CHAPTER 2
REVIEW OF LITERATURE

The concept of food security has got maturity over the years. Focus of analysis also changed to the individual level from earlier global and national level. Accordingly, literature associated with the concept has become manifold. This chapter attempts to present a brief review of literature on the works of various authors with reference to the broad concept of food security. The review is arranged in following three modules:

2.1 Individual perspectives on food security.
2.2 Issues related to household food security.
2.3 Globalisation, liberalisation of agriculture and food security

2.1 INDIVIDUAL PERSPECTIVES ON FOOD SECURITY:

This module would focus on studies relating to supply and demand, and on studies considering multidimensional issues.

2.1.1 Supply-side perspective:

Food security was a theme of discussion even during the classical era. At that time, it was done at the micro level from the supply parameter in terms of Food Availability Deficiency (FAD). Adam Smith (1776)\(^1\) in his article “Digression Concerning the Corn Trade and Corn Laws”, in Book IV of the Wealth of Nations theorised that famines could be caused by a real scarcity situation. Scarcities are caused by natural calamities like drought, flood and seasonal failures. Contrary to it, Ricardo (1815)\(^2\) proclaimed that famines could occur in situations of “supply-abundance.” In subsequent years, Malthus (1798)\(^3\)

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claimed a correlation between mass starvation and an excessive population growth that outstrips available food supply. He explained the situation of famine through a direct and easily understood casual relationship. He argued that so long as food output grew faster than the population, famine could not occur. He advocated for formulating an early warning system through much emphasis on quantitative problem of population vis-à-vis food supply.

Literature on supply-side approach of food security in subsequent years generally concentrated on analyzing various causes, which lead to deficiency in food supply. Authors like Brown et al. (1957)⁴, Harrer (1963)⁵ and Brown (1965)⁶ analysed the world food situation and prospects of increasing food availability through technological improvement in production. Moseman (1964)⁷, Milikan and Hopgood (1967)⁸ and a study in University of California (1974)⁹ examine the food availability problems of less developed countries and concluded that technical progress could promote high yields.

FAO (1970)¹⁰ analysed the problems of agriculture on priority basis with a view to improve food grain situation. Masefield (1963)¹¹ and John (1975)¹² observed that acute food shortages lead to starvation causing diseases and deaths in restricted geographical area of the world.

World Food Conference (UN 1975)¹³ identified the risk of acute food shortages because of crop failure, natural and other disasters. The conference also

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⁷ A.H. Moseman (1964): Agricultural Sciences for the Developing Countries, American Association for the Advancement of Science, Washington, D.C.
analysed the risk of fluctuations in production and prices. In many subsequent analyses quoted below in parenthesis similarly concentrated on risks to national food supply and the balance of payment (Minhas 1976; Reutlinger and Knapp 1980; and Valdes and Konangreas 1981).

Acharya (1983) studied food security situation in India and categorized various components of food security and accentuated the importance of each in Indian context. In the context of South Asian countries, George (1994) suggested that food production can be increased in these countries by employing better technology, trading adequate buffer stocks and enforcing target oriented programmes for the poor. Davies et al. (1991) predicted alarming food insecurity situations and emphasized the necessity of data at the national and international levels for food security interventions.

Reied. D. (2000) opined that here is need to secure food security in the face of rising population; the breakdown of traditional, ecologically- sound systems of resource management under commercial and population pressure; displacement by economic process of the resource- poor to marginal lands or to rapidly growing cities, resulting in under-employment.

Again, according to Chand R. (2007b), opined that despite the declining trend in per capita direct consumption of food grains, total demand is expected to increase at 2 percent per annum in the medium term on account of an increase in

the population, and the need for grain as feed and in related purposes. This implies that the growth rate in domestic food grain production needs to accelerate three to four times to guard against an adverse impact on food security.

2.1.2 Demand side perspectives

As supply side perspectives considered food availability as a matter of factual investigation, the demand side focuses assumed importance in the food security equations.

Straffa (1971) suggested that economists should also recognise significance of command in the market (demand side focus) along with the problem of food availability. Mittal & Sethi (2009) also advocated that food availability alone does not ensure food security, access to food is equally important.

Smith’s opinion of protecting the food insecure through marketing system by the laissez-fair approach is debatable. Malthus, of course, made an early presentation of the theory of demand even before Keynes. However, his emphasis was on the quantitative problems of population against food supply. Food Availability Deficiency is based on population growth and physical access (agriculture stagnation) whereas, "economic access" is the phenomenon of the 1980s.

Using entitlement framework (which forms the basis of "economic access to food"), Sen (1981) demonstrated that food insecurity could occur in the absence of any change in production. After thorough investigation of the causes of various famines (Bengal in 1943, China in 1948 and Bangladesh in 1974) found that these famines took place when food was available in adequate quantities and in some part of the areas per capita availability of food was highest during those years when compared to the early and subsequent years. Thus, Sen’s entitlement theory went beyond the narrow study of food availability. He

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postulated that decline in food availability was neither necessary nor sufficient condition to create hunger. Famine could occur in the absence of any change in production, if the value of people’s production and work activities declined relative to the cost of staple food.

According to Entitlement and Deprivation (E & D) theory, food insecurity can also be seen as the characteristic of a person not having enough to eat. The latter could be the cause of the former, but it is not the only cause. The Exchange entitlement concept implies that food insecurity at the household level is a result of inadequate demand for food. The analysis of risk of adequate access (on the basis of entitlement theory) had become an important concern by the mid-1980s (World Bank, 1989)25.

According to E & D thesis, if enough food were available and if people could access the food so available, there would be no food insecurity. But Mukharjee (1977)26 contested the view with the argument that even when these two conditions are satisfied, individuals can be food insecure. Food insecurity could be caused in the absence of institutional sanction to access the food through exchange entitlement or transfer entitlement, and when people do not choose to access the available food. Mukherjee further established that both Sen’s theory of E&D and theory of FAD, the dimension of secondary food system was not taken into account.

However, with similar line to Sen, many studies focused attention on the importance of the macro-economic policies in ensuring food security of the poor due to deprivation of entitlements. Kumar (1987)27, Krueger et al.(1988)28 and

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Pinstrup-Andersen (1990)\textsuperscript{29} reviewed macro-economic policies and suggested that policies for improving food security should not be limited to direct food and agriculture related policies. Policies such as industrial protection and fiscal policies are highly relevant for prices, income and employment of the poor and thus for food security in the short and long runs. In addition, Hussain (1990)\textsuperscript{30} suggested that policies ranging from economy wide macro policies to community actions should be adopted. Policies based on the more targeted actions such as food subsidies and transfers, labour intensive public work and improved supplementary feeding programmes for food security should also be considered.

\textbf{2.1.3: Multidimensional perspectives:}

Just like poverty, the concept of food security has evolved over time. Food security gets popularity as top priority of agenda of the governments of the world over the past few decades. During 1970s and early 1980s main agenda was nutrition, which was displaced in 1980s by food security, which was again displaced by poverty in 1990s (Maxwell 1998)\textsuperscript{31}. Since the World Food Conference of 1974 to 1996 World Food Summit, Maxwell (1996)\textsuperscript{32} identified three main shifts in food security paradigms: from the global and national level to the household and individual level; from a “food first” to a “livelihood” perspective and from objective indicators to subjective perceptions.

Dr. M.S. Swaminathan (2004)\textsuperscript{33} defined food security as the livelihood security for the household and all members within, which ensures both physical


\textsuperscript{33} M.S. Swaminathan (2004): “ National Food Security Summit-2004”, Selected Papers, World Food Programme, FAO.
and economic access to balance diet, safe drinking water, and environmental sanitation, primary education and basic health care. For him food security is a complex function of multiple aspects. These aspects can be categorized as social, institutional relations; access to resources (natural, financial, social, human); livelihood and services; quality of soil and other resources; landholdings size; national polices; international trade policies etc.

Sagar (2004)\textsuperscript{34} equalised food security with a state of “nutritional sovereignty”. According to him, the multi-dimensional concept of food security has the following components:

a. Availability defined as aggregate supply, ensured either through sustainable growth in production or through imports of both and encompasses both the inter-temporal and spatial stability of supplies for every section of the population;

b. Accessibility defined in terms entitlement to adequate food, whether through production, labour, trade or transfer based entitlements;

c. Absorption of food a function of environmental hygiene, nutrition practices and access to primary health care and clean drinking water;

d. Sustainability involving conservation and enhancement of natural resources.

Contemporary food security literature centers on the concepts like “sustainability”, “food safety”, “food sovereignty”, “GM crops” etc. Thus, food security literature in these days, covers a wide range of disciplines such as anthropology, nutrition, sociology, economics, geography, public health and epidemiology etc. (Chung \textit{et al} 1997)\textsuperscript{35}. This makes food security a across-cutting, complex and multi-faceted phenomenon. Each component of the concept viz; availability, access, utilization, vulnerability etc. captures different but

\textsuperscript{34} V. Sagar (2004): \textit{"Food Security in India"} in Vyas, S.V., (eds.); Food Security in Asian Countries in the context of Millennium Goals, Academic Foundation, New Delhi, p. 50.

\textsuperscript{35} Chung \textit{et al}. (1997): \textit{"Alternative Approaches to Locating the Food Insecure: Qualitative and Quantitative Evidence from South India"}. Discussion Paper No. 22, Food Consumption and Nutrition Division IFPRI, Washington, D.C
overlapping dimension of the phenomenon (Migotto et al 2005). All these associated concepts of food security are equally important and hierarchical in nature: food availability is necessary but not sufficient condition for access and access is necessary but not sufficient condition for utilization (Webb et al, 2006). Interaction of the associated factors together determines the food security status of a country or a household or an individual. That is, how adequate, steady and risk-free food consumption is at the household and individual levels.

2.2 ISSUES RELATED TO HOUSEHOLD FOOD SECURITY:

It would provide incomplete input to policy-makers if we look food security only from supply and demand perspectives. To seek solution of food insecurity at the micro level, one has to investigate the reactions of the households at the macro also. Most of the definitions of household food security centers on the fact “secure access at all time to sufficient food”. Thus, the four core concepts associated with the definitions of household food security are:

a) Sufficiency
b) Access
c) Security
d) Time

“Sufficient” or “enough food” has been defined by different scholars in different ways. Siamwalla and Vales (1980) defined sufficient or enough food as it as “target level”. Again, UNICEF (1990) defined enough food as “to meet food needs throughout every season of the year”. More elaborately, World Bank

(1986) defined enough food is defined as "enough food for an active, healthy life".

According to Maxwell and Frankenberger (1992), the concept of enough or sufficient food is problematic. It concentrated initially on "calories", required not merely for survival, but also for an active and healthy life. Its assessment is done not only as a shortfall, but also in terms of the gravity of shortfall.

"Access" dimension of food security literature concentrates on whether individuals and households (and nations) are able to get sufficient food. The concept has got maturity after the advent of Amartya Sen's (1981) work on food "entitlement". According to him, an individual's entitlement refers to his/her initial resource bundle. Through production and trade, this resource bundle got transformed into food or commodities that can be exchanged for food. A person without adequate resource bundle must go for hungry and this refers to his entitlement failure. An account of the entitlement deprivation has been given in section 2.1.2 of this chapter.

Based on Sen's work, World Food Summit (1996) formally acknowledged the "access" dimension of food security (Web et al 2006). Entitlement framework also forms the basis of vulnerability analysis. As an extension of entitlement theory, Swift (1989) pointed out that vulnerability of a household to hunger depends not only on its immediate entitlements, but also on the assets created in successive periods, out of the surpluses over and above their basic food requirements. These assets can be drawn down when the household faces a crisis. As the poorest households tend to have fewest assets, they will be the most vulnerable.

The third main concept is that of "security". It implies secure access to enough food. "Vulnerability" to entitlement failure forms the basis of security, risk, as well as risk avoidance etc. in food security analysis. These terms have been defined in various ways by different scholars. Also, they have got popularity as the focus of food security analysis shifts to household and individual level. Maxwell and Frankenberger (1992)\textsuperscript{45} identified various risks to food entitlement confronted by a household and they are presented in Table 2.1. The rows of Table 2.1 shows different sources of entitlement to food whereas the columns shows different types of risks.

\textsuperscript{45} Maxwell and Frankenberger (1992): op.cit. p16
### Table: 2.1: Source of Risk to Household Food Security

<table>
<thead>
<tr>
<th>Sources of Entitlement</th>
<th>Types of Risk</th>
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<tbody>
<tr>
<td></td>
<td>Natural</td>
</tr>
<tr>
<td></td>
<td>State</td>
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<tr>
<td></td>
<td>Market</td>
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<tr>
<td></td>
<td>Community</td>
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<tr>
<td></td>
<td>Other</td>
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<tr>
<td>Productive capital</td>
<td>Drought</td>
</tr>
<tr>
<td>(land, machinery,</td>
<td>contamination (for example, of water</td>
</tr>
<tr>
<td>tools, animals, farm</td>
<td>supplies) land</td>
</tr>
<tr>
<td>buildings, trees,</td>
<td>degradation Fire</td>
</tr>
<tr>
<td>wells, etc.)</td>
<td>Flooding</td>
</tr>
<tr>
<td>Non-productive</td>
<td>Pests</td>
</tr>
<tr>
<td>capital (jewellery,</td>
<td>Animal disease</td>
</tr>
<tr>
<td>dwellings, granaries,</td>
<td>Compulsory procurement</td>
</tr>
<tr>
<td>some animals, cash</td>
<td>villageisation</td>
</tr>
<tr>
<td>savings)</td>
<td>wealth tax</td>
</tr>
<tr>
<td>Human capital</td>
<td>Disease epidemics</td>
</tr>
<tr>
<td>(labour power</td>
<td>Declining public health expenditures</td>
</tr>
<tr>
<td>education, health)</td>
<td>and or</td>
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<tr>
<td></td>
<td>Unemployment</td>
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<td></td>
<td>Declining public health expenditures</td>
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<td>and or</td>
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<td>Morbidity</td>
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<td></td>
<td>Morbidity</td>
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<tr>
<td></td>
<td>Mortality</td>
</tr>
<tr>
<td>Income (crops, livestock, noon-farm and non agricultural activity)</td>
<td>Disability</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Pests Drought and other climatic events</td>
<td>Cessation of extension services, subsidies on inputs of price support schemes Tax increase</td>
</tr>
<tr>
<td>Claims (loans, gifts, social contracts, social security)</td>
<td>Reductions in nutrition programmes (for example school feeding, supplementary feeding)</td>
</tr>
</tbody>
</table>

*Source: Maxwell and Frankenberger (1992)*
According to Carter (1997)\(^{46}\), even within a population, risks may function as a mechanism for economic differentiation and that too with a healthy stock of food in aggregate. Risk events, such as weather or commodity price stocks, may plunge particularly vulnerable households into poverty (Holzmann and Jorgensen 2000)\(^{47}\). Vulnerability is associated with high expected poverty and identified relative to a poverty line. (Christiaensen and Boisvert 2000\(^{48}\), Chaudhuri 2002\(^{49}\)). While observed poverty provides an ex-post measure of household’s welfare, it may not indicate household’s expected welfare in the future. A non-poor household may be predisposed to fall into poverty mainly due to variable income as a consequence of large adverse shocks (Rapsomanikis and Sarris 2007)\(^{50}\). As there is no single definition or measure of vulnerability to food insecurity in the literature, there is widespread consensus that household vulnerability to poverty is a stochastic phenomenon (Christiaensen and Boisvert 2000\(^{51}\); Ligon and Schechter 2003\(^{52}\)).

Jonsoon and Toole (1991)\(^{53}\) illustrated the link between risks and assets as in Table 2.2. According to them, most food secure households achieve adequate access to food. At the period of risk, they have to use only a small proportion of


\(^{51}\) Christiaensen and Boisvert (2000): op.cit.


available resources. The most food insecure households fail to achieve adequate access to food even by devoting a large proportion of available resources to food.

Table 2.2: Resources Utilised in Pursuing Household Food Security Strategies

<table>
<thead>
<tr>
<th>Resource use</th>
<th>Household food secure</th>
<th>Household food insecure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses a small proportion of available resources</td>
<td>Best off</td>
<td>Not too difficult to improve</td>
</tr>
<tr>
<td>Uses a large proportion of available resources</td>
<td>Food secure, but at great risk</td>
<td>Worst off</td>
</tr>
</tbody>
</table>

Source: Jonsson and Toole 1991

"Time" dimension in the definition of food security is not much discussed in food security literature. World Bank distinguished between "chronic" and "transitory" food insecurity. Chronic food insecurity means that a household runs a continually high risk of inability to meet the food needs of household members. On the other hand, transitory food insecurity occurs when a household faces a temporary decline in the security of its entitlements. "The major sources of transitory food insecurity are year-to-year variations in international food prices, foreign exchange earnings, domestic food production and household incomes. These are often related. Temporary sharp reductions in a population’s ability to produce or purchase food and other essentials undermine long term development and cause loss of human capital from which it takes years to recover" World Bank (1986)54.

Transitory food insecurity again divided into cyclical and temporary food insecurity. As the name indicates, temporary food insecurity occurs for a limited time. It is due to unforeseen and unpredictable circumstances. On the other hand, when there is food insecurity in regular or periodic pattern, it is cyclical or

seasonal food insecurity. It may be due to logistical difficulties or prohibitive costs in storing food or borrowing.

2.2.1: Associated issues in Household Food Security

Household food security is a complex and problematic concept. Besides the above four concepts many other issues are associated with it. Following section give an overview of these.

- Intra-household issues:

  It is misleading to assume that household members share common preferences with regard to acquisition and distribution of income and food within the household. Food security shocks such as work, output, food, asset, AIDS etc. will affect different kinds of household and members of individual households in different ways (Maxwell and Frankenberger 1992)\(^55\). With growing awareness regarding gender equality and child right, human right etc., intra-household issues are becoming under the purview of broad household food security. Tomas (1991)\(^56\) was the opinion that working women contributes 4 to 8 times bigger to household food security than her male counterpart. In addition to this, he showed that the effect of unearned income on child health depends largely on those who control that income.

  Again, according to Behrman and Deolalikar (1990)\(^57\), nutritional burden of hike in food price during lean agricultural season falls disproportionately on female members. In similar line, Sen 1984\(^58\), Sen and Sengupta (1983)\(^59\) opined that women “compensate” their own food consumption during price shock.

Gittinger et al (1990)\textsuperscript{60} identified five main causes of household food insecurity that affect differently on different members of the household: work shocks, output shocks, food shocks, asset shocks and AIDS shocks. To identify costs and benefits to individuals (specially among women) within a household Kabeer (1990)\textsuperscript{61} suggested to operationalise the idea of "food cycle". The food cycle refers to the sequence of events by which food enters households (purchased or produced) and is transformed into consumable form at first, and then into nutritional intake but itself at some nutritional cost. By tracing household labour inputs to food cycle activities one can identify individual nutrition shortfalls, specially among women.

- **Issues related to Nutrition**:

  Earlier, food and nutrition securities were assumed to be similar and many of the core issues of food security are derived from the earlier concerns of nutrition planning. However, from the works of UNICEF (1990)\textsuperscript{62}, it has become clear that food security is a necessary condition only for achieving nutrition security. The other two are sufficient health services for the citizens and environmental sanitation. Gillespie and Mason (1991)\textsuperscript{63} also found that household food security is a necessary condition for adequate nutrition, and, in turn, growth faltering cannot necessarily be ascribed to a failure of household food security.

  Following UNICEF (1990) model, Tonkins and Watson (1989)\textsuperscript{64} advocated that malnutrition and death are caused by a combination and interaction of two factors: inadequate dietary intake; and disease. These two

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factors, in turn, are seen to be caused by a combination of three interrelated factors: insufficient household food security inadequate maternal and child care and insufficient health services and unhealthy environment. Thus, each one of these three factors is necessary but no one of them is sufficient individually for adequate nutritional status to be achieved.

Considering nutrition security, a number of definitions of food security stressed food quality as an essential element under it. So, emphasis during 1990s was shifted from sufficient “calories” to the composition of diet, specially with respect to micro-nutrients (Commission of Europian Community1988, Bryceson 1990).

Livelihood concerns

Earlier, food was considered to be the most important need in the hierarchy of needs of a household. It was believed that poor households want to meet food needs before and in preference to all other needs. In recent years, this assumption has been questioned. Now a days, food security has been seen as only one dimension of the broader concept of livelihood security. Under this framework, the food security strategies of the poor people have been interpreted in the context of their complex and dynamic livelihood strategies. Corbett (1988) found that preservation of assets takes priority over meeting immediate food needs until the point of destitution, when all options (coping strategies) have been exhausted. Thus poor people have a vested interest in conserving their natural resource base: for food security and livelihood reasons. They will do so if they are given the opportunity. Frankenberger and Goldstein (1991), in this connection have made distinction between various types of risk management and

patterns of coping behaviour. They also make list of various types of household assets and their role in the process of coping as depicted in Figure 1. Thus, in livelihood and coping strategies, more important is "how people gain access to food" instead of "how they fail to do so".

**Fig. 2.1: Responses to Household Food Shortage**


- **Sustainability, Resilience and Sensitivity:**

  The issues of sustainability, resilience and sensitivity have played an important part in household food security. These concepts come from the key notion of "risk" and "livelihood security". Oshaug (1985)\(^6\) identified three kinds of households: "enduring", "resilient" and "fragile". The first type of households, according to him, maintains food security on a continuous basis. The second type

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suffers shocks but recover quickly. The "fragile" households increasingly become insecure in response to shocks.

Barraclough and Utting (1987)\textsuperscript{70} suggest that long term sustainability is one of five key characteristics of food security. It is achieved by preserving and improving the ecosystem within which food is produced. Reliability is another component, which means minimizing seasonal and cyclical variations in access to food. Maxwell (1988) identifies sustainable livelihood as a necessary condition of food security.

In ecosystem science, sustainability is analysed in terms of and resilience. Sensitivity is defined as the degree to which a given land system undergoes changes due to natural forces, following human interference. Again, resilience refers to the capacity of land to absorb change. It is defined as the ability of land to reproduce its capacity after inference. Where resilience is high, it requires a major disturbance to overcome the limits to qualitative change in a system and allow it to be transformed rapidly into another condition (Blaike and Brookfield 1987)\textsuperscript{71}.

Swift (1989)\textsuperscript{72} classified the main factors contributing food insecurity: those relating to production, to exchange and to the system of assets and claims that the households are able to mobilise. He found historical evidence of facing food insecurity resulting from failure of all three mechanisms simultaneously. According to Maxwell and Frankenberger (1992)\textsuperscript{73}, household livelihood security as well as food security depends on strategies, networks and collective actions taken at levels over and above the household level. Here, units of social organization above the household often play a crucial role. So, policies to


\textsuperscript{73} Maxwell and Frankenberger (1992): op.cit.
improve food or livelihood security at household level should recognize this role of community organization, and seek to strengthen it.

- **Perceptions and Cultural Acceptability:**

  There is need to focus more directly on the perceptions and actions of food insecure themselves. Maxwell (1988)\(^74\) brought the idea of “self perception” to a central definition of food security: A country and people are food secure when their food system operates in such a way as to remove the fear that there will not be enough to eat. In particular, food security will be achieved when the poor and vulnerable, particularly women and children and those living in marginal areas, have secure access to the food they want (Maxwell 1988:10)\(^75\).

  Again, in food security, it is not just the quantity of “food entitlement” that matters, but also the “quality of entitlement”. Thus, food security refers to a situation not only of secure and stable access to a sufficient quantity of food, but also access to food that is nutritionally adequate, culturally acceptable, consistent with local food habits and procured without loss of dignity and self-determination, and consistent with the realisation of other basic needs (Oomen1988\(^76\) Teller et al 1991\(^77\), Maxwell and Frankenberger 1992\(^78\)).

  Oshaug (1985:5-10) explored the cultural importance of food as vehicle for self-realisation, communication and the maintenance of social relations. He argued that efforts to direct changes in food patterns should aim to improve people and their traditions rather than debase them through forcing them to eat food that is culturally unacceptable. He also emphasised on “human dignity” as a further condition of food security. Following these, Eide et al (1985) developed a “normative” model of household food security and concluded that viable

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\(^75\) Maxwell 1988: op. cit. p.10

\(^76\) A. Oomen1988: cited in (Maxwell and Frankenberger (1992)


\(^78\) Maxwell and Frankenberger (1992) : op.cit.41.
procurement of food must be consistent with the satisfaction of other basic material and non-material needs.

All these factors transform food security from a uni-dimensional to a multidimensional objective. Accordingly, it also raises problems of measurement. How to trade-off quantity of entitlement against quality of entitlement? The balance between the two cannot be decided without reference to food insecure people themselves. In India, subjective questions are included in surveys of NSSO.

• Efficiency and Cost-Effectiveness

The issues of efficiency and cost-effectiveness deserve greater importance in household food security because of their implications for resource allocation by households and external agencies. Originally, these issues were raised in association with national food security: achieved either through production or through import (FAO 1991:179; Badiane 1988; Kennes 1990). Maxwell (1988) opined that food security requires efficient and equitable operation of the food system. He defined food system as “the combination of agro-ecological and socio-economic process which determines the production, marketing and consumption of food”. For him, “efficiency” means that in all stages in the food chain, from production to final consumption, should be efficient in a social welfare sense. “Equitable” means that the benefits of production should be equally distributed and that food should be available to all.

In dealing with national food security, efficiency issues arise in connection with economic growth and equity: economic growth may by-pass households whose incomes are already insufficient for meeting food needs (Pinstrup-Andersen 1988).82

At the household level, efficiency issues arise in both production and distribution. Here again, "risk" become the central in the decision of production. Households attach high priority in reducing the variability of household income; rather than maximizing expected income. In other words, they accept lower average incomes in exchange for stability. Households may incur additional costs for two reasons:

a) Missing savings and loan markets may induce households to invest in unproductive liquid assets, storage and other activities for smoothing consumption. These are costly affaires.

b) Households have to bear the full brunt of production variability because of absence of insurance markets for spreading risks.

These factors may lead households to underinvestment in risk-prone activities at the expense of higher long-run incomes. Thus, households may face secure access to food even with inefficient production decisions (Maxwell and Frankenberger 1992).83

The issue is more complicated with regard to distribution. Even if the household is treated as a single consumer unit, maximising joint utility function through allocating consumption resources accordingly, the pattern of consumption may be efficient to look at; but it may impose high welfare costs to some members within the family. Such allocation may be efficient because it increases the aggregate income of the household through allocating food resources with the highest marginal value product of labour. As consequence of this skewed distribution, other members of the family may have to borne high functional and psychological costs (Gross and Waterwood 1971).84

- **Household Food Security and Human Rights**

In the words of Article 25 of Human Rights, adopted by the General Assembly of the United Nations in 1948, the right to an adequate standard of

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83 Maxwell and Frankenberger (1992): op. cit. p 44
living includes: food, clothing, housing and medical care and necessary social services, and right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood. (UN 1948)\textsuperscript{85}

Article 11 of the International Covenant on Economic, Social and Cultural Rights adopted by the UN General Assembly in 1966 enshrines the right to food in the following manner:

The States parties to the present Covenant, recognising the fundamental right of everyone to be free from hunger, shall take, individually, and through international cooperation, the measures, including specific programmes, which are needed:

a) To improve methods of production, conservation, and distribution of food……

b) ......to ensure an equitable distribution of world food supplies in relation to need. (\textit{United Nations 1966})\textsuperscript{86}

Right to food was reaffirmed by the World Food Conference in 1974 which adopted the Universal Declaration on the Eradication of Hunger and Malnutrition. The first paragraph of the Declaration proclaims:

Every man, woman and child has the inalienable right to be free from hunger and malnutrition in order to develop fully and maintain their physical and mental faculties. (\textit{United Nations 1974})\textsuperscript{87}

In spite of these legal commitments, there was none to elaborate the contents and the duties corresponding to these provisions. Moreover, there was debate about the legitimacy of economic and social rights, of which, food is one (Cranston 1962\textsuperscript{88}, Raphael 1967\textsuperscript{89}). Contrary to these, the works of Alston and

\begin{itemize}
\item \textsuperscript{85} UN (1948): op.cit.
\item \textsuperscript{87} \textit{United Nations (1974)}: “Universal Declaration on the Eradication of Hunger and Malnutrition,” endorsed by the General Assembly in Resolution 3348 (XXIX) of 17 December 1974.
\item \textsuperscript{89} D. Raphael (1967): “Political Theory and the Rights of Man”, Macmillan, London.
\end{itemize}
Eide (1984)\textsuperscript{90}, Eide (1989)\textsuperscript{91} and Eide \textit{et al} (1991)\textsuperscript{92} prepared code of conduct of right to food for the states. Following this, the states have to respect, protect and fulfill human rights.

The obligation to protect implies that the state has to protect individuals from being deprived of their means of livelihood. Moreover, it has a responsibility to safeguard the interests of its citizens in common property resources. In addition to this it can enact legislation which protects consumers from harmful food products or prohibits the promotion of food practices detrimental to the well being of the community.

The obligation to fulfill requires the state to provide assistance for members of society who are unable to meet their own food needs. Thus, during famine, if a state does nothing, then it will be a case of violation of this obligation.

\textbf{2.3 GLOBALISATION, LIBERALISATION OF AGRICULTURE AND FOOD SECURITY:}

According to Moddie (1995)\textsuperscript{93} globalisation and liberalization of agriculture will bring wide opportunities for India.

However, this type of optimism has been criticized by several researchers from various angles:

The boom experienced in Indian agriculture during the 1990s was possible only because of huge public investment. The globalization imposed reduced public investment will definitely lower the intensity of this boom. Kurosaki (1999)\textsuperscript{94}.

\textsuperscript{90} Alston and Eide (1984): \textit{Advancing the Right to Food in International Law}, in A. Eide \textit{et al}, "Food as a Human Right" United Nations University, Tokyo.


Freer agricultural trade has impact on both macro as well as micro level: at macro level, it tends to increase import dependence for food for some countries. At the micro level, it raises the risk exposure of small farmers, and it will have negative impact on their nutritional status (Khasnobis et. al. 2007)\(^95\).

It is impossible to calculate comparative cost of the crops because they are specific to particular soil-climatic complexes and therefore great mistake has been done in calculating the same. Therefore, IHF-World Bank induced boosts to agro-exports and linking of the cropping pattern to elite consumption at home and abroad will definitely lead to widespread poverty and hunger (Patnaik, 1996\(^96\), 1997\(^97\)). Farmers will lose both as producers as well as consumers.\(^98\)

Moreover, India is a large country and is a major producer and consumer of most agriculture commodities. Since a very small proportion of world output of agricultural commodities enters into world market, so a major participation by India will definitely lead to terms of trade Kashyap (2002)\(^99\).

Using a nine-sector dynamic input-output model, Storm (1997) showed that gains from liberalization of trade in agriculture is not so large (and ambiguous) even if it is supported by aggressive agricultural policy stance.

According to Rapsomanikis and Sarris (2007)\(^100\), following exposure to global market, income of the producers may become volatile-without appropriate

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\(^96\) U. Patnaik (1996): “Export- Oriented Agriculture and Food Security in Developing Countries and India", Economic and Political Weekly, special number, September.


price stabilization policies. Westhoff (2010)\textsuperscript{101} also accounted for globalisation induced volatility of prices in these days. Volatility of prices worldwide has also been considered seriously in United Nations \textsuperscript{102}.

Again, international trade in cereals is dominated by advanced countries that highly subsidize their farmers, often go for monopoly and monopolistic pricing. Most of the items of agro-export trade are producible in tropical and subtropical developing areas. They have to compete among themselves for a better price as the pricing of the same in the world trade is handled by less than five to six multi-commodities traders. So gain in income and employment is totally disputed, instead it will bring complete misery to the small producers of the developing countries. (Patnaik, 1997:1108\textsuperscript{103}, Clairmont and Cavanagh,1988\textsuperscript{104}).

Trade liberalization, and globalisation of agriculture is leading to transfer power of controlling of the same from nation-state to transnational corporations (TNCs). The TNCs only now have control over natural resources, production systems, markets and trade all over the globe. In this process, production and productivity of food are going to decline worldwide. Small farmers and landless labours in the North as well as in the South are becoming totally disempowered. (Shiva and Ingunn (1995)\textsuperscript{105}, Shiva (1997)\textsuperscript{106}, WB 1995\textsuperscript{107}, Reddy, M.D. 2001\textsuperscript{108,109}).

\textsuperscript{103} U. Patnaik, 1997: op. cit. 1108.
Thus, from the review, it has become clear that liberalisation-led market-driven economy are going to hurt both small producers as well as consumers. Producers are not getting remunerative prices of their produce. On the other hand, consumers are paying higher amount because of the hike and volatility of prices of essential items (including food) worldwide. Only traders are benefiting from it. Moreover, it also has bearing on future food security as so many lands have got diverted from producing food crops to cash crops as well as horticultural crops.

**Key issues highlighted:**

1. Food security in terms of supply dominated in the classical era. Domestic agricultural production and food imports are the two important components of availability of food.
2. Demand for food is associated accessibility of food. Access to food has two dimensions: physical and economic.
3. Till 1980s, the concept of food security was uni-dimensional and primarily concerned with national and international food supply. Contemporary literature on food security incorporates many dimensions besides demand and supply of food, as the focus of attention of the same goes to the individual level.
4. There are four core concepts associated household food security: sufficiency, access, security and time.
5. As acquisition and distribution of food differs among individuals within a household, food security shocks affect members of the household in different ways.
6. With respect to food behavior, households cannot be analysed as discrete entities in the socio-political framework.
7. Food security is a necessary, but not sufficient condition for adequate nutritional status.

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8. Households and individuals confronting nutritional stress can modify their nutritional outcome through adaptation, which may be genetic, physiological and behavioural.


10. Livelihood strategies can be analysed and extended by drawing on ecological analysis. Sensitivity and resilience

11. Qualitative issues of food security centers around people’s own perception of food security.

12. Whatever people’s own perception, issues of efficiency and cost-effectiveness arise at national and household level.

13. Following obligations of right to food, the states have to protect, respect and fulfill food security of the citizens.

14. Most of the literature describes adverse effects of globalisation and liberalisation of agriculture on food security.