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The prevalence of chronic hunger and malnutrition in developing countries is the major challenge for policy-planners and international funding agencies. Banishing hunger and ensuring food security has been accepted as the primary responsibility of the state towards its citizens, and is repeatedly endorsed at various national, regional and international forums. This chapter discusses the nature and measurement of hunger and malnutrition, Socio-economic aspects of hunger, public policy issues and current strategy being implemented at global level.

Hunger and Malnutrition – Conceptual Aspect

Hunger is a subjective term and the concept of hunger varies from person to person depending upon perception and understanding of requirements and objectives of life, availability of resources, socio-economic and cultural perspectives and behavioral modes. Hence there is no single clear and universally accepted definition of hunger and way how to measure it.

Hunger in the common sense is the physical sensation of desiring food. It includes a spectrum of conditions in which the diet is either quantitatively or qualitatively inadequate. Hunger exists when a person’s body lacks the required nutrients to grow and develop to a productive, active and healthy life.
Hunger is a term which has three meanings (Oxford English Dictionary, 1971):

- The uneasy or painful sensation caused by want of food, craving appetite. Also the exhausted condition caused by want of food.
- The want or scarcity of food in a country
- A strong desire or craving

Word hunger refers to the second definition.

Internationally the term, “Food insecurity” has been in use for some time to describe the inadequacy of national food supplies over time. It has been expended to include lack of food access at the household and individual level (Le Blanc et. al., 2005); Habicht, Pelto, Erongillo and Rose, 2004).

In a broad sense a nation or a community or a household is considered to be free from hunger if food is available at all times, food that is available is also culturally acceptable, people have economic and physical access to food, That is, people have the purchasing power to buy food, food that people consume has the requisite nutritional value for a healthy life, Food that people can access must have nutritional value. Consumption of food, which has no nutritional value will leave people without energy for a healthy life and hence hungry. People have access to potable water and other infrastructure needed for absorption of food by the body.

The joint FAO/WHO conference on nutrition held in Rome in 1992, declared "Hunger and Malnutrition are unacceptable in a world that has both knowledge and resources to end this human catastrophe"
and recognized that “access to nutritionally adequate and safe food is a right of each individual”.

When we talk about people suffering from hunger we usually refer to those who are unable to have sufficient food to meet their nutritional needs required for physical and mental health for sustainable period of time. Availability, accessibility and stability of required food grains are basic-conditions of food security. In view of this lacking of any element causes the problem of hunger. In general there are four major dimensions of hunger – **chronic hunger** caused by inadequate purchasing power; **hidden hunger** caused by the deficiency of micro nutrients; **transient hunger** caused by disruption in system due to drought, floods, cyclones and other natural calamities or civic disorders and **institutional hunger** caused by in-built problems of society arising through laws, customs, usages, practices, inter-organizational relationships etc., that determine the pattern of relationships and entitlements. A gender bias in the entitlement of the food at household level is an example of institutional hunger as women eat last, least and leftovers.

International Food Policy Research Institute's (IFPRI) defines hunger according to the number of calories consumed per day:

**Subjacent hungry**: those who consume between 1800 and 2200 calories per day; **medial hungry**: those who consume between 1600 and 1800 calories per day; ultra hungry: those who consume less than 1600 calories per day. 2200 calories is the average energy requirement that, as recommended by international experts, is needed for adults undertaking light activity. However, country level definitions of hunger vary greatly.
Hunger can also be defined as nutritional deficiency and/or under-nourishment and malnourishment and in the extreme case starvation.

Malnutrition is an associated problem. It relates to the quality of the food absorbed and to its nutritional value. It is a pathological state arising from prolonged use of food that does not supply all the elements necessary for good health. Hence, malnutrition worldwide includes a spectrum of nutrient-related disorder, deficiencies and conditions such as intrauterine growth retardation, protein-energy malnutrition, iodine deficiency disorder, vitamin A deficiency, and iron-deficiency anemia, (Ratzen et. al., 2000).

The five methods are presently used by FAO to measure different aspects of hunger and malnutrition:

- “FAO methodology for estimating the prevalence of undernourishment” (L.Naiken);
- “The use of household expenditure surveys for the assessment of food insecurity”, (L.Smith);
- “Individual food intake survey methods”, (A.Ferro-Luzzi);
- “Measures of nutritional status from anthropometric survey data”, (P.Shetty);
- “Qualitative measures of food insecurity and hunger”, (E.Kennedy).

The features of “hunger” that drive the concern for combating it include:

- **Effects on Health**: The effects on health constitute (1) wasting (low weight for-height), (2) underweight (low weight-for age) or (3) stunting (low height-for-age).
- **Suffering**: The pain and distress of hunger, the "uneasy or painful sensation caused by lack of food", people's concerns for their children;

- **Behavior**: Among the destitute, food-seeking dominates decisions and behavior in a way that favors short-term survival to the exclusion of much else;

- **Economic**: Reduced productivity, both from lowered energy availability for work and from lowered physical fitness resulting from malnutrition, as well as changes in risk-taking and coping strategies.

These days, hunger understood as starvation is not a pervasive phenomenon in our part of the world; not even in the poorer countries of the region. Incidence of hunger, defined as the absence of two meals a day, is limited to a small number of people mostly in isolated pockets and inaccessible places, that too during certain parts of the year but Under-nutrition is the main threat to health and well-being not only in middle and low income countries but also globally. Inadequate consumption of calories is much more common. Average dietary energy supply in calories, derived from national food balance sheets and population data, show that in the early 1990s although enough food was available globally, nearly 840 million people in the developing world had inadequate access to food, i.e., below the minimum level of energy requirements.

Therefore, estimation of the precise number of ‘hungry’ or ‘calorie-deficient’ people is a hard task. Hunger is easy to recognize but hard to measure. It has many faces ranging from chronic lack of energy,
to acute malnutrition, to death. Various estimates measure different aspects of hunger or use different measurement techniques and hence are difficult to compare. A useful starting point is to measure calorie intake as a proxy for hunger. This is not fully sufficient though, because an arbitrary cut-off point cannot measure the multidimensional aspects of hunger and it is quite possible that even people above this cutoff are under-nourished. Indeed, the choice of the cut-off point itself can influence the outcome significantly as there is a dense spread of households just above and below the typical food poverty lines.

At global level the most widely-cited data on the hunger come from the United Nations Food and Agriculture Organization (FAO). On an ongoing basis, FAO constructs estimates of mean per capita dietary energy supply (\(((\text{Production} + \text{Stocks}) - \text{Post harvest losses}) + \text{Commercial imports} + \text{food aid} - \text{exports})\). Assumptions regarding the distribution of this supply are made based on data on income distribution, the distribution of consumption or, in some cases inferences based on infant mortality (Naiken, 2002). The constructed distribution is compared against minimum per capita energy requirements (Weisell, 2002) and from this the proportion of persons whose access to food is below these requirements is estimated. FAO calls it the prevalence of under nourishment.

Limitations of FAO approach are well known. First, there are serious concerns about the quality of the underlying data on food supply (Devereu and Hoddinott, 1991). Second, the absence of good data on distribution of food consumption means that estimates are highly sensitive to changes in the shape of the distribution around the minimum.
requirements threshold. Third, Aduayom and Smith (2002) show hunger prevalence when compared to those derived from household consumption surveys.

Despite these valid concerns, the FAO approach provides a fairly credible data on a global basis. FAO (2012) estimates that over the last decade, the proportion of people undernourished in the developing world declined slightly from 18.2 to 14.9 per cent between 2000 and 2002 to 2010 and 2012. Asia and Pacific and Sub-Saharan Africa account for nearly 90 per cent of the world’s hungry.

Globally, certain groups of people are more vulnerable to food insecurity than others. Victims of conflict e.g. refugees and displaced people, marginal population i.e. school drop-outs, unemployed people, homeless people, orphans, nomadic groups, dependent population e.g. elderly people, children under 5, disabled and patients, women of reproductive age, single non earning women, ethnic minorities, low literacy households, land less labour, marginal farmers, economically backward classes etc., suffer more at the time of adverse conditions and scarcity of food.

In pre-school and school-age children, nutritional status is often assessed in terms of anthropometry. “The basic principle of anthropometry is that prolonged or severe nutrient depletion eventually leads to retardation of linear (Skeletal) growth in children and loss of, or failure to accumulate muscle mass and fat in both children and adults”. (Morris, Vol. P.12)
Three anthropometric measures which are used for measurement of malnutrition are (Appendix-1):

- Underweight (low weight for age),
- Stunting (Low height for age), and
- Wasting (low weight for height).

Weight-for-age (under weight) reflects both the long-term and short-term effects of nourishment and is considered indicative of both chronic and acute undernourishment. (Nair, 2007)

Height for age (Stunting) can be taken as indicative of long-term or chronic undernourishment, which does not vary with short-term changes in the level of nourishment.

Similarly weight for height (Wasting) gives body mass in relation to body length and indicates acute but short-term undernourishment due to failure to receive adequate nourishment immediately before measurement.

Micronutrient deficiencies (hidden hunger) of iron, Vitamin-A, iodine and Zinc make one susceptible to infectious diseases and stunt physical and mental development, impeding productivity to the tune of a less of 10-15 per cent of one's life time earnings and in fatal cases death.

This analysis shows that hunger and malnutrition has multi dimensional facets. To understand the problem of hunger it is imperative to review socio-political and economic aspects related with this problem which is precisely the issue attempted in the subsequent section.
Socio-Economic aspects of the Problem

In general hunger and food insecurity is linked to reduced food availability. Hunger particularly at the time of famine appeared to be a result of an acute food shortage, which could be best addressed by way of increasing the production and distribution of food. This notion has affected public policy greatly. Increasing availability of food grains through technology-based productivity improvements seemed to offer the world a way out of hunger has remained the basic objective of agricultural development policies.

The concept of food and nutrition security has comparatively changed over time. The World Food Conference, held in 1974, was primarily concerned with finding out means and ways for ensuring the availability and price stability of basic foodstuffs and building the effective network for meeting the threats of famines. Thus, the problem of hunger and malnutrition was viewed from the terms of availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuation in production and prices (United Nations, 1975).

Because of this thinking paradigm tackling hunger was thought of as synonymous with enhancing productive capacity of food crops, as a result of this policy technology based on using of high-yielding varieties of seeds, chemical fertilizers and irrigation was adopted by many countries to boost food availability. This strategy known as the Green Revolution proved to be successful in increasing the production of wheat and rice and therefore, immensely helped in ensuring food availability at macro level and enabling the governments to run
programmes targeted on providing safety networks to vulnerable groups of society. On balance, the Green Revolution probably saved millions from famine (The Unfinished Campaign against Hunger, 2009).

At present there is significant change in policy designing for food security.

The multidimensionality of the food system implies two-pronged approach to be undertaken for achieving food security and economic development in developing countries. In general terms, economic development is the engine that can help in achieving food security, but it needs to be tailored to the socio-economic contexts of each developing country. Hence, there is debate over the best path to take. But it is generally accepted that it is important for developing countries – where the majority of the population lives in rural areas and depends on agriculture for its livelihood – to initially concentrate on the agricultural sector. As studies have shown, agricultural growth can have a significant impact on other sectors of economy as well.

Along with focus on agricultural growth, it is realized that Targeted food and Nutrition Intervention is essential. Because the poor—especially the rural poor—are more exposed to serious economic, political, social, and health risks but have the least access to risk-management tools, it is necessary to implement micro-level interventions that target these vulnerable populations, such as school feeding programs to improve child nutrition.

Researchers in this show that both hunger and malnutrition reflect the interaction of purposive actions of individuals given preferences and
constraints together with biological processes. In behavioral models an individual's nutritional status is treated as an argument in the welfare function of individuals or the households in which they reside (Behrman and Deo Lalikar, 1988; Strauss and Thomas, 1995), a reflection of the intrinsic value placed on nutritional status. In allocating resources, household decision makers take into account the extent to which these investments will make both their children and themselves better off in the future as well as currently.

There are resource constraints reflecting income (itself an outcome as nutritional status which affect productivity), time prices faced by households and process for health outcomes. Nutrient intakes, time devoted to the production of health, individuals genetic make-up, knowledge and skill etc. are important inputs which produce health outcomes at individual level. This approach suggests that to ensure sustainable food security change in behavior pattern is crucial for policy designing.

A number of maternal factors like mother’s stature, her nutritional status prior to conception and her weight gain during pregnancy have been shown to be significant determinants of intrauterine growth retardation (IUGR) by many researchers. Most important are Diarrheal disease, intentional parasites smelling and respiratory infections also lead to IUGR.

Poverty, hunger and malnutrition are linked. Strauss and Thomas (1995, 1998) and Hoddinott Skoufias and Washburn (2000) documented the empirical literature relating dimensions of access and intakes of calories to household consumption levels. Behrman and Rosenzweig
(2004) report that cross-country variation in GDP per Capita (PPP) is inversely related to the percentage of low birth weight (LBW <2.5 kilogram) births. Haddar, et.al. (2003) estimates that the cross country elasticity of pre-school underweight rates with respect to per capita income for 1980-95 is (-) 0.5. These relationships imply that nutritional objectives such as the Millennium Development Goal of halving the prevalence of underweight children by 2015 are unlikely to be met through income alone and that successful efforts to reduce most forms of malnutrition are likely to have incidence of benefits concentrated relatively among the poor.

Empirical studies highlight the fact that the problem of hunger has varying facets in terms of the root of the problem. For the sake of revising appropriate policy to tackle the problem it is essential to view the problem in socio-economic framework. The subsequent section attempts to pinpoint the issues concerned with framing the policy.

**Prominent Issues for Battle against Hunger**

Traditionally agricultural, health and nutritional issues are treated separately by the policy planners. As a consequence, separate and isolated policies and programmes were chalked-out for tackling issues relating to food-access and public health system. Major approaches for ensuring food security and good nutritional status adopted in programmes and policies are briefed as follows:-

**Focus on Agricultural growth** – For eradication of hunger, availability of food grains is one of the important components. Plan, agricultural policy was focused on increasing yields, productivity and general food availability in the country. The Green revolution was
launched to increase productivity and production. Studies relating to the impact of the green revolution show that predominant focus on the increased production of rice and wheat – staple grains consisting mainly of carbohydrates, protein and a few other nutrients are essential to meet human nutritional requirements (Remans, Fanzo, Palm, DeClerck, 2011). This push to concentrate on a few staple crops may be a contributory factor to the simplified diets that continued under nutrition in south Asia and widespread nutritional deficiencies (Graham, Welch, Saunders, Ortiz-Monasterio, Bouis, Bonierbale, de Haan, Burgos, Thiele, Liria, Meisner, Beebe, Potts, Kadian, Hobbs, Gupta, Twomlow, 2007). These policies could not achieve improved food and nutrition security as the prevalence of child malnutrition is the highest in India. While the green revolution improved food productivity significantly, the role of health care, childcare and diverse and quality foods for household food and nutrition security was less emphasized (Bamji, 2007). More detailed analysis have also highlighted that women and children benefitted the least from the technological revolution (von Braun, Kennedy, 1986; von Braun, Puetz, Webb, 1989). Such a situation demonstrates that reforms in one sector could be impactful if other sectors are integrated simultaneously in both policy and practice.

Agriculture provides sources of income but not improvement in child nutrition.

**Focus on Nutritional Security**

The new emphasis on nutrition security and public health as reflected in the definition of food security given at the 1996 World Food Summit (Rome Declaration on World Food Security and World Food
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Summit Plan of Action. FAO; Rome, Italy: 1996), agricultural interventions have drawn more attention to nutrition for the alleviation of micronutrient deficiencies (Ruel, 2001; Bouis, 2000; The World Bank, 2007).

Historically, shortages of staple foods such as wheat and rice were prevalent in developing countries, leading to hunger and starvation (Dreze and Sen, 1990; Fogel, 1994). Thus, selling staple foods at subsidized prices through special shops has been a popular strategy of governments in developing countries for reducing under-nutrition.

A major goal for food policies is to facilitate children's physical and mental development in less developed countries. At low levels of income, children's physical development and learning are intertwined; children's cognitive development depends in their nutritional and Nutritional Status, household resources and the educational infrastructure (Bhargava, 1998; Bhargava, Jukes et. at., 2005).

Food intakes are likely to be influenced by food prices, household incomes, the education and knowledge of decision-makers, tastes and individuals' energy requirements. Policy-makers concerned with food consumption and health outcomes are interested in knowing how diets changes with prices and income (e.g. Pinstrup-Andersen, 1988).

For tackling food shortages (“energy deficiencies”), programmes such as distributing subsidized or free food are essential (Dreze and Sen, 1990). Also, schemes such as “food for work” are useful especially where individuals are in good health and there are few employment opportunities.
International Crop Research Institute for Semi Arid Tropics (ICRISAT) conducted a study of nutritional and economic factors in six villages of southern India in 1976-77 covering approximately 240 households (Binswanger and Jodha, 1978). The Study reveals that Milk is an important source of protein, calcium and other nutrients and its consumption was likely to be influenced by household incomes, especially in the long run.

Behrman and Deolalikar (1987) analyzed the ICRISAT data by aggregating nutrient intake for household members using the ordinary least squares method, which is appropriate for cross-section regressions. The main findings were that income elasticity of energy and nutrients such as protein, calcium, iron, vitamins, A B (niacin, riboflavin and thiamine) and C were not significantly different from zero. Thus, the authors concluded that individuals do not nourish themselves better with increases in incomes and may be consuming foods because of "taste, odor, smell, and status value".

The persistence of hunger in many countries in the contemporary world is related not merely to a general lack of affluence, but also to substantial – often extreme – inequalities within the society. The dependence of one group's ability to command food on its relative position and comparative economic power vis-à-vis other groups can be especially important in a market economy.

The importance of the institution of wage labour is a particular aspect of this general problem. People who possess no means of production excepting their own labour power, which they try to sell for a wage in order to earn an adequate income to buy enough food, are
particularly vulnerable to changes in labour market conditions. A decline in wages vis-à-vis food prices, or an increase in unemployment, can spell disaster for this class. The class of landless wage labourers has indeed recurrently produced multitudes of famine victims in modern times.

Recent times have witnessed not only a rapid expansion of market exchange, but also significant developments in the conditions of 'exchange with nature'.

The state has an important role to play in combating world hunger, and in fact, go into many of the policy issues that are involved in playing this role effectively.

The association of poverty and hunger is institutionalized in the UN’s first Millennium Development Goal (MDG), which is “to reduce poverty and hunger”. Poverty lines in many countries were originally set to capture the notion of poverty based on hunger – the budget needs to buy a certain number of calories, plus some other indispensable purchases. A "poor" person was essentially defined as someone without enough to eat.

Therefore, a large part of governments' effort to help the poor is posited on the idea that the poor desperately need food, and that quantity is what matters. The inability of the poor to feed themselves properly is also one of the most frequently cited root causes of a poverty trap. The intuition is powerful: The poor cannot afford to eat enough; this makes them less productive and keeps them poor.

The human body needs a certain number of calories just to survive. So when someone is very poor, all the food he or she can afford
is barely enough to allow for going through the motion of living and perhaps earning the meager income that the individual originally used to buy that food.

As people get richer, they can buy more food. Once the basic metabolic needs of the body are taken care of, all that extra food goes into building strength, allowing people to produce much more than they need to eat merely to stay alive.

Even the money that people spend on food is not spent to maximize the intake of calories or micronutrients. When very poor people get a chance to spend a little bit more on food, they do not put everything into getting more calories. Instead, they buy better-tasting, more expensive calories.

For example in India the rapid rise of obesity and diabetes as the urban upper-middle classes when they become richer. However, Angus Deaton and Jean Dreze have shown that the real story of nutrition in India over the last quarter century is not that Indians are becoming fatter: It is that they are in fact eating less and less. Despite rapid economic growth, there has been a sustained decline in per capita calorie consumption; moreover, the consumption of all other nutrients except fat also appear to have declined among all groups, even the poorest. Today, more than three-fourths of the population live in households whose per capita calories consumption is less than 2,100 calories in urban areas and 2,400 in rural areas – numbers that are often cited as "minimum requirements" in India for individuals engaged in manual labor.
At least in terms of food availability, today we live in a world that is capable of feeding every person that lives on the planet. On the occasion of the World Food Summit in 1996, the FAO estimated that world food production in that year was enough to provide at least 2,700 calories per person per day. This is the result of centuries of innovation in food supply, thanks no doubt to great innovations in agricultural science, but attributable also to more mundane factors such as the adoption of the potato into the diet after the Spanish discovered it in Peru in the sixteenth century and imported it to Europe.

Starvation exists in today's world, but only as a result of the way the food gets shared among us. Using the average calories requirements calculated by the Indian council of Medical Research for people engaged in heavy, moderate, or light activity, Deaton and Dreze noted that the decline in calorie consumption over the last twenty-five years could be entirely explained by a modest decrease in the number of people engaged in physically heavy work for a large part of the day.

As Amartya Sen has shown, most recent famines have been caused not by lack of food availability but by institutional failures that led to poor distribution of the available food, or even hoarding and storage in the face of starvation elsewhere. Eradication of hunger and malnutrition is envisaged by the policy of food security. According to UN's FAO Food security is a 'situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.'
Food security becomes a reality only at the household level – in fact, at the level of each member of the household. As far as household food security is concerned, a consensus is emerging favouring the "entitlement approach" to explain access to food by the households. With this approach, principally developed by Amartya Sen (1981) to explain the causes of famine, and its consequences for different groups of people – in other worlds, asymmetry of its impact, the entitlement thesis (which posits relationship between endowments of the households and their entitlement) can provide rich insights in understanding food insecurity once the concept is widened to include not only legally enforceable entitlements, but also the market induced and civil society bestowed entitlements.

The second area, where the consensus has emerged is the recognition of the weakness of the calorie-based definition of food security. One need not dwell at length on the inadequacy of the calories as an indicator of food security. In brief, the major problem with the calories norm is to determine what could be considered as adequate number of calories. In India, as in several other countries of this region, where this norm is taken as the basis of defining poverty line, i.e., those having calorie intake above certain level being defined as non-poor and the rest as poor, a serious, but inconclusive debate continues with different scholars maintaining different standards of adequacy. In any case, it is clear that the norms of adequate calories will vary depending on the external environment and the nature of activity of an individual. Thus, calorie requirement for a person in humid climate may be different from that of the one in dry and harsh climate. Similarly, calorie
requirement of a person pursuing sedate operations will be different from the one engaged in manual labour.

Another serious lacuna of calorie norm is that calorie adequacy cannot be equated to healthy and active life. This is evident from the fact that while more and more people are able to access "adequate" calories, this is not reflected in a sizeable reduction in malnutrition. Dietary energy supply measurement based on average availability of calories at the household level, besides failing to reveal intra household distribution of food does not reflect true nutritional status. Even if we assume that "adequate" calories are available to every member of the household there is no certainty that available calories will meet the requirements of protein energy, and micro nutrients, such as iron, iodine and vitamin-A. The most commonly used indicator of Protein Energy Malnutrition (PEM) is the percentage of children whose weight for age falls below a reference value.

There is a growing consensus on the need to widen the definition of food security. Calorie norm, at best can provide a threshold but not the standard for food security. Food security acquires a meaning where it also connotes nutritional security at the household level. It is a different matter that nowhere, in developed as well as developing countries, this notion of access of nutritionally adequate diet is operationalized (Vyas, 1997). The main reason for the absence of nutritional security, or for that matter even the narrowly defined (calorie based) food security, is that we have not taken a balanced view on the respective role of the state, markets and civil society in ensuring food security in true sense of the term.
Strategy for combating Hunger

Policy interventions for tackling the problem of hunger and malnutrition or to promote food security can broadly be characterized as approaches which either emphasize food production and supplies, or which are primarily aimed at improving access to quality food.

- The volume and stability of food production (whether subsistence or market oriented),
- available food stocks (farm-level, commercial, government stocks);
- and food imports (commercial and concessional) are factors determining food availability.
- the purchasing power, or level of real income. The level of real income depends, again, on factors such as wage levels, employment, prices, etc. at the household level and on the national level, access to food depends on the availability of foreign exchange to pay for food imports if these are required to complement domestic supplies the productive assets available to those who depend on subsistence production as their source of food supply
- non market transfers (on the national level: food aid) are determinants of access to food.

Food availability is determined by the level of food supply, composed of subsistence production and market supplies stemming from domestic production, food stocks and food imports. Access to food is the result of the ability to express food needs (beyond subsistence production) as effective demand whether in the market or through other political and social institutions. Stability refers to the need to insulate against variations and the risk of shortfalls in food production, supplies and/or demand over time.
In light of availability, accessibility and stability of food grains, the definition of food security may now be translated to be a situation where both food supply and demand are sufficient to cover food requirements on a continuous and stable basis. This general definition of food security applies, in principle, to individual households as well as to aggregate national food security. Food insecurity prevails if, at any time (occasionally, repeatedly, or permanently), either the volume of food supply, or food demand, or both fall short of requirements.

The household level of food security is probably the most important for the analyst, insofar as the household is the basic economic unit which determines the level of consumption by the individual. In most analyses there is a presumption that income comes to the household as a whole, resource allocation decisions are made at the household level and household consumption is divided amongst its members in some relation to the needs of the individuals. But there are occasions when none of these assumptions are valid. For the most part, however, they do reflect the basis on which economic activity is organized, and the way that information is often collected. In general, throughout this manual, the basic unit of analysis will be the household. At this level, households are identified as food bulwarks if their entitlements, or demand for food is greater than their needs, defined as the aggregation of individual requirements.

At the individual level, the definition of food security is much more straightforward. An individual is food secure if his or her food consumption is always greater than the need, as defined by physiological requirement. Consumption is determined by the claim the individual has
on household food resources. This may be affected by individual earnings and assets, or by the individual's position in the household. It is certainly unusual for an individual's share of household food consumption to be determined solely by need.

The “stability” aspect of the definition we are using of food security can be interpreted as incorporating the ability to withstand shocks to food entitlements. The greater the degree of resilience a household has in the face of these risks, the more food secure it will be. The most food insecure households will be those facing the greatest probability of an entitlement failure with the least assets.

Both availability and access have a physical and an economic dimension to them. Availability becomes supply if and only if what is available at some place or time is made economically available where and when they might be demanded. Access to food must physical access made possible by the will and ability to express food needs as effective demand through the social system. Demand by virtue of command over purchasing power in market is only one form of effective demand.

As far as policy initiatives are concerned, during the United Nations Millennium Summit in September, 2000, around 189 world leaders promised to end poverty by 2015 and agreed to set targets – called the Millennium Development Goals to reduce poverty and hunger. In 2008 again world leaders met in New York to assess how far member nations have been able to fulfill the goal by 2015. Dr. Jacques Diouf, Director General of the UN Food and Agriculture Organization, told the 36th session of the Inter-governmental Committee on World Food Security in Rome on December 16, 2010 World Food Day that the
combination of global food crisis and economic recession have pushed the number of hungry people beyond the one billion mark.

After almost ten years of the Millennium Development Goals summit, the FAO and the United Nations World Food Programme announced on September 14, 2010 that 925 million people are estimated to be suffering from chronic hunger in 2010, a small decline from the 1,023 billion estimated in 2009. The new figures on world hunger highlight that the food crisis is still acute for one-sixth of the world's population. Dr. Jacques Diouf said that agricultural production will need to increase by 70 per cent in the world and double in the developing countries to feed a global population expected to reach 9.1 billion by 2050. How far are we going to fulfill this United Nations Millennium Development Goals in 2015 and how are we going to double the food production are big questions.

In recent years, dramatic progress has been made globally in tackling malnutrition, however, around 800 million people are chronically malnourished, and more than a billion are sick or disabled because of nutrient deficiencies in the world. As nutrition embodies a central role in human well-being, it is both an essential element of and also a critical input to other aspects of well being. Adequate nutritional attainment is essential equally for men and women. Under nutrition would denote a deprivation of basic aspect of well-being, the lack of freedom to lead a minimally healthy life.

Malnutrition has multiple dimensions. A host of other conditions need to be in place in order to tackle this problem. One of the most critical factors for long term and sustainable impact on nutritional
outcomes is the level of women's education. International Food Policy Research Institute's (IFPRI) research on 63 countries during 1970-96 estimates that women's education accounted for 43 per cent of the child malnutrition reduction during the period. Besides constructing roughly half the population, women take important decisions on family health, education and feeding. Thus poor and ill-informed decisions have adverse consequences on child health, education and nutrition status, accompanied by a high risk of transmission of chronic malnutrition to future generations.

Some other important factors include improved access to safe drinking water, sanitation facilities and quality healthcare services and infrastructure, better implementation and coordination of existing nutrition interventions (especially those targeting children under three years of age and pregnant women), better governance and non-farm income growth (Gulati, 2010).

It is generally accepted that the single biggest contributor to malnutrition is poverty. What is less understandable is the slower reduction of malnutrition than of poverty. The World Bank calls this “A South Asian Enigma” – while poverty is often the under lying cause of child malnutrition the superior economic growth experienced by South Asian countries compared to those in sub Saharan Africa, has not translated into superior nutritional status for the South Asian child. Income inequality could help explain what average economic growth figures may conceal, yet inequality is not significantly worse in South Asia than in Africa (Panda, 2009).
The present study is an attempt to evaluate the programmes designed and implemented for the sake of guaranteeing food security in India. The main area of research is to explore the efficacy of programmes which are directly affecting the need of food and nutrition. Keeping this in mind, three main programmes namely the Targeted Public Distribution System (TPDS), Mid-Day Meal Scheme (MDM) and Integrated Child Development Scheme (ICDS) are chosen for measuring the impact of their inputs on targeted families.

Review of Literature

As hunger and malnutrition has remained the core area of public policy, it has attracted the attention of academicians, Governmental agencies, international agencies and non-governmental organizations. Measurement and prevalence of the problem, Policy designing for combating it and evaluation of policies are three main research domains under which the research efforts can be classified. There are a large number of studies which made efforts to identify determining factors and socio-economic perspectives of the problem of hunger for the sake of proper understanding of causes and tackling them effectively. Efforts are made here to review some studies which are mainly concerned with the measurement of hunger and assessment of public policies in terms of their effectiveness in ensuring food and nutritional security.

As far as measurement of hunger and malnutrition is concerned, there are several standard papers relating to methodological issues published by FAO and WHO (L.Naiken, 2002; L Smith, 2006; A Ferro-Luzzi, 200; P.Shetty, 2003; E.Kennedy, 200). Many researchers have critically examined the FAO approach.
Hunger and Public Action by Dreze and Sen (1989) analyses the enduring problem of hunger in the modern world and of the role of public action in meeting this challenge.

The Political Economy of Hunger edited by Dreze et. al. (1993) address a wide range of policy issues relating to the role of public action in combating hunger and deprivation in the modern world.

Schmitz et.al. in their article "Public Intervention in food and nutrition in Brazil" discuss that the Brazilian Government has created a number of programmes to eradicate extreme poverty, hunger and malnutrition in the last twenty years. (2011).

The article "Can FAO measure of chronic undernourishment be strengthened?" by Lisa C. Smith (1998) examines the estimation methodology underlying the food insecurity measure which relies on national aggregate measures of food availability and distribution. Paper calls for employing the new household survey to strengthen the empirical foundation of FAO's measures.

Harting de Haen; Stephan Kalsen and Martin Qaim's article entitled "What do we really know? Metrics for Food insecurity and under-nutrition" (2011) is an attempt to review the three most common approaches of assessing chronic food insecurity and under-nutrition namely, (1) The FAO indicator of under-nourishment, (2) household food consumption surveys and (3) childhood anthropometrics. Paper finds that all approaches have empirical problems and true extent of under-nutrition is unknown.
The paper "The World Health Organization Global Database on child growth and malnutrition: Methodology and application" by Mercedes de onis and Monika Blossna (2003) examines the database developed by the WHO and finds it successful for monitoring child health.

The state of Food Insecurity in the World 2012 published by the FAO of the United Nations (2013) presents new estimates of under-nourishment which shows that progress in reducing hunger during the past 20 years has been better than previously believed. However, the number of people suffering from chronic under-nourishment is still high and eradication of hunger remains a major global challenge.

In Poor Economics : rethinking poverty and the ways to end it by Banerjee and Duflo have associated hunger with poverty in the UNs first Millennium Development Goal (MDG) which is "to reduce poverty and hunger"(2011).

In India Public Distribution System (PDS) has remained the largest programme aimed at ensuring food security. The literature on the PDS is vast with studies focusing on the system (Raghavan, 2003; Shanker, 2002; Ramaswami, 2002) and also linking the system to issues such as international trade (Raghvan, 2006) agriculture (Majumdar, 2006, Chand, 2001) and gender (Krishnaraj, 2006).

There have been a large number of studies at macro level in various aspects of public distribution system in India since Second World War. Famous authors like C.N. Vakil and others (1973), Dr. Gadgil and N.V. Sovami (1944), R.N. Chatterjee (1946) analyzed the
Demand and Supply position in food grains which was their main theme and justification for price control and rationing in country.

Some government level expert committees have also been formed e.g. the Ashok Mehta Committee (1957) on food grains. Their enquiry led to the analysis measures for price control and rationing. Subsequently the Jha committee (1965) and the Agricultural Price Commission (1965) suggested and laid down the food grains price policy for the benefit of producers and consumers. In view of the recommendations of the committee of Food and Civil Supply ministers (1965), the then government announced targeted public distribution system (TPDS) to provide the food security to the poor.

Besides these studies at the government level, there are a number of scholars who studied various aspects and issues of public distribution system of food grains. Raj Krishna (1963) and M.L. Dantwala (1967) did emphasise incentive price for the benefit of producers alone. I.S. Gulati & T.N. Krishnana (1975) and L.K. Jha (1976) have advocated the effective procurement of the marketable surplus of areas for running the public distribution system. L.K. Jain (1989) in his study, “Public Participation in Public Distribution System” draws inference in the following words, "There is literally no public participation in the working of public distribution system network. Even in an advisory capacity, the village's population for whom certain essential consumer items are dispatched is kept in the dark about the items, their qualities and price. D.S. Tyagi in “Managing India's Food Economy: Problems and Alternatives” (1990) explains as a consequence of near self sufficiency being achieved in the case of cereals in some year the
demand from the PDS was less than not only the quantity procured but also even less than what it was in the previous year.

Some micro level studies were held in early nineties - Dev and Surya Narayan (1991) concluded that a substantial part of the public distribution system benefits goes to the non poor, as the dependence of the poor on public distribution system in rural areas was observed to be less than 16%. K.G. Joglekar in “Heartening Picture but Caution Need” (1995) has pointed out the increase in procurement and minimum support prices of food grains.

In another study K.N. Kabra revealed that the public distribution system is largely a responsibility of the State Government, particularly at the cutting edge level. This system was instituted as an integral part of the national food policy for consumer protection to begin with, but with new agriculture strategy, it became intimately linked with the incentive price policy. He revealed that the population of Delhi is only one percent of India but it consumes five to six percent of public distribution system supplies. He has concluded that the benefit of Public Distribution System failed to reach the poor and this system has a strong urban bias.

Devasahaya (2001) has suggested that food security should go hand in hand with fair price for the farmers under proper food management in order system (FMS) Gaiha (2003) has emphasized that to eliminate hunger, malnutrition and families, the right to food is an essential right and it must not be discarded.

Amalesh Banerjee in "Food Security and the Public Distribution System Today" (2004) and in addition to these R.M. Kocheta (2002)
revealed that fair price shops are the end point in the channel of public distribution of essential goods of mass consumption to the society. In a country ridden with chronic shortage of essential supplies and an unabated inflationary trend in the economy, the role of the fair price shops cannot be underestimated as an instrument for equitable distribution of essential commodities at prices which are within the reach of the common man.

K.S. Pathania in his book Public Distribution System has concluded that there is an urgent need for an effective enforcement machinery to ensure that the commodities are distributed to the right persons in right quantity and at the right time and place.

In a recent study of N. Praveen Kumar Reddy & D. Himachalam in "Public Distribution System and Tribal Development" (2007) concluded since quantity of food items supplied through Public Distribution System is insufficient the tribal have to depend on other sources. Sometimes they have to go to the open market for purchases of food item and thereby they have to incur more expenditure. In the open market they have to buy on cash basis, and that aggravates their financial problems because they have to borrow from money lenders, and remain in debt forever.

India is one of the few countries which have experimented with a broad of spectrum of programmes for improving food security. As Radhakrishna R.S. says, “The limitation is not food supply but food distribution. Careful consideration of food security requires moving beyond food availability and recognizing the low incomes of the poor.”
Sambi, Reddy B. and K. Hanumantha Rao (2004) despite the TPDS and employment programmes MDM Programmes and other social welfare programmes which are under implementation in the rural areas, still many people are facing the threat of hunger and malnutrition because these programmes could not properly reach at the local level. So they have suggested in this context it becomes imperative to look at micro-level distribution systems that have successfully attempted in various parts of the country, so that viable and successful models could be considered for supplementation on bigger scales in addition to the existing PDS.

The book entitled “Towards Hunger Free India – From Vision to Action” edited by M.S. Swaminathan and Pedro Medrano (2005) deals with the problems such as high malnutrition, seasonal hunger, hidden hunger and discusses policy implications of food insecurity. The responses of Government to the challenges of food and nutrition security is also discussed. “The Way Forward” section provides recommendations and solutions for future actions.

In Targeted Public Distribution System: Performance and Inefficiencies (2010) – Parmod Kumar asserts that for the proper functioning of the PDS the first condition is to identify the beneficiaries and he also states that a large number of inclusion and exclusion errors are due to imperfect information and arbitrariness in the identification of BPL and AAY beneficiaries.

M.S. Swaminathan in his book from green to Evergreen Revolution (2010) says that hunger itself is complex, multifaceted, and
best approached through a "life-cycle" perspective of human development and human needs.

S. Mahendra Dev in his book *Inclusive Growth in India: Agriculture, Poverty and Human Development* and ICDS programmes are political will resoueters, effective implementation, decentralization etc. (2010)

R. Radhakrishna is "Improving Food security for the Poor" serves that though India has achieved self-sufficiency in cereal availability yet its high incidents of food concern (2011)

In *Agriculture, Food Security and Rural Development* an ADB book, (2010) Alakh Sharma describes the various dimensions as well as evaluation of food security measures. He also discusses strategies and policy feedback on the exiting programmes addressing food in security and Malnutrition.

*Empowering women through Better Healthcare and Nutrition* (2012) edited by Sharma and Atero is collection of essays which explain that women, especially in the developing countries, are invariably in an awful state of health, nutrition, education economy and above all, dignified existence and believe that healthy women are the real wealth of societies.

Devi Sridhar in *The Battle Against Hunger: Choice, Circumstance and the World Bank* (2008) probes the issues surrounding development assistance, strategies to eliminate under nutrition and how hunger should be fundamentally understood and addressed.
Alok Bhargava's *Food, Economics and Health* (2008) provides readers with issues across multidisciplinary subjects in the hope of improving the design of food policies in the developed and developing countries.

Amitava Mukherjee's *Food Security is Asia* (2012) discusses the major governmental policies regarding food security in relation to the communities' responses.

In *Food Security and the Public Distribution Today: Failures and Successes* (2010) Amalesh Banerjee suggests remedial measures for improvement of PDS supply side issues for augmenting food production and organisational and infrastructural problems of food management have been discussed.

Aripita Ghose's *Globlisation, Agricultural growth and Food Security in India* (2011) has studied the problem of food security in the, post globalisation era and suggested ways to improve the situation of food security.

KRG Nair's article titled *Malnourishment among Children in India: A Regional Analysis* analyses inter-state differentials in malnourishment among children in India on the basis of the NFHS I, II and III. (2007).

Deaton and Dreze in their article "*Food and Nutrition in India: Facts and Interpretations*" have concluded that there is a decline of average calorie intake during that last 25 years and one of the reasons for its may be due to better health as well as to lower activity levels. (2009).
"Why are Levels of Child Malnutrition Not Improving" by A.K. Shiva Kumar discusses the Measures and trends of child malnutrition and concludes that there is continuing neglect of health inadequate reach and efficacy of health and childcare (2007) services.

Engle and Huffman in their article titled "Growing Children's bodies and minds : Maximising child to nutrition and development " describe how actions to enhance optimal infant and young child nutrition can be linked with child development intervention for children under 3 years of age. (2010).


As far as Rajasthan is concerned, prevalence of hunger is measured by United Nations’ World Food Programme (UNWFP). 22 districts in Rajasthan had been identified as those requiring immediate attention in terms of food security, according to the food security atlas of rural Rajasthan released jointly by the Institute of Human Development and United Nations’ World Food Programme (UNWFP). Intensive intervention in ten out of these districts is required. Barring seven districts the atlas pointed out that prevalence of mortality and malnutrition is much higher than the national average. Every second child in the state is underweight.

Captures the general situation on under nutrition and acute malnutrition in India and particularly in selected sites of Rajasthan and Madhya Pradesh focusing on tribal dominated areas and population. The report summarises the reasons for the malnourished premature and Low Birth Weight (LBW) infants in Rajasthan. Repeated illness and non-use or limited use of health services are the greatest factors for the aforesaid problems.

The factors contributing to constantly very high rates of malnutrition have been analyzed by researchers.

The researches by government agencies link malnutrition with poverty at household level as well as with improper feeding practices (Sustainable Nutrition security in India: A leadership agenda for action, New Delhi, India, May 2010), especially in SC, ST and other backward classes. The BPL are estimated to be from 28% (Planning commission of India) to 77% (National Commission on for enterprises in the unorganized sector- NCEUS). Such wide variations of the proportion of poor in the country do not facilitate analysis of the role of poverty on under nutrition levels.

The determinants of Child malnutrition in Rural areas have been analyzed by Radhakrishna and Ravi (2004) using a logit regression model. The results shows that the probability of child falling into malnutrition decreases with improvement in mother's nutritional status, mother's education, mother's age and ante-natal visits, but increases when the mother is working. The adverse effect of the working status of the mother may be a characteristic among the poor households. The risk of malnutrition also decreases with the standard of living of the household whereas it increases with house-hold size.
The article titled India's PDS : Utilisation and Impact by Reetika Khera deals with the effectiveness of India's PDS as a food security intervention using field survey data collected by her in Rajasthan (July, 2011).

The HUNGaMA survey Report (2011) shows that positive changes for child nutrition in India is happening including in the 100 Focus districts. However, rates of child malnutrition are still unacceptably high particularly in these focus districts where over 40 per cent of children are under weight and almost 60 per cent are stunted.

NSS Report No. 540: Nutritional Intake in India (2012) is concerned with the levels of calories protein and fat intake in India and their variation across states/Union Territories with level of living.

In the article titled "Access to the Targeted Public Distribution System : A case study in Rajasthan, "Ritika Khan examines the proportion of" "wrongly excluded" and "wrongly included" households for BPL ration cards (2008) .

Most studies on the PDS, ICDS and MDM in India have concentrated on the issues bearing on regional variations in the supply of food grains, urban bias in schemes targeting of programmes, the growing cost of food subsidy, measurement of welfare gains from different schemes etc. A few studies have incorporated the issues relating to impact of all programmes aimed at ensuring food and nutritional securities at individual level and tracing out effectiveness of PDS, ICDS and MDM in comparative manner.
This study aims to fill this gap. In the light of empirical evidences, efforts are made in this study to identify determining factors of prevalence of hunger and malnutrition in regional perspectives. In terms of coverage of area and approach this study has explored the policy implications best suited for the BPL families in study area.

**Objectives of the study**

The present study has focused on the distribution and implementation aspect of PDS, ICDS and MDM schemes, as effective instrument for providing the umbrella of food security to BPLs and targeted persons. The main object of the study is to find out the way by which the public intervention can work as an effective means for improving the nutritional status of population. In short the proposed study is motivated to fulfil the following objectives:

- to analyze the efficiency and effectiveness of TPDS, ICDS and MDM in terms of realization of their objectives.
- to assess the impact of public intervention measures on nutritional status and health of beneficiaries in comparative perspective.
- to suggest better strategy for effective implementation in future. Keeping in view the international experiences with respect to food transfers policies, approaches to targeting and design of programs and the options available for improving the effectiveness of public intervention.
Hypotheses

Efforts are made in the present study to test the following hypotheses empirically:

- identification of beneficiaries under the TPDS is not proper. Delivery mechanism is not effective (Delay in distribution, malpractices of dealers, and corruption make the impact of food security measures insignificant).
- the ultimate impact of food security measures on targeted families in terms of raising purchasing power, improvement in nutritional status and health is insignificant.
- insufficient allocation under ICDS and lack of proper infrastructure base in schools for MDMS have lessened the impact of these programmes in terms of improvement in nutritional status of targeted children.

Data-Base and Research Methodology

The present study has used both the primary and secondary data. The secondary data for the study have been collected from annual reports and published statistics by the Department of Food and Civil Supplies, Department of Medical and Health, Department of Women and Child Development, Directorate of Economics and Statistics, Directorate of Mid Day Meal and Education Department of Government of Rajasthan and Census Department, Government of India along with State Institute of Health and Family Welfare. Sources are mentioned where the secondary data have been used.
Besides the secondary data, a field survey has been undertaken to collect primary data from a sample of 380 households using the multi-stage random sampling.

In the first stage, 8 villages and 6 wards in Jaipur district have been selected randomly. Families from each selected village have been chosen at the second stage by using the stratified random sampling, being the basis of stratification of the category of family.

In the present study 100 BPL rural families and 91 other rural families were chosen from the list of BPL and other families of 8 randomly selected villages using the proportional method of the stratified random sampling. The sample size of rural families is shown in the table 1.1.

**Table 1.1**

**Village wise and Economic Category wise Sample Size**

<table>
<thead>
<tr>
<th>Name of the Villages</th>
<th>Families chosen for the study</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BPL</td>
<td>Others</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Vatika</td>
<td>11</td>
<td>16</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Bilwa</td>
<td>2</td>
<td>11</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Mohanpura</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Banskhoh</td>
<td>22</td>
<td>20</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Bhateri</td>
<td>10</td>
<td>8</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Patan</td>
<td>18</td>
<td>10</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Shivdaspura</td>
<td>12</td>
<td>8</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Bada Padampura</td>
<td>23</td>
<td>10</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>91</strong></td>
<td><strong>191</strong></td>
<td></td>
</tr>
</tbody>
</table>

For urban sample of families was chosen from randomly selected 6 wards of Jaipur Municipal Corporation. Taking total list of BPL families the sample size was decided by the proportional method. The urban sample comprises is depicted in the table 1.2.
Table 1.2
Ward wise and Economic Category wise Sample Size

<table>
<thead>
<tr>
<th>Wards</th>
<th>Total Number of BPL Families</th>
<th>BPL Families selected for study</th>
<th>Total Other families</th>
<th>Other families chosen for study</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1456</td>
<td>34</td>
<td>8022</td>
<td>17</td>
</tr>
<tr>
<td>23</td>
<td>348</td>
<td>8</td>
<td>6702</td>
<td>14</td>
</tr>
<tr>
<td>28</td>
<td>670</td>
<td>16</td>
<td>13934</td>
<td>29</td>
</tr>
<tr>
<td>46</td>
<td>1231</td>
<td>28</td>
<td>2991</td>
<td>6</td>
</tr>
<tr>
<td>50</td>
<td>411</td>
<td>9</td>
<td>5038</td>
<td>11</td>
</tr>
<tr>
<td>57</td>
<td>413</td>
<td>10</td>
<td>3596</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>4529</td>
<td>105</td>
<td>40283</td>
<td>84</td>
</tr>
</tbody>
</table>

The primary data have been collected through direct interview with the head of the family.

The primary and secondary data collected for the study have been classified and tabulated for the purpose of analysis. Statistical tools like averages, co-efficient of variation, index numbers, correlation and regression analysis, and test of significance have been used to analyze and to interpret the data. The determinants of malnutrition have been identified by using the multiple regression and chi-squared test.

**Period of the study**

The present study has covered last 10 years i.e. from 2002 to 2012. The 10 year period has witnessed a number of policy changes in ensuring food and nutritional security. In view of this it is felt that the period is sufficient enough to fulfil the objectives of the study namely assessment of the impact at household level.
Conclusion

Thus in this chapter we have defined and analysed hunger and malnutrition at several levels Socio-economic, Cultural, Psychological, Hereditary and dietary habits.

Some hypotheses have been reached at and the attempt has been made to treat these two evils in different human aspects instead of defining them in the context of an economy. Therefore, they have been defined and discussed in a broader spectrum.

References


