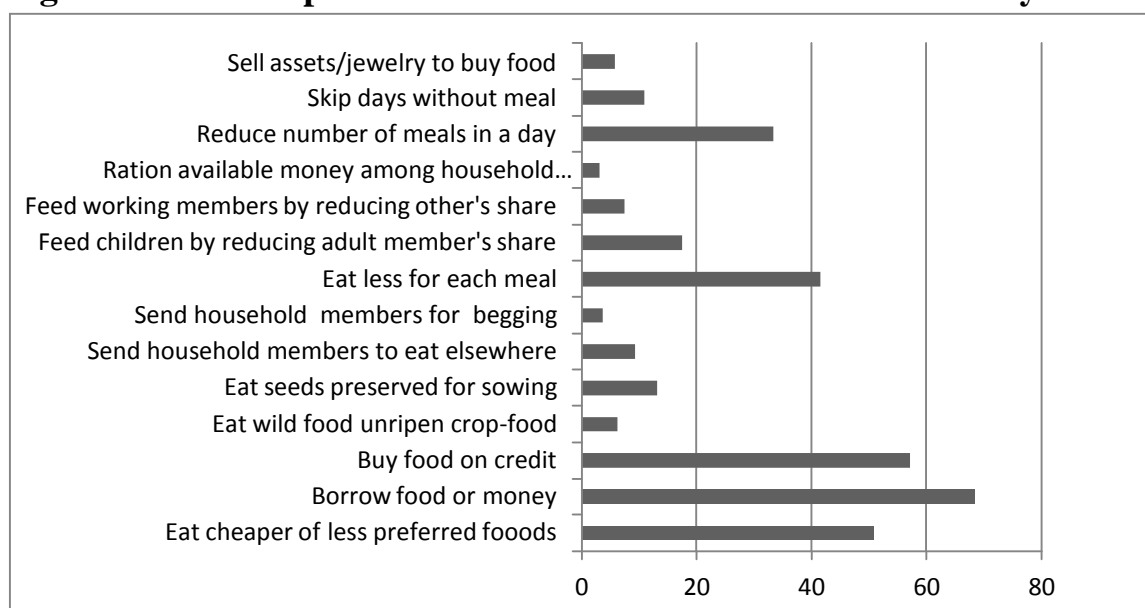
With the decline in poverty, percentage of household reporting “less than adequate” consumption of food has also reduced remarkably. In 1995/96, when first NLSS was conducted, the percentage of people reporting “less than adequate” consumption of food was 50.9, it reached 31.2 in 2003/04 and this trend continued further and reached 15.7 in 2010/11.

Despite sharp decline in the number of poor people, they are still quite vulnerable to hunger. According to NLSS-III conducted in 2010/11, 7.5 percentage of people reported that they didn’t have enough food or money to buy food. 42.8 percent of people reported that they remained ‘food-less’ up to 5 days. While 8.5 percent of people remained foodless for 15 days or more.

According to NLSS-III, most of the people suffering from food scarcity preferred to borrow food or money to alleviate or overcome food scarcity. The figure reached up to two thirds of the population concerned. While half of the people reported to eat cheaper or less preferred foods. The less preferred or cheaper food imply they are less appetizing and less caloric

which enables under nutrition and, hence, physical and mental weakness. While 17.5 percent responded that they curtailed adult member's share of food to feed children. Since, most of the women in Nepal who take left over meal, are more likely to suffer from such curtail. The study unfolded a serious situation when 10.9 percentage of the respondent reported that they skip days without meals.

Figure No. 5.4: Steps taken to alleviate or overcome food scarcity



Source: Nepal Living Standard Survey-III, 2010/11, Central Bureau of Statistics, Nepal

There has been remarkable decline in poverty over the decade and half. The declining poverty has been reflected in declining food insecurity. The increased income has extended poor's access to diversified and highly nutrient food. People's increasing share of diversified fruits and vegetable are clear manifestation of declining poverty and, hence, enhanced food security.

Employment Opportunities and Remittance

ILO defines employment as, “[p]ersons in employment comprise all persons above a specified age who during a specified brief period, either one week or one day, were in the following categories: paid employment or self-employment.” Consistent with the definition of ILO, Nepal Labour Force Survey 2008 roughly defines “labour force as a group of people aged 15 years or above, either working or looking for job” (CBS, 2008).

The main source of employment is still agriculture where there is already problem of surplus labour. There is lack of formal institutions for providing a large number of employments. Until a recent past, it was the government, which was the major employer; however, with the promotion of private sector, the source of employment has become the private sector.

“Because of the conflict, there has been a general decline in income and employment opportunities” (Upreti *et al.*, 2010). “Regular blockades, reduced marketing opportunities, lack of mobility for trade and wage employment opportunities, lack of mobility for trade and wage employment during farm off-season, reduced developmental activities, and reduced construction of infrastructure and houses has meant a decline in income and employment opportunities” (ibid). “Wage employment opportunities have declined in general because of the decline in investment in agriculture, trade and commerce, development projects and infrastructure” (ibid).

Remittance has been emerging as a dominant constituent of income that most of the household receiving. “The proportion of households receiving

a remittance was 30 percent of all enumerated households” (CBS, 2008). “The average amount received over all households in the last 12 months was 19721 Rupees” (ibid).

Nepal has been ranked among the top five countries in terms of the contribution of remittance to the Gross Domestic Product (GDP). According to the World Bank's new report "Migration and Remittance Fact book 2011", the share of remittance amounts to 23 percent of the GDP .Among the least developed countries, Nepal is placed second behind Bangladesh. Even though the growth rate of remittance has slowed down to single digit from double digits in recent years, it has contributed significantly to the reduction of poverty in the last 15 years. The country ranks among the top five in terms of the share of remittance of the Gross Domestic Product.

Tajikistan, Tonga, Lesotho and Moldova are ranked ahead of Nepal. The Second Living Standard Survey had also indicated remittance as the major contributor behind the decline in people living below the poverty line from 42 percent to 31 percent. According to UNDP's *Human Development Report 2010* remittance was one of the factors behind Nepal's remarkable success in human development in the last 40 years. Nepal emerged one of the world's fastest movers in Human Development Index (HDI) since 1970, coming in third among 135 countries studied.

The World Bank study (2011) found that of households that receive remittances, 40 percent are fully dependent on the inflows to cover their basic needs, and another 45 percent regard them as very important for going beyond basic needs. In fact, 60 percent of receiving households

(and 18 percent of all Nepali households) derived more than half of their income from remittance.

According to *NLSS-III* findings, almost 70 percent of households used remittances primarily to cover day-to-day food consumption costs. In addition, a significant portion of the population, 14 percent use remittance income primarily to pay back loans, which is consistent across all wealth quintiles. For the poorest households, which spend most of their income on food, loans allow consumption to be maintained when households face shocks or abnormal expenses.

The wealth creation generated from remittances has undoubtedly had a positive impact on food security. As households escape from poverty, they also tend to escape from food insecurity. According to *NLSS-III*, 86 percent of households in the bottom wealth quintile suffer food poverty (the value of their diet not high enough to meet minimum requirements) compared to only 1-2 percent in the top two wealth quintiles. Results from the NLSS support these findings show that poor households with a migrating household member in 2010/11 are less likely to be energy deficient and more likely to eat an adequately diverse diet. The survey also revealed that 73 percent of rural households were suffering from energy deficiency compared to 62 percent for migrants. The variation of energy intake between migrant and non-migrant households among urban population is also remarkable. Migrant households belonging to the richest quintile suffering from energy deficiency was 20 percent compared to 30 percent that of non-migrant households. When it comes to adequacy of consumption for the same quintile, the figure remains the same for both migrant and non-migrant households. Such invariability implies the fact

that income received from abroad ensures diverse of food and increased dietary intake which resulted into higher nutrition at the same time.

Table No. 5.2: Food security indicators for households with and without a migrant member, by expenditure quintile.

Expenditure Quintile	Migrants	Rural % HHs with inadequate Consumption	Rural % of population energy deficient	Urban % HHs with inadequate consumption	Urban % of population energy deficient
Q1(Poorest)	no migrants	52	73	50	71
	migrants	50	62	49	68
Q2	no migrants	32	45	29	59
	migrants	28	39	27	51
Q3	no migrants	18	33	16	49
	migrants	14	28	14	46
Q4	no migrants	13	25	11	39
	migrants	14	17	13	31
Q5(Richest)	no migrants	5	20	4	30
	migrants	4	7	4	20

Source: Nepal Living Standard Survey-III, 2010/11, Central Bureau of Statistics, 2011

Migration for employment has some drawbacks as well. Tiwari (2002) highlights, “[o]ne demerit of migration is the increased feminization of agricultural sector and poor productive base of the economy. The other demerit is the changing food habits which have bad repercussion if those migrants could not sustain in the future.”

Rising Food Prices

One of the main reasons for increasing number of hungry people in Nepal is soaring price. At that time, global stocks of major cereals had been falling dramatically, indicating the failure of production to catch up with consumption for a number of years before the crisis. Rising food price weakens the ability of people to access food through entitlement. Soaring price of food either reduces the number of items in the bundle resulting into low level of physical strength and hence perpetual poverty.

“In Nepal, food prices have been the major contributor of the higher rate of overall inflation in the last few years. The major causes of the food price hike in Nepal are decline in agriculture production due to unfavourable weather conditions and various types of supply bottlenecks. On the demand side, growing population and increased remittance inflow raised the demand for cereal grains, which in turn exerted the pressure on prices. Moreover, export bans imposed by India and use of cereals feed products also influenced the food prices in Nepal” (Shrestha/Chaudhary, 2012).

The price of rice and wheat, which are major staple food for majority of population in Nepal, has doubled from FY 2000/02 (see Figure No. 5.5). Similarly the price of Broken *Moong* has tripled for the same time period. Likewise, it is 2.5 times higher in FY 2010/11 compared to FY 2000/01. The price of soybean has also tripled.

Figure No. 5.5: National annual average retail price of rice and flour

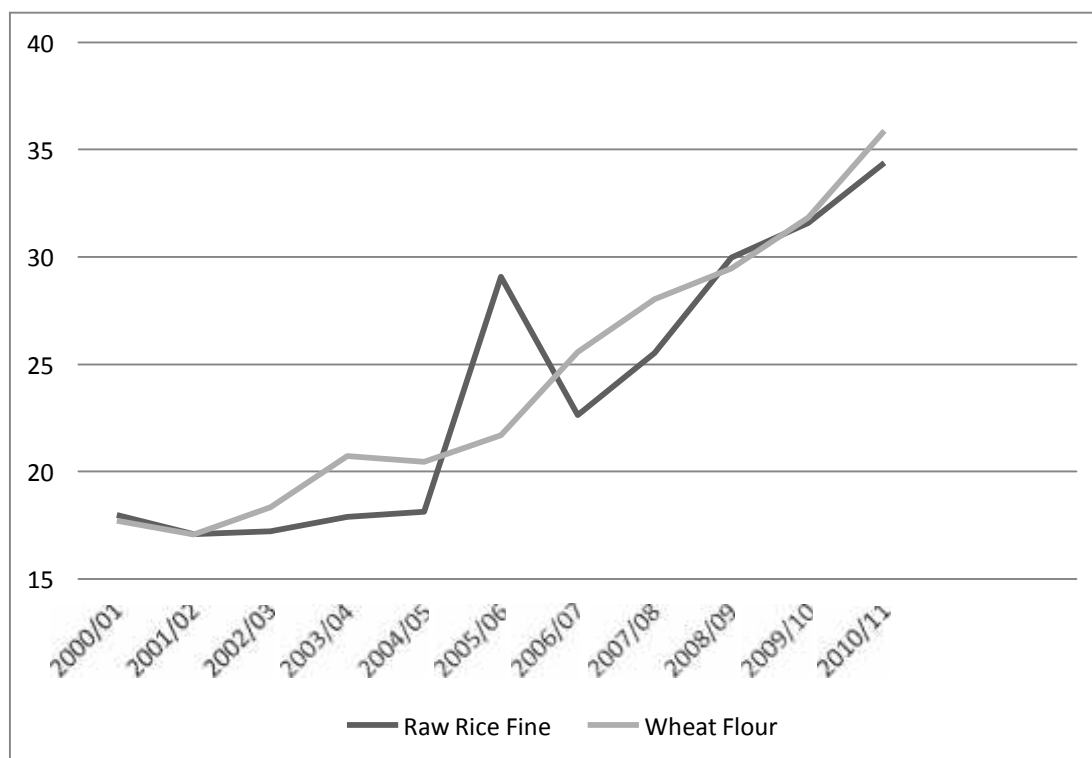
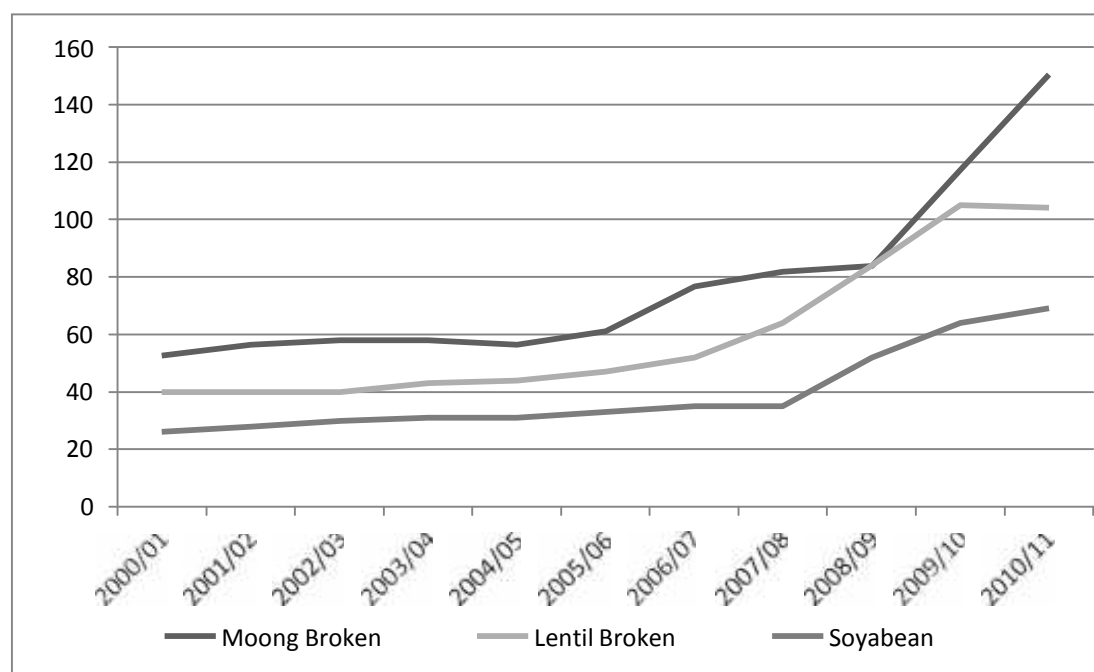


Figure No.5.6: National annual average retail price of lentils



Source: Statistical Information on Nepalese Agriculture, 2011/12, MoAD, 2012

Note: Figures are in Rupees per kg.

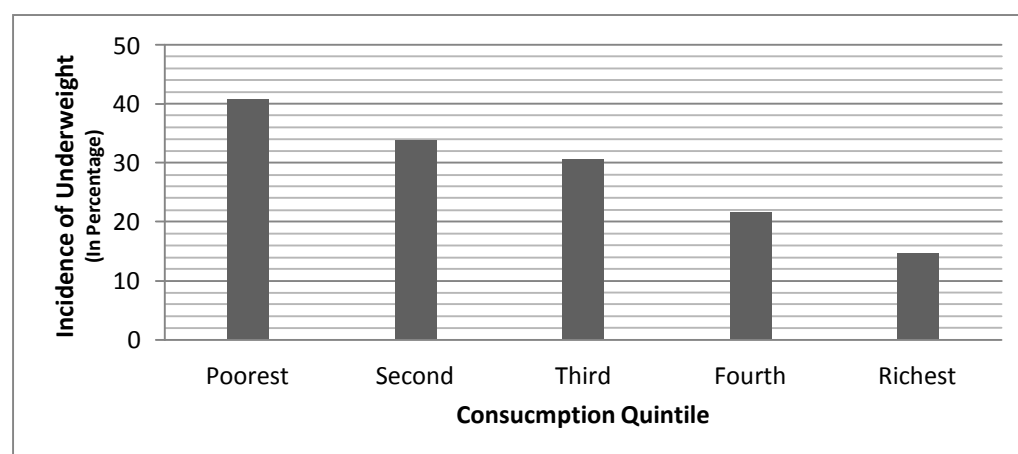
“A 10 percent increment in food prices in Nepal pushes 550,000 people into poverty—as per the threshold income of US\$ 1.25 per day” (ADB, 2011). “And, as per the Nepal Rastra Bank, the country witnessed 16.6 percent rise in food and beverage prices as of mid-February 2011. Therefore, a simple calculation suggests that a total of 913,000 people were pushed into poverty in Nepal” (ibid). “Accordingly, a 10 percent rise in food prices leads to an increase in the number of people living in poverty by 2 percent in Nepal implying number of poor people has risen by 3.32 percent in Nepal as per the inflation rate of 16.6 percent” (Ibid). Though country witnessed remarkable success in reducing the number of poor people, there’s a fear that such achievements would be outweighed by rising food prices—resulting hundreds and thousands of people might plunge into hunger in very near future. Poor infrastructures—mainly road and warehouses—exacerbating the crisis. Poor management of public

distribution mechanism is also, among various others, contributing rising food price.

Nutritional Status of Children and Women

There is direct linkage between economic status and the incidence of malnutrition. Low income means low access to diversified food and thus higher incidence of malnutrition, generally manifested as underweight and stunted body. But, “malnutrition is complex multidimensional problem needing a multi-sectorial approach” (UNCT, 2007).

**Figure No. 5.7: Distribution of underweight status of children
(Consumption quintile in percentage)**

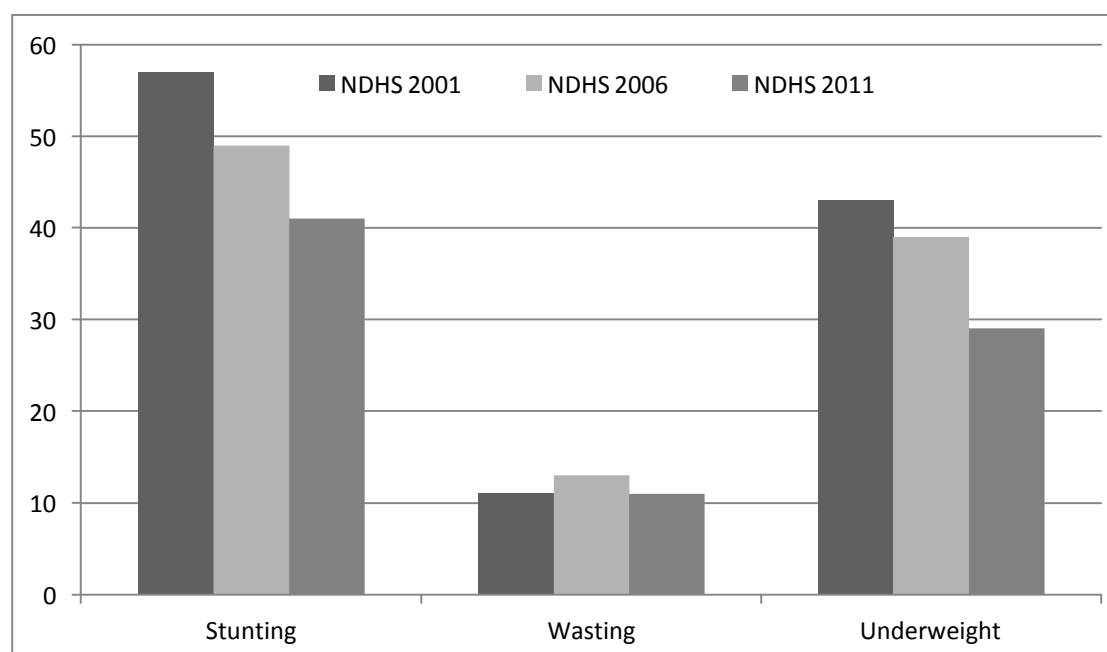


Source: NLSS-III, 2010/11, Central Bureau of Statistics, 2011, October

As mentioned above, there’s inverse relationship between higher income and incidence of underweight children. Forty percent of the children belonging to the poorest consumption quintile are underweight (see Figure No. 5.7). The incidence of underweight is declining with rising income levels. Only 15 percent of the children belonging to the richest consumption quintile are underweight.

However, “the nutritional status of children in Nepal has improved over the past 15 years and is close to achieving the MDG target reducing the percentage of underweight children age 6-59 months to 29 months by 2015” (NPC, 2010). Figure 11.2 shows a downward trend in stunting underweight overtime. The percentages of stunted children are declining by 14 percent between 2001 and 2006 and declined by an additional 16 percent between 2006 and 2011. A similar pattern is observed for the percentage of underweight children, which dropped by 9 percent between 2001 and 2006 and by 26 percent between 2006 and 2011. Similarly, an incidence of wasting declined by 15 percents during 2006 to 2011.

Figure 5.8: Trends in nutritional status of children under age of 5 years

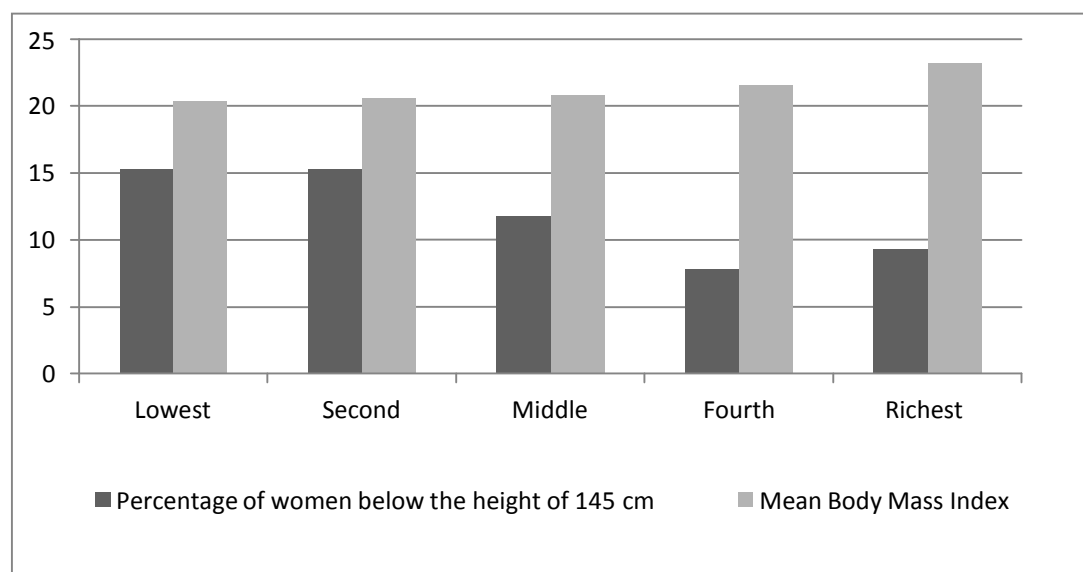


Source: MoHP, 2011

A woman’s nutritional status has important implications for her health as well as the health of her children. Malnutrition in women results in reduced productivity, an increased susceptibility to infections, delayed recovery from illness, and heightened risk of adverse pregnancy outcomes. One of the

important indicators determining the nutritional status of women is Body Mass Index (BMI) and height. Nepal Demographic Health Survey (NDHS) in 2006 used these two, including others, indicators to measure the situation of malnutrition of women. Women’s nutritional status has improved only slightly over the years.

Figure No. 5.8: Height and BMI Status of Women (In Wealth Quintiles)



Source: MoHP-New Era-USAID (2011)

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m²).

There is no clear variation in Mean BMI among different wealth quintiles. The BMI values are concentrated around the value of 20 for all wealth quintiles. The women belonging to richest consumption quintile has just surpassed that value and reached to 23.2. On the other hand, the variation in terms of wealth quintile is clearly visible in the case of women’s height. More than 15.3 percentages of women belonging to lowest wealth quintile are below the height of 145 cm while it is slightly more than 9.3 percent for the women of wealthiest quintile.

Malnutrition of women and children is a serious problem in Nepal. Access to nutritious food is the most important factor determining the status of malnutrition among women and children. But for the women, the case is somewhat complicated. In this regard, various social and cultural factors come into play stipulating women to consume low nutritious food. This intensified their vulnerability towards many diseases due to low immunity power.

CHAPTER SIX

UTILIZATION OF FOOD

Utilization of food refers to use of food that family has access to. It has three dimensions: a) utilization of food by a family; b) utilization of food by individuals in a family; and c) health and nutrition status of individual members of family, with a special focus on women and children as they are more disadvantaged and vulnerable group. This chapter aims to analyze various dimensions of utilization of food ranging from food consumption pattern and access to sanitation to intra-household distribution of food.

“Utilization of food by the family implies hygiene and housing conditions for storing, cooking and preparing food” (Tiwari, 2002). “The analysis of food consumption is more important than the analysis of food availability, as households not producing food may be consuming sufficient food through other exchange systems, like purchase, exchange of food for labour or other assets/ property, member of kinship group or other social groups having access to food, or by borrowing food or money to purchase food” (Upreti *et al.*, 2010). It is, therefore, mandatory to prepare food, regardless of its source, that way which ensures sufficient diet and nutrition. In this regard, consumption pattern, food belief, sanitation facility and intra-household distribution of food are vital.

6.1. Consumption Pattern of Food

Consumption pattern of food is an important factor in ensuring food security. Ingredients of meal, preference of particular foods over others, frequency of having meal etc. are some of the major elements taken into consideration.

Based on the pattern of food production, the major staple food of the Nepali population includes rice and wheat in Terai; maize and millets in the hills; and millet, maize in the mountains. Potatoes are also an important part of the diet in the mountains. With extending economic access, mainly because of the heavy

remittance inflow in the country, the consumption pattern has been changing gradually. The newly preferred food mainly involves imported junk foods. In addition, NFC is transporting rice to various rice-short districts leading to an increase in rice consumption in those areas.

Majority families in Nepal take their meal twice a day, 9 to 10 a.m. in the morning and in the evening. The meal mainly involves rice or wheat bread or maize bread, or porridge with lentils and vegetables in relatively affluent houses. Those who cannot afford for lentils or vegetable eat only one of them. Roasted maize, popcorn, beans or wheat or millet bread constitutes the snacks. Those who have cattle consume small amount of milk and buttermilk. Consuming vegetables is a common practice and it is gradually increasing in some areas. Some communities raise goats, chickens and pigs; however, eating meat even in a relatively well-off family is rare, happening on a weekly basis when possible. For most of the average earning family such occasion hardly comes once in a month.

“Compared to previous years, the Nepalese population is consuming more food per capita per day and a more diverse diet in both urban and rural areas. At a national level, people are consuming, on average, 12 percent more calories than in 2003/04 and 21 percent more than in 1995/96” (NPC/CBS, 2013).

The share of staples in the average Nepalese diet has decreased from 83 percent in 1995/96 and 81 percent in 2003/04 to 72 percent in 2010/11. There has also been significant decrease in the proportion of rural and urban households with “very high staple diets,” from 83 percent in 1995/96 and 74 percent in 2003/04 to 46 percent in 2010/11.

The increase in vegetable and fruit consumption is particularly important to overall micronutrient intake. While overall consumption of fruits and vegetables may still be below the recommended intake, these results are

encouraging and demonstrate that general food consumption trends are heading in the right direction in Nepal.

Consumption pattern of food cannot be ignored while analyzing the situation of food security. Even if the population has easy access to diversified foods, food security cannot be ensured unless it is properly prepared and consumed. And, consumption pattern are determined by various factors: social, cultural, and religious and, most importantly, economic.

Food Beliefs

Food belief has strong implication on consumption pattern. Such beliefs are transmitted over the generations, therefore, stubborn in nature and cannot be changed easily. According to Krantz (1975), culture has a strong impact on the food behavior of the people. The food, habits and practices are closely related to the typical behavior of particular group of people or culture. Such behavior follows codes of conduct in relation to food choice, methods of food preparation and eating, number of meals eaten per day, time of eating, and the size of the portion eaten.

Various field observations demonstrate villager's beliefs in superior or inferior foods. Wildly growing vitamin A rich leafy vegetables such as stinging nettles, amaranths, and garlic pear all considered inferior foods. The villagers believe that such foods are considered fit for very poor people. Such beliefs have negative impact on their nutritional status.

Most of the communities make liquor from food even if it is short in supply in many rural villages of Nepal. Those communities, mainly among *Matwali* (the castes below the upper hierarchy called *Bahun* and *Chhetri*) consider liquor as an inevitable beverage for daily consumption. In addition, it is customary in many such communities to offer *Aila* (Newari term for liquor) to the God therefore considered pure and unavoidable. *Newari* communities have regular

Bhoj (feasts), which is incomplete without liquor. The custom becomes problem when the community plunge into starvation and subsidized or aided food is used for brewing such liquor rather than avoiding hunger by consuming it as regular meal. This clearly intensifies the problem of starvation and malnutrition.

An explorative study (Krantz, 1977) carried out among the housewives of Kathmandu valley reported that the people hold the beliefs about *pure* and *impure* food; *hot*, *cold*, and *neutral* foods; *beneficial* or *harmful* foods; or *curative* foods. Such beliefs, as Krantz believes, seem to be carried on apparently without any logic. Such categorization makes people more selective and consumer of less diversified foods. In most of the communities among upper castes, eating meat and eggs are taboo. They relate those foods as against the religious codes of conduct and considered as *paap* (sin). Since meat and eggs provide essential protein and energy for human body, such avoidance has negative impact on food security.

Food beliefs have strong implication on the pattern of consumption and thus food security. Such beliefs are stubborn in nature and can be hardly changed. In most of the cases such beliefs are hardly conducive in enhancing food security.

Intra-household Distribution of Food

Intra-household distribution of food means allocation of food among members of the family mainly regarding age-group and gender. The problem of asymmetric distribution of food regarding gender is deeply rooted in Nepal. “Compared to African countries, intra-household food security is of critical concern in Asian countries including Nepal (Tiwari, 2006). One main reason is the culture and tradition where adult males are given preference over women and children in terms of food and other conveniences of life in those countries” (ibid). Many ethnographic studies have shown that household behaviours can result in certain individuals receiving disproportionately more or less of the household food supply.

Female members of the family are ruled out from the highly preferred food items in most of the communities on Nepal. Since, women are more physically active than male but are hardly provided with nutrition rich food items. The problem is aggravated by such practices at the time of pregnancy and delivery. “Most commonly females are reported to receive less food of “poorer quality” than their male counterparts (Basu et al., 1986, Quoted by Gittlelson, 1991). According to Gittlelsohn (1994), there are varieties of mechanisms by which some individuals are favoured over others through household food distribution. This includes serving order, serving method, refusing to serve foods, channeling foods, and distributing low-status of food for higher-status foods. Women’s late position in household serving order, channeling of special foods to males and children, and lower intake of foods, account for these findings. Tiwari (2006) upholds the same findings. “The tradition that women in Nepal have to eat later than men; eat the leftovers; and limit their own food to provide adequate food to their children, affects the nutritional status of women” (ibid). “Moreover, the tradition of not offering separate plate to younger siblings in many families also makes children lives without adequate food” (NPC, 1997; Quoted by Tiwari, 2006). In most of the communities women share their part of food, which is already insufficient, with her siblings. Such practices leave both mother and children inadequate food. In addition, mother offer much preferred food from her share to her sibling therefore contended with ordinary meal.

Intra-household distribution of food plays vital role in ensuring food security within family. Such distribution is upheld on the ground of social and cultural settings of the communities concerned. Women and children are much suffered from such distribution. Most importantly, even if the family has easy access to food, the household food security cannot be ensured unless intra-household distribution of food is just.

Access to Pure Drinking Water and Sanitation

Access to pure drinking water is the most vital pre-requisite to ensure proper utilization of food hence food security. Even if the access to food is ensured, if household's member has little or no knowledge of using pure drinking water, vulnerability towards illness and thus food insecurity is intensified. Much of the curable diseases in Nepal are water-born. Access to pure drinking water and some knowledge about sanitation can radically reduce the possibility of such diseases. Proper sanitation is warranted mainly at the time of cooking and dining.

The United Nations Millennium Development Goals' target is to provide basic sanitation and drinking water to 53 and 73 percent of the population by 2015. According to NLSS-III, more than 98 percent reported that they have source of drinking water within 30 minutes of walking distance for both dry and rainy seasons. This figure resembles the same for both urban and rural areas. Similarly, NPHS-2011 revealed that piped or tap water is the main source of drinking water for 47.78 percent of the total households. Tube/well pump is the main source of drinking water for about 35 percent of the total households, while spout, uncovered well/kuwa and covered well/kuwa are the main source for 5.74 percent, 4.71 percent and 2.45 percent respectively.

Table No.6.1: Nepal's Progress on MDGs of access to improved water source and sanitation

Progress against Indicators	1990	2000	2006	2009	2015 (MDG target)
% of people with access to improved water source	46	73	81	80	73
% of people with sustainable access to improved sanitation	6	30	39	43	53

Adapted from "Nepal: Country Strategy 2010-2015", Water Aid Nepal

The MDG of improved water source has been already achieved. "But coverage is only 53 percent if we consider the functionality of water supply, without

even accounting for water quality. With real growth of 7 percent in 20 years, it is unlikely that Nepal will meet the MDG target 73 percent by 2015 deadline if we consider aspect of quality and functionality” (Water-Aid, 2010). Water pollution and contamination remain among the most serious public health problems in Nepal. Standards of hygiene remain low due to lack of awareness, cramped living spaces, and inadequate mechanism to dispose of human and other waste.

The situation of sanitation is very poor in Nepal. In 2009, the diarrhea outbreak resulting from impure water supply and poor sanitation in 13 districts in the Far-Western and Mid-Western regions took 367 lives and affected more than 64,000 people. The main reason for this tragedy, though preventable, being lack of access to proper toilet and basic sanitary facilities. The sanitation facility is directly linked with the vulnerability to illness of the households. The preparation of food with utmost care of sanitation ensures good health. Only considering at the MDG of access to improved sanitation facility, with toilet coverage, seems easily achievable (see Table: 6.1). But improved and hygienic latrine coverage is only 27 percent, implying there is only a remote possibility of meeting the sanitation MDG of 53 percent by 2015. Moreover, according to Water-Aid (2010), districts like Bajura, Bajhang and Kalikot have coverage below 10 percent; total coverage here could take as long as 2031.

A study conducted by Sah (2004), at Dhanusha district revealed that materials used for hand washing by mothers before feeding child has noticeable effect on stunting. Furthermore, children whose mothers use ash and soap for hand washing before feeding child are less likely to be underweight. The study further revealed that more proportions of children whose mothers wash hand with only water, or water and mud are stunted than those children whose mothers wash hand with ash and water, or soap and water before feeding child.

Therefore, there is direct linkage between quality of drinking water, sanitation and the status of nutrition. Children who have very poor sanitation access are more likely to be underweight. They are more vulnerable to water-borne diseases like diarrhea and cholera, therefore, suffering from underweight and wasting.

CHAPTER SEVEN

GOVERNMENT EFFORTS

Ensuring basic need and providing modern amenities to the countrymen is the principal goal of any government in a welfare state. Since, hunger is the most urgent appetite of human being, any kind of ignorance and sluggishness in eliminating the same cannot be justified from any angle in the modern world. Therefore, government is subject to feed its fellow countrymen at any cost. And, such foods have to be easily available, reasonable in price, nutritious and shared justly. This chapter attempts to critically analyze government's efforts in halving the number hungry people in the light of MDGs. In doing so, various periodic plans, long term policies and programmes are taken into consideration.

Since, Nepal is committed to achieve MDGs—which became obligatory after the Millennium Declaration in 1990—“attaining them not only requires planning and resources but also political will and commitments. As a signatory to MDGs, Nepal is committed to meeting them, however” (Tiwari, 2006: 7).

It requires a significant policy shifts to attain MDGs in the developing countries including Nepal. The government of Nepal has made some efforts in attaining MDGs can be enlisted as follows:

- Integration of human development into country's periodic plan and budgeting system ensuring funds to first priority project;
- Promoting human development and social inclusion, and provision of safety nets; improving governance;
- Tracking indicators of poverty and MDGs;

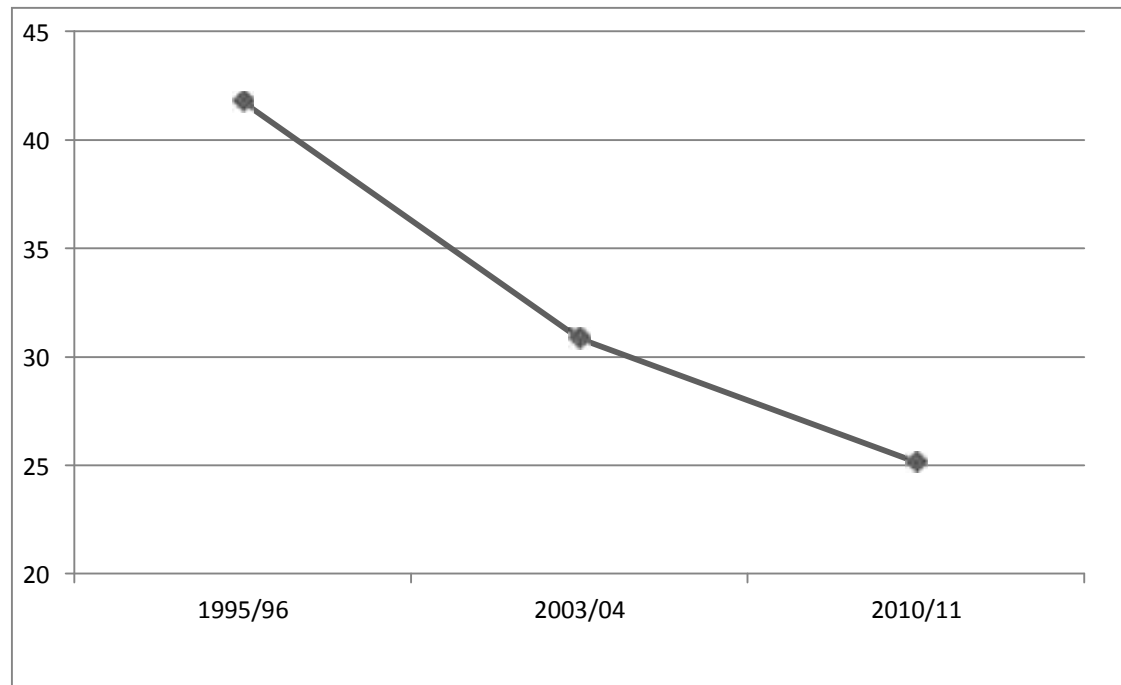
- Disseminating MDGs and creating awareness; and
- Conducting need assessment for identifying interventions and estimating resource to meet the MDGs in the process of preparing MDG-based plan.

Poverty Reduction

The most important factor contributing to the problem of hunger is poverty. This is the state in which people are unable to finance for their most urgent need—food. Since, hunger is so linked with the poverty, it cannot be analyzed separately. Therefore, poverty reduction is the critical linchpin of hunger eradication. Since, expenses on food account for 61.5 percent (CBS, 2011) of total expenditures; increased income has direct and significant impact of food consumption. The most crucial effort in eradicating hunger by the government would be, therefore, poverty reduction.

In 1995/96, when NLSS-I was carried out, incidence of poverty was estimated 41.6 percents (see Figure 7.1), it declined significantly and reached 30.85 percents in 2003/04 (NLSS-II). In fact, it was targeted to reduce incidence of poverty to 38 percents by the end of Tenth Plan. This improvement happened to be more than the expectation of the Plan. In addition, the Interim Plan (2007-10) reviewed poverty alleviation effort of Tenth Plan in following words: “[T]he past experiences have shown that the objective of poverty alleviation might not be achieved even if the overall economic indicators remain positive. Based on this reality the Tenth Plan divided poverty mainly into three categories—income poverty, human poverty and social inclusion. Analyzing all these categories, the overall poverty and human development indices have significantly improved during the past years”.

Figure 7.1: Poverty head count rate (in percentage)



Source: CBS, 2011

During the Interim Plan (2007-10), the level of poverty was expected to decline from 31 percents to 25.14 percents—consistent with the findings of the NLSS-III. Similarly, the Interim Plan (2010-13) has envisaged reducing the incidence of poverty to 21 percents until the completion the plan. Since, the plan is in the verge of completion, the level of poverty can be expected to decline, partly, considering the past trends, and partly, because the country is receiving huge amount of remittance—dominant contributor of rising living standard mainly manifested in sufficiency and diversity of food.

The government has initiated various programs reducing poverty. The urgency of poverty has been duly reflected right from the Tenth Plan (2002-2007). “As the Tenth Plan in itself is the strategic document for

alleviating poverty, its only objective is poverty alleviation” (NPC, 2002).

The Plan has also adopted four strategic pillars of poverty alleviation:

- high, sustainable and broad based economic growth;
- social sector and rural infrastructure development;
- targeted programmes and
- Good governance.

The Interim Plan (2007-10) envisaged prosperous Nepal through poverty alleviation and re-construction of infrastructures damaged during the decade-long civil war. The government during this period had to perform dual role. On the one hand, it had to console the people who suffer badly from decade-long civil war and on the other hand, carry out development activities for poverty reduction through reconstruction of damaged infrastructure and employment generation activities. “The main objective of this (2007-10) plan [was] to generate an experience of a direct feeling of change in the lives of the general public by supporting in the establishment of peace and reducing the existing unemployment, poverty and inequality in the country” (NPC, 2002). But the review of the Plan (2007-10) tells a different story—blurring government vision to reconstruct infrastructure. Most of the projects remained incomplete until the end of the plan except development of underground irrigation project and new road construction project. But successes of such projects were meager given the urgency of physical infrastructure to the country.

Although, the goal of reducing incidence of poverty to 21 percents seems achievable for the current (2010-13) plan, achievement of other goals, on the other hand, seems dubious. Generation of employment through new investments in the country is always challenged by perpetual power

crisis, degrading investment friendly environment—mainly due to heavy unionization and politicization in the every hierarchy of productive sectors. After the country adopted, though on *ad hoc* basis, liberalization policy, amidst growing skepticism, with the development of private sector somehow justified its implementation. Development of private sector contributed generating employment mainly in the service sector. This helped to minimize, though negligible, the incidence of unemployment in the country. But there is a fear that already underdeveloped market economy may suffer badly given the rising trend of extortion, political based labour unionization, power crisis and political instability. Considering the above scenarios, one can easily infer that the country should heavily rely on the remittance to reduce the incidence of poverty and, hence, hunger. Erratic performance of agriculture and industrial sector in the country has left the country with no option other than relying on remittance. Therefore the growth of remittance inflow and the rise of labour force outflow turning out to be the crucial factor determining the incidence of poverty and hunger in the present and in the future.

MDG of Hunger Eradication in the Planning Cycle

Nepal has set up its long term development targets in line with the MDGs. “The MDGs programmes of ongoing 10th Plan (2002-07). The achievements attained by the end of the final year of the 12th Plan (2016/17) will be assessed with the achievements of the MDGs” (NPC, 2002). If the objectives and targets of the 12th Plan are not fulfilled, the targets of MDGs will also become futile and incomplete.

Although, MDGs are formulated by UNDP, it covers most of the countries of the world. Since, every country has its own distinctive

socioeconomic circumstances; therefore, the global targets set under the MDGs could not fit well across the developing world as they have different socio-economic background. Therefore, such goals must be accommodated to national circumstances. The driving force of such operationalization is the nationally owned Poverty Reduction Strategy Paper (PRSP). “The emergence of the PRSP, as a tool for setting national priorities and strategies, including numerical and time-bound targets for human development and poverty reduction, makes it one of the most important instruments for integrating the MDGs within priorities, policies and resource allocation decision taken by governments” (Tiwari, 2006: 55).

Table No. 7.1: Comparison of PRSP targets with implied 2007 targets of MDGs.

MDG Indicators	2007 Target		Remarks
	PRSP	MDG	
Poverty rate (%)	30	30	Aligned
Net primary enrolment rate (%)	90	81	Aligned
Youth literacy rate 15-25 years (%)	79	86	Fall Short
Under 5 mortality rate	72	75	Aligned
Infant mortality rate proportion of 1 year	32	51	Aligned
Immunized Children (%)	90	83.5	Aligned
Proportion of deliveries attended by skilled health workers (%)	18	44	Need Significant Attention
Proportion of population with access to safe drinking water (%)	85	84	Aligned
Proportion of population with access to sanitation (%)	50	69	Need Significant Attention
Proportion of household with electricity (%)	44.5	43	Aligned

Source: NPC and UNDP (2006)

Initially, PRSP was not aligned with the MDGs because it was prepared as a monitoring tool rather than a planning tool. So, there is not tight correspondence between MDGs and PRSP targets. Despite this fact, there is significant level of alignment between MDGS and PRSP targets. It is because of such an alignment (see Table 7.1) that Nepal is likely to achieve 14 targets among 17 such targets.

The Ninth Plan had aimed at regular and smooth supply of essential consumer goods, monitoring these goods to protect the interest of consumers, and storage of minimum required food items at the regional level to ensure food security. The Plan had also mentioned that the government would play the role of a regulator and would control the black marketing and creation of artificial shortages of essential goods.

Tenth Plan envisaged alleviating food insecurity through high yield from the agricultural products expecting higher disposable income and lower incidence of hunger. In doing so, the Plan intended to encourage cooperatives and private sectors. In addition, the Plan envisaged improving the situation of irrigation system. The plan further mentioned: “[t]he task of increasing food productivity in the food scarce areas of the country will be taken ahead in the form of a massive campaign through the use of quality inputs in agriculture. This in turn would contribute towards ensuring food security and poverty alleviation” (NPC, 2002). It had quantitative target of raising per capita food availability from 264 kg to 286 kg with an anticipation of 3.70 percents of growth in food grain production.

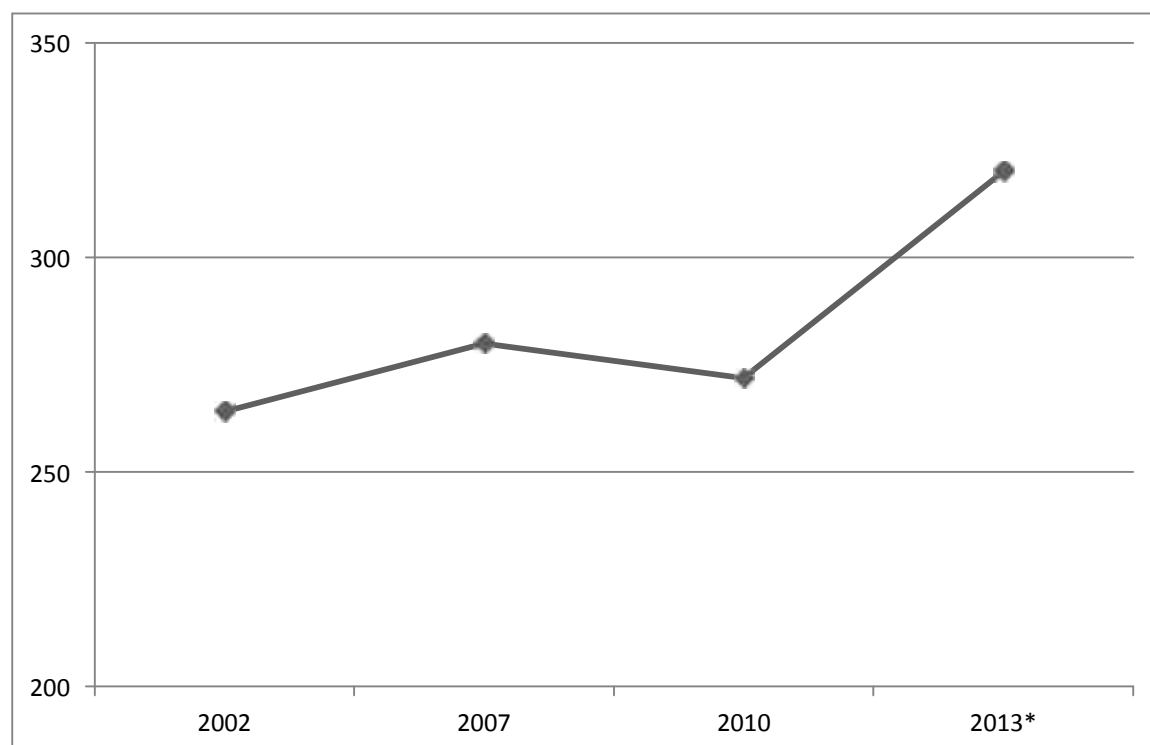
The three main food security related targets of the Tenth Plan (NPC, 2002) were:

- Increasing overall (gross) availability of cereal grains from 264 kgs/person/per annum in 2002 to 286/kgs/person/annum by 2007;
- Reducing proportion of underweight children under three years from 21.9 percent in 2001 to 15.5 percent 2007, and
- Distributing 35,000 mt. of food grains in subsidized prices in the remote food deficit districts.

The Tenth Plan had two strategies regarding hunger eradication. Firstly, special attention would be given to the food deficient areas and to meet the food need of the economically challenged people. In doing so, food deficient districts will be given subsidy for transportation of food. Secondly, the provision of warehouses to meet the shortages during natural calamities and other similar situation maintaining adequate buffer stock.

The long term vision of the Interim Plan (2007-10) regarding hunger eradication was to “make the life of the targeted people healthy and productive by improving national food sovereignty and the food and nutrition situation” (NPC, 2007).

Figure 7.1: Per capita food grain availability (periodic plan wise, at the end)



Source: NPC (2002, 2007, 2010)

*Targeted

Its objective, in short, involved increase self-reliance on food; improve nutrition status, quality control, safety nets especially at the time of natural calamities like drought, flood, landslides etc. and targeted programmes for vulnerable groups.

The plan had target of increasing per capita food availability from 280 kg in the base year 2006/07 to 289 kg in the final year of plan. For the same period, the percentage of stunting children below 5 years was expected to reduce from 39 percent to 35 percent. Similarly, the percentage of the population consuming less than the minimum calories also expected to be reduced to 31 percent from 35 percent.

The Interim Plan (2007-10) duly emphasized the necessity of public distribution of food. It intended to increase the quantity of public food distribution by almost twice. In addition to this, anticipation was to sell 29,151MT of food through Nepal Food Corporation.

The plan adopted the strategy of increasing food grain production as well as its productivity. It maintained the strategy to emphasize “the production of those products which provide food and nutrition security” (NPC, 2007). Identifying the utility dimension of food security, the plan contemplated “to make changes in the food habits of the people to match food availability of the people” (NPC, 2007). Furthermore, it envisaged to increase the feeding practices like, ‘a little and many times a day’ and operate and expand food security storage at least at the district level (ibid, 2007). The plan also envisaged to establish ‘food coupon’ and ‘food credit’ system for food insecure group.

The long term goal of the Interim Plan (2010-13) is to guarantee food sovereignty of the people through coordination and consolidation of all the dimensions of food and nutrition security. The plan has set the objectives of ensuring country’s self reliance on basic food items to improve the situation of food and nutritional status of the people. It also aimed of enhancing the quality control of the food. And, most importantly, the plan envisaged enriching people’s access to food mainly in the food deficit areas.

The strategies of the Interim Plan (2010-13) remained somewhat similar to that of earlier plan. The major programmes, in short, involved:

- promotion of indigenous crops, dissemination of the methods adapting climate change;
- strengthen the food quality control mechanism and conduct awareness programmes;
- targeted programmes for the most vulnerable areas and communities—creating job opportunities within agricultural and some commercial activities such as transportation and food processing;
- policy formulation, implementation and reforms for effectiveness of the programmes, identification of the appropriate safety nets for the most vulnerable groups or areas.

Most of the programs in the Interim Plan (2010-13) resemble the same, in a greater extent, in comparison to earlier two periodical plans, besides, the programmes like introduction of climate change adaptation method and proceeding for the implementation of WTO standard in export and import of food items. Identification of the most vulnerable groups and communities, their categorization, issuance of ‘food credit’, ‘food coupon’ and ‘low-price outlets’ are also remarkable strategies of the plan.

The rationale behind linking MDGs with the periodical plans lies in the fact that goals set at global level might not work in the countries throughout the world, given the distinctive socioeconomic feature of the country. Therefore localization of the MDGs for the country concerned has been reflected in the periodical plans of the country. This is why the formulation and implementation of plan are crucial factors in determining the progress of the country in achieving the targets of MDGs.

A half decade long history of economic planning in Nepal has not been convincing one. Many sound programmes and policies have been rarely accompanied by proper execution. Although, the country introduces new policies and programmes in each periodical plan, the country's attempts to eradicate hunger turning out be a long way journey. Growing dependency on imported food grain, priority of fine rice over locally available or indigenous food crops, lack of infrastructures (road, warehouse, local market etc), mechanization and commercialization of the agriculture sectors are some of the major problems challenging policymakers in the path of hunger eradication.

Policies and Programmes

To Enhance Availability

Price Measures

The price measures being applied in Nepal to enhance availability of food grains are minimum support prices of paddy and wheat. However, these price measures have been rather ineffective in inducing farmers to produce more. First of all, the minimum support prices are too low to provide any incentive to the farmers. Secondly, the Nepal Food Corporation which is supposed to buy grain from the farmers is very inefficient and now virtually bankrupt organization. Accordingly, it has limited capacity to procure surplus paddy and wheat of the farmers.

At present, Nepal does not provide any price subsidy for any agriculture inputs. Until June 2000, subsidy on urea supply was being provided. Both the government owned Agriculture Input Corporation and private traders involved in fertilizer supply received subsidy for every ton of fertilizer imported in the country. No the subsidy has been completely withdrawn. Partly as a result of fertilizer subsidy withdrawal and because of

disruption in supply due to conflict situation, use of fertilizer has gone down drastically according to the official statistics. It is possible that fertilizer coming to Nepal through informal trade has not been included in the official statistics. But the fact remains that fertilizer use has declined. Another reason for overall decline in fertilizer use may be due to adverse impact of insurgency. Many larger farmers who were previously the main users of fertilizer are now not much interested in agriculture because many kinds of levies are being imposed by the insurgents. Moreover, they create all kinds of barriers to marketing of agricultural surpluses.

Non-Price Measures

Increasing agriculture production to enhance availability of food has always been the policy of Nepal. Accordingly, various programs have been there to increase productivity and production of agricultural crops. These programs have included irrigation, supply of agriculture inputs, agriculture credit, agriculture research and extension, post-harvest loss reduction, and market support. However, the long-term growth of agriculture sector has been dismal, hardly enough to keep pace with the population growth rate. As a result there has been no significant increase in availability of food. In fact, Nepal has become a net food importing country. As late as 1980s Nepal used to be a food exporting country.

In 1995 Nepal began implementation of the Agriculture Perspective Plan (APP) which sought to accelerate agricultural growth rate so as to make Nepal's economic growth basically an agriculture led growth. Four critical components of APP were irrigation, fertilizer supply, agricultural roads for market access and strengthened research and extension services. Implementation of APP initially got mired in bureaucratic turf battle and later with lack of funding. Lately, financing of security needs of the

country has further reduced country's capacity to fund developmental activities. The development expenditures in agriculture sector have been decline in the recent years even in nominal terms.

To Ensure Physical Access

Many areas of Nepal are so remote that either food has to airlifted or transported by animals. This means very high transportation cost. For instance, rice which is available at around Rs.25 in Nepalgunj, a town in Terai, costs about Rs. 73 per kg in Humla district where food has to be airlifted by helicopter or airplane. The people of these remote areas also receive low prices for their products because of the high transportation cost. Thus, to reduce transportation cost and ensure supply of food to the people of the remote areas of Nepal, emphasis is being given to connect remote areas by road. The progress of road construction until 2000 was very encouraging but after 2000 construction of roads has slowed down as result of insurgency in the country. The pace of constructing new road networks has been re- accelerated given the lack of locally elected body and political turmoil. Construction of new road route such as Jumla-Surkhet has significantly changed the lifestyle of the people. After the Comprehensive Peace Accord between Maoist rebels and the government the country is receiving significant amount of foreign aid in the name of reconstruction of physical infrastructure destroyed during the insurgency.

Food-for-work activity is also helping in improving physical access to food by paying wages in terms of food. Food-for-work not only provides direct physical access of the poor in remote areas to food but also helps ensure physical access to food in future by removing transportation difficulties and reducing cost. Food-for-work has proved to be a very cost effective and efficient programme in improving food security and

physical access. In addition to food-for-work a number of income generating activities, some specifically targeted to poor and deprived (e.g., leasehold forestry, micro-credit program), are being implemented to reduce poverty. The outcomes of these programmes have been mixed and they have not been able to make a perceptible dent on poverty situation of the country. “Currently, the programme covers 30 districts throughout the country. During the time between the year 1991-2007, the amount of food NFC is handling came down from 34,000 metric ton to 20,000 metric ton per mainly due to the hindrance caused by the Maoist conflict” (ibid, 2007). The future of the remains uncertain as one of the major donour of the programme DFID withdraws its support referring to low development of infrastructure development.

Rural Community Infrastructure Development Programme is in operation in 21 districts for the construction and improvement of community infrastructures. Its main objective is to enhance self-reliance capacity of rural poor thereby bringing improvement in their food security situation. Construction of rural roads and some small income generating activities are being carried out through this program. Of the target set to build 74 km roads in the fiscal year 2010/11, 71.5 km rural roads was already constructed while 110 VDCs of 21 districts were selected to operate rural roads and income generating projects during the review period of the current fiscal year 2011/12. Likewise, design and estimate works are being carried out subsequent to the project selection process.

Local Infrastructure Development for Livelihood Improvement Program program is in operation in Achham, Dailekh, Jajarkot, Kalikot, Dolakha, Okhaldhunga, Khotang, and Ramechhap districts aimed to bring improvements in the food security situation of rural farmers of the said

districts. Constructions of 83 small irrigation channels were completed in the previous fiscal year 2010/11 so as to raise people's living standard, their income source and boost up cash crops production in food deficit areas through this program. A total of 27 irrigation projects have been completed during the first eight month of current FY 2011/12.

To Ensure Nutritional Security

Public Distribution System

There is only limited public food distribution system in Nepal. At present mid-day meals are being provided to primary school age children in 14 districts of mid and far western regions of Nepal. This program is supposed to improve nutritional situation of primary school children and also encourage school enrolment. This program is a much appreciated program but its coverage is very limited. The program is also unsustainable as government's own resource is not enough to continue this program once the WFP withdraws food support to this program.

Nepal's public food distribution system was never a significant operation and hardly had any impact on overall food security situation of the country. It, however, did contribute to some extent to food security of the people living in the remote areas of Nepal. Public distribution system of food in Nepal has also criticized as a program, which ensures food security of government officials posted in remote regions of Nepal rather than local people.

Food Programme for Education Food programme education under the support of United Nations World Food Program is in operation since August 1967. As per the agreement reached between Nepal Government and World Food Program in September, 2007, Day-Meal Program is

being conducted for the year 2008-2010 in 10 districts including Darchula, Baitadi, Dadeldhura, Bajhang, Bajura, Accham, Doti, Dailekh, Salyan and Rukum. This program is carried out with the goal to increase the admission rate of students, raise the level of daily attendance, reduce class dropout rates, increase the studying capacity of students, bring improvements in health condition of students, and increase the number of girls in admission by targeting those districts which have less access to education. Day-meals (Nutritious Food) were distributed to 1,650,000 child students through Food Programme for Education that was included in a three year interim plan to provide children with access to education to those who are deprived of school education. Day-Meal program that was conducted for primary level students in 21 districts in the fiscal year 2008/09 has been extended to 35 districts this year. This program has brought positive impact on the children's health, girl students' enrollments and declination in school dropouts.

7.3.2.2 Public Awareness

The communication efforts have not been effective to bring about behavioural changes conducive for nutritional improvement. Many nutritional problems are deepening because of lack of public awareness and practices rather than lack of food. For instance, Terai has relatively high incidence of Vitamin-A deficiency when there is plenty of cheap Vitamins-A rich food in Terai. Even the poorest families can also easily grow them. Yet this is not happening.

To Ensure Entitlements

Income Enhancing Activities

A number income enhance activities have been launched. Some of these are targeted to assets less poor, e.g., food-for-work, leasehold forestry, others to poor households with meager resource base, e.g., small farmer development program, micro-credit programme, etc. Although these programmes have been relatively effective in improving food entitlement of the poor, coverage of these programmes are limited. Moreover, intensification of conflict has forced several programmes close down in many districts.

Price Policies

Except occasional administrative actions against so called hoarders and black marketers there are no specific initiatives to restrain rise in price of food. Government has focused more on easing supply bottlenecks to allow market mechanism itself to restrain prices of food. By and large, this policy seems to working as recent years have witnessed relatively slow rise in prices of food in accessible areas. However, in remote areas there is report of high price of food at the time of food shortages. Due to supply bottlenecks market mechanism cannot work effectively in these areas.

Nepal Food Security Program is in operation since FY 2008/09 with the objective to provide immediate relief to poor public marred by skyrocketing food prices. In FY 2010/11, irrigation facility was provided to 3,873 hectares of land while tree plantation was carried out in 1,637 hectares. Similarly, 104 drinking water projects, 16,083 compost pits and 176,111Km of rural road were constructed during the same period. In the first eight months of current fiscal year, computers were procured and

works have been initiated to carry out beneficiary assessment after reaching an agreement with the consultants.

Food at Subsidized Price

Food subsidies is mainly targeted at providing food below market price to civil servants and the population as a whole in remote areas where there is no connection with the land transportation and also no food available for sale in large parts of the year. It was done by buying food from surplus areas by Nepal Food Corporation (NFC). “It was aimed at reducing inter regional food imbalance. However, guided by political interest, NFC distributed most of the procured foods in the Kathmandu Valley. It usually supplies only around 5-6 percent of the deficit in the rural areas, and beneficiaries most often are government officials and well-off households of the region” (FAO/WFP2007 and WB, 1991). Despite inefficiency in the functioning of the NFC, there is growing need for such strategy as the population growth rate continues to outstrip agricultural production and the region still being isolated. “In order to improve efficiency in its functioning, the NFC developed the concept of local grain storage program. A local grain storage programme aims to reduce seasonal price fluctuations by providing the opportunity for the poor farmers to hold grain after harvest until price rises.

There have been several policies formulated and implemented since the country realized hunger as stigma to the modern welfare state. Among implemented programmes, ranging from direct support to employment creation only few turned out to be successful e.g. food-for-education and food-for-work. Ineffectiveness of many other programmes lied in the fact that most of the programmes sought temporary solution out of the problem. There evolved a deep rooted thought of prioritizing imported

fine rice over indigenous food grain. Gradually, local people started being reluctant to produce by themselves rather than queuing at the NFC depot—aggravating dependency. Moreover, several international NGOs and INGOs working in the areas seem reluctant to promote self production and indigenous food consumption.

CHAPTER EIGHT

SUMMARY OF MAJOR FINDINGS

Availability of Food

The main finding of this piece of research is the fact that availability of food *per se* does not ensure food security. Availability of food, though dominant, is only one dimension, among numerous others, to ensure food security at country level. However, availability of food followed by ‘economic access to food’ and ‘utilization of food’ are crucial in ensuring food security at community and household level respectively.

Throughout a decade the productivity of major cereal crops like paddy, maize, wheat etc. remained somewhat stagnant. The productivity of rice has faced several ups and downs but this has been now in declining trend. In the case of Nepal, it is productivity of per hectare of land is more crucial than production. Since the country still undergoing expansionary phase of arable land, expansion of land mainly through deforestation significantly contributes the overall production of food grain. Besides this, agricultural sector in Nepal has following features and accompanying problems:

- Production of food and thus availability of food is heavily dependent on the level of rainfall. The production of paddy in most of the area of Nepal relies upon the timeliness and sufficiency of monsoon rainfall.
- Since, low priority is given to the agricultural sector by people in general, mainly youths, reflected into gradual dependency of major food grains with neighboring countries like India.

- National food balance in the past decade has been either marginally surplus or deficit depending on the production outcome which fluctuates primarily due to rainfall situation. The Hill and Mountain regions are more likely to be food deficit and therefore more vulnerable to such fluctuations.
- Low production of food grain and thus availability of food in the country is attributable to conventional type of farming, declining motivation towards agriculture related activities and poor infrastructure, mainly transportation.
- Prioritizing rice over other local food grain like millet in most of the food deficit districts of Mid-western and Far-western has been intensifying dependency upon food aid of government and non-government agencies.

Access to Food

Economic access to food is the prime determinant of food security within the household, community and country in general. Various studies at national and international level reveal that the level of hunger is positively related to the level of poverty. A Sub-regional Hunger Index for Nepal 2009 suggests that more affluent and economically active sub-regions are low vulnerable to hunger. The highest prevalence of hunger was found in the Far- and Mid-Western Hill and Mountain. The HDI in these regions have low Human Development Index as well. Problems and prospect of economic access to food in ensuring food security can be enumerated as:

- Since, the agricultural sector is still the largest employer to more than three hundred thousand of annually accumulating labour force. The low performance of agricultural sector coupled with decade long Maoist insurgency left very slim opportunities within the country for vast majority of them--triggering heavy migration to gulf countries for semiskilled and unskilled jobs.
- Heavy influx of remittance has been crucial factor to reduce the level of poverty and thus enhancing the possibility of consuming nutritious and diversified foods for the vast population.
- The magnitude of remittance per worker in Nepal is dismal compared to other Asian countries. However, the total inflow of remittance accounts for one of the dominant source of foreign currency inflow in the country.
- The intensity of poverty has been coupled with high income inequality as highest 20 percent enjoys almost 55 percent of country's total resources. While, lowest 20 percent shares meager 6 percent of country's total resources. Therefore, widening gap between rich and poor has very serious implication such as creating chaos in the economy leaving vast majority of people unable to fulfill their basic requirement. The perpetuating problem as such might endanger the sovereignty of the country.
- Increasing food price is another crucial factor posing as a major difficulty in achieving the MDG of hunger eradication worldwide. Heavy dependency of imported food grain, ineffective price monitoring mechanism, undue appropriation of profit by

middlemen, heavy transportation cost are few, among numerous others, to account for ever increasing food inflation. The rising food price alone can cancel out the achievements conceded in the way of halving the number of hungry people by 2015.

Utilization of Food

Forty nine percent of Nepalese children under five are chronically malnourished (stunted). This figure is within the top five in the world. Although there has been some development on the hunger indicators in the past, the recent rapid rise in food prices and the consequences of climate change pose the main challenges in achieving the target.

Well-utilization of food needs nutritional intakes, pure drinking water and intra-household distribution of food. Nepal's inability (however, UNDP categorizes it as "unlikely") to achieve the MDG of hunger eradication can be largely attributed to poor "utilization of food". Forty nine percent of children under five are malnourished, caused by poor management of nutrition in the food. The problem related to the utilization of food can be enumerated as:

- Women and children in Nepal are more vulnerable to food insecurity. A study conducted in 1997 revealed that 48 percent of children in Nepal are stunted. The percentage of malnourished women, measured in BMI, has declined by 14 percent implies the fact that food insecurity within household has been gradually improving. This has another implication as well. Since women and children are deprived from consuming nutritious food within the household, if the nutritious status of women is improving, though

slowly, indicates eradicating hunger for women, children and the whole member of the family in the future.

- Besides nutritional aspect, utilization of food involves behavior associated to water and sanitation as well. Though 50 percent of Nepalese use tap water for their daily use, lack of knowledge about the contamination and purification has been detrimental in ensuring not only well utilization of food but also the overall health of the family.
- Diarrhea outbreak in the western part of the country in 2009 took 367 lives was rooted in the contamination of drinking water with human disposal. This clearly suggest that the majority of people in Nepal have nothing or meager knowledge about sanitation.
- Nepali cuisine mainly involves food grain as a dominant ingredient. Preference of fine rice over other indigenous products, which possess vital micronutrients, has been posing serious difficulties to reduce malnourishment from the country. Low diversification of food mainly due to poor purchasing power and poor knowledge about the nutritional aspect of food are two main reasons for very sluggish movement towards reducing malnourishment.
- Intra-household distribution of food is crucial for the country where women are considered to be subordinated to their male counterparts and deprived or cheated from household resource distribution. The majority of women in Nepal have to be satisfied with low quality of food, leftovers, or have to share their already

insufficient meal with siblings, leaving both mother and children hungry for short run but stunted in the long run.

Government Efforts Eradicating Hunger

- Poverty reduction is the most critical linchpin in hunger eradication. Therefore, the most crucial step toward hunger eradication by the government has been poverty reduction. According 3 different NLSSs country witnessed 73 percentage of reduction in the poverty head count rate, resulting masses of the people enriched their access to sufficient and diversified food.

- Heavy influx of remittance largely accounts for the nation's increased income and declining poverty. Poor performance of both agriculture and industrial sector could not create additional job to hundreds of thousands of productive human resources, stipulating them for foreign employment. Though this trend is assisting government to achieve its goal in the short run but intensifying the problem of underutilization of natural resources (mainly, agricultural lands), feminization of agriculture sector leading low level of production and increasing trend of consuming imported food grain. Government efforts in this regard are turning towards promotion of foreign employment given the creeping movement of the economy with very meager chances creating new job opportunity.

- Realization of poverty as the single most constraint of country's prosperity has been duly realized right from the formulation of Tenth Plan as poverty reduction was the sole objective of the plan. The Plan was an important milestone not only because of its

emphasis on poverty reduction but also because most of the targets of the plan were very much consistent with the targets of MDGs. This trend continued in the subsequent plans, with due emphasis on MDGs in general and poverty reduction and hunger eradication in particular.

- A half decade long history of economic planning in Nepal has not been convincing one. Many sound programmes and policies have been rarely accompanied by proper execution. Although, the country introduces new policies and programmes in each periodical plan, the country's attempts to eradicate hunger turning out be a long way journey. Growing dependency on imported food grain, priority of fine rice over locally available or indigenous food crops, lack of infrastructures (road, warehouse, local market etc), mechanization and commercialization of the agriculture sectors are some of the major problems challenging policymakers in the path of hunger eradication.

- There have been several policies formulated and implemented since the country realized hunger as stigma to the modern welfare state. Among implemented programmes, ranging from direct support to employment creation, only few turned out to be successful e.g. food-for-education and food-for-work. Ineffectiveness of many other programmes lied in the fact that most of the programmes sought temporary solution out of the problem. There evolved a deep rooted thought of prioritizing imported fine rice over indigenous food grain. Gradually, local people started being reluctant to produce by themselves rather than queuing at the NFC depot—aggravating dependency. Moreover,

several international NGOs and INGOs working in the areas seem reluctant to promote self production and indigenous food consumption.

- Finally, Nepal's efforts in achieving MDGs in general and poverty reduction and hunger eradication in particular are remarkable given the decade-long Civil War, subsequent political impasse, and slow but erratic agricultural growth. Whether country manages to achieve the MDG of hunger eradication still remains uncertain as the Third Progress Report designated it as "potentially likely". But one thing is clear that Nepal is in the path to eradicate hunger in the very near future. And, declining poverty overtime consolidates this inference.

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