

THE GLOBAL HUNGER CRISIS

Tackling Food Insecurity in Developing Countries

Majda Bne Saad



PlutoPress
www.plutobooks.com

Contents

<i>Illustrations</i>	x
<i>Abbreviations and Acronyms</i>	xii
<i>Preface</i>	xv
<i>Acknowledgements</i>	xvii
Introduction	1
PART I FOOD SECURITY AND INSECURITY: CAUSES AND CONSEQUENCES	
1 Food Security	9
What is Food Security?	9
What is Food Insecurity?	14
Measuring Chronic Food Insecurity	18
Transitory Food Insecurity	22
Domestic Food Prices	29
Household Purchasing Power	31
2 Famine	34
Famine Mortality 1903–2011	35
Defining Famine	37
Operational Definition of Famine	40
Theories of Famine	45
Pre-modern Theories: Supply-side Factors	46
Modern Theories: Demand-side Factors	51
Postmodern Theory: The Failure of Accountability	61
3 The World Food System: Challenges and Options	66
What is the World Food System?	67
The Productionist Paradigm	71
The Life Sciences Integrated Paradigm	78
The Ecologically Integrated Paradigm	83
4 Peasant Farming: Current and Future Challenges	91
The Peasants' World	91
Defining 'Peasant' and Peasant Societies	93
World Capitalism and Agrarian Change	96
Peasants and the Three Worlds of Agriculture	100

Agricultural Contribution to Economic Development	100
Investment and Economic Incentives for Agricultural Growth	104
Agricultural Policies in Agriculture-based Developing Countries	108
Peasant Farming: Constraints and Challenges	112
PART II CHALLENGES AND OPTIONS FOR FOOD SECURITY	
5 Access to Land	119
Pressure for Land Reform	119
Instruments of State-Led Land Reform	122
Market-Led Agrarian Reform (MLAR)	132
Steps towards Successful Land Reform	136
Gender and Land Reform	137
Land Grabbing: A New Challenge	138
6 Rural Labour Markets	141
Rural Labour Markets: An Overview	141
The Economics of the Household Labour Allocation Model	144
Factors Affecting Labour Supply	149
Factors Affecting Demand for Labour	154
Employment, Unemployment and Underemployment	159
7 Rural Financial Services and the Issue of Sustainability	162
Rural Credit Markets	163
Credit for Agricultural Development and Poverty Reduction	164
The Evolution of Rural Credit Markets	165
Do Microfinance Institutions Help the Poor?	168
Second Generation MFIs	170
Non-Governmental Development Organisations and MFIs: The Dilemmas	173
The Sustainability of Microfinance Operations	174
Gender and Credit Policy	179
MFIs and the Global Financial Crisis	180
8 Water for Livelihoods	183
World Waters: An Overview	184
Shared Water Resources: The Political and Legal Dimensions	187
State Cooperation	190

Water for Livelihoods: Social, Economic and Environmental Constraints	191
The Environmental Costs of Intensive and Extensive Farming	201
Choices in Irrigation Technology: Shaping the Future	202
Governance in Irrigation Systems	204
Irrigation Policy and Gender	205
Irrigation in a Resource-poor Environment	205
9 Gender and Food Security: Invisibility Revisited	209
Invisible Rural Women	210
Data Deficiencies: Maintaining Rural Women Invisibility	214
The Feminisation of Agriculture	215
Rural Women's Participation in Decision Making	219
Policy Approaches to Women in Development	220
Gender Mainstreaming	224
Gender and the Millennium Development Goals	226
Gender and Food Security: Policy Implications	227
Rural Women's Voice	230
10 Conclusion: Food Security in Perspective	232
Economic and Agricultural Growth in Africa	236
Net Food Importing Countries and World Trade	238
Aid to Agriculture	241
Future Challenges (1): Climate Change	244
Future Challenges (2): Biofuels	246
Conclusion	247
<i>Appendix: General Agreement on Tariffs and Trade</i>	251
<i>Notes</i>	254
<i>Bibliography</i>	260
<i>Index</i>	279

Food security has been a centrepiece of food and agricultural policy discussion since the food crises of the 1970s, and it has risen to prominence since 2007 among national governments, multilateral and bilateral institutions, and non-governmental organisations following the recent food crisis.

No one really knows how many people are malnourished. The statistics most frequently cited are that of the Food and Agriculture Organization of the United Nations (FAO), which measures 'undernutrition', with the most recent estimate, released on 14 October 2009, indicating that 1.02 billion people are hungry, 15 per cent of the estimated world population in that year of 6.8 billion. This represents a sizeable increase from its 2006 estimate of 854 million people. Almost all of the undernourished are in developing countries, in which about 11 million children under five die each year. Malnutrition and hunger-related diseases cause 60 per cent of these deaths (UNICEF 2007).

This chapter begins by defining food security and insecurity, and goes on to trace the evolution of these concepts since the 1970s. It provides some discussions on the costs of chronic food insecurity and malnutrition to individuals and nations. The chapter then examines the causes of food insecurity, both chronic and transitory, elaborating on the factors behind the repeated occurrences of transitory food insecurity. Finally, it is imperative to examine the key factors that caused the 1972–1973 food crises, and to consider whether the same factors have been operating since then, leading to the most recent crisis of 2007 and beyond.

WHAT IS FOOD SECURITY?

Concern with food insecurity can be traced back to the first-world food crisis of 1972–1974 and beyond that at least to President Franklin D. Roosevelt's 'State of the Union Address' on 6 January 1941, before the US entered the Second World War, in which he spoke of 'four essential freedoms': freedom of speech, freedom of

faith, freedom from want, and freedom from fear (Rosenman, in Shaw 2007: 3).

In 1943, the FAO's founding conference was organised to consider the goal of freedom from want in relation to food and agriculture. Freedom from want was defined then as 'a secure, an adequate, and a suitable supply of food for every man' (FAO, in Shaw 2007: 3).

The overall objective of the conference was to promote the idea of ensuring 'an abundant supply of the right kinds of food for all mankind', with a clear emphasis on nutritional standards as a guide for governmental agricultural and economic policies for improving the nutrition and health of the world's population. The conference declaration also recognised the causes of hunger and proposed some solutions (Shaw 2007: 3):

- Poverty is the first cause of malnutrition and hunger;
- Increasing food production will ensure availability but nations have to provide the markets to absorb it, thus, an expansion of the world economy should provide the purchasing power needed to maintain an adequate diet for all. Clear emphasis is put on the need for opportunities to create jobs, enlarged industrial production, and the elimination of labour exploitation;
- With an increasing flow of trade within and between countries, better management of domestic and international investment and currencies, and sustained internal and international economic growth, the food which is produced can be made available to all people.

During 1973, the world witnessed the most publicised food crisis, triggered by rising oil prices and consequently increasing input prices for items such as fertiliser and transport costs, in addition to a bad harvest year in the former Soviet Union, China, and India (Mackie 1974). These combined with the gradually increasing demand to absorb worldwide grain reserves (Leathers and Foster 2004). In the face of this crisis, the FAO held an international conference in 1974 at which the 'Universal Declaration on the Eradication of Hunger and Malnutrition' 'solemnly proclaimed' that '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'. The Declaration recognised the role of governments, and urged the participants to work together

for increased food production and a more equitable and efficient distribution of food between and within countries. It reiterated that 'all countries, big and small, rich or poor, are equal. All countries have a full right to participate in decisions on the food problem'. It also provided a definition of a world food security system (UN 1975: 2):

The wellbeing of the peoples of the world largely depends on the adequate production and distribution of food as well as the establishment of a world food security system which would insure adequate availability of, and reasonable prices for, food at all times, irrespective of periodic fluctuations and vagaries of weather conditions, and free of political and economic pressures, and should thus facilitate, amongst other things, the development process of developing countries.

Despite this clear understanding of the complexity of the issue of food insecurity, the policy trends of the 1970s were largely concerned with ensuring national and global food supplies to satisfy the most urgent emergencies and needs in low-income food deficit countries. The annotated bibliography compiled by Maxwell and Frankenberger (1992) contains 200 items, which together trace the evolution of the concept of 'food security' from concern with national food stocks in the 1970s (declining food availability) to a preoccupation with individual entitlements in the 1980s, and to accountability failures, the failure of informal safety nets, food aid failure, and the political and economic priorities of countries in the 1990s (Devereux 2009).

Devereux and Maxwell (2001: 13–21), highlighted three paradigm shifts which followed global and local trends:

1. From global and national to household and the individual – adequate world supplies of basic foodstuffs to offset fluctuations in production and prices and satisfy growing demands (UN 1975) – seeing food supply as the problem.
2. From a 'food first' perspective to a livelihood perspective – food is one part of the jigsaw of secure and sustainable livelihoods; meeting food needs as far as possible given immediate and future livelihood needs – concerns the long-term environmental capacity to supply food and the institutional capacity to enable access to food.

3. From objective indicators (the conditions of deprivation) such as poverty being seen as the main cause of subjective perceptions (feelings of deprivation, lack of self-esteem and self respect) (Kabeer 1988; Chambers et al. 1989) to the 'fear that there will not be enough to eat' (Maxwell 2001: 13–27).

Interest among academics and policymakers in defining and refining the concept of food security is evident from the significant amount of literature devoted to providing definitions, indicators, and conceptual models to measure and determine households' and individuals' food security status. Maxwell and Frankenberger (1992) cited 30 definitions put forward from 1975 to 1991, which have either been influential in the literature or which summarise agency views. Among the most influential are: Siamwalla and Valdes (1980), the FAO (1983), and the World Bank (1985). Most writers agree with the general idea proposed by Reutlinger (1982; 1985), that food security is:

Access by all people at all times to enough food for an active, healthy life. Its essential elements are the availability [Supply] of food and the ability [Demand] to gain it.

The United Nations (UN 1993) added another dimension to the definition: 'a household is food secure when it has access to the food needed for a healthy life for all its members, adequate in terms of quality, quantity, safety and cultural acceptability'. The 1996 World Food Summit adopted a still more complex definition, encompassing regional and global levels, and this definition was adapted by the FAO in 2001:

Food security, at the individual, household, national, regional and global levels [is achieved] when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Maxwell and Frankenberger (1992: 4) identify four core concepts, implicit in the notion of 'secure access to enough food at all times'. These are: (1) sufficiency of food, defined mainly as the calories needed for an active, healthy life; (2) access to food, which is inclusive of both the supply side [availability] and the demand side [purchasing power]; (3) security, defined by the balance between

vulnerability, risk, and insurance; and (4) time, since food insecurity can be chronic, transitory, or cyclical.

Hahn (2000: 2) introduced a new definition of 'nutrition security' at the Scientific Academies Summit in 1996: nutrition security is achieved if

every individual has the physical, economic and environmental access to a balanced diet that includes the necessary macro and micro nutrients and safe drinking water, sanitation, environmental hygiene, primary health care and education so as to lead a healthy and productive life.

The following points sum up the meaning of the term, and the conditions that are essential to the attainment of 'nutrition security' at national and household levels (See Diagram 1.1):

- *Food availability*: refers to overall regional, national or even global food supply and shortfalls in supply compared to requirements (Hahn 2000: 2). It also means sufficient quantities of appropriate types of food from domestic production, commercial imports or food aid, which is consistently available to individuals or is within reasonable proximity to them or is within their reach (USAID 1992; 2006). However, providing a sufficient supply of food for all people at all times has historically been a major challenge. Institutional, technical, and scientific innovations have made important contributions in terms of quantity and economies of scale in the last 50 years but have fallen short of maintaining sustainability of production and access (Koc et al.: 2010).
- *Access to food*: refers to individuals with incomes or other resources that enable them to obtain appropriate levels of consumption of an adequate diet/nutrition level through purchase or barter; accessibility also deals with equality of access to food for every member of a household within and between regions. Inequities have resulted in serious entitlement shortfalls, reflecting class, gender, ethnic, racial, and age differentials, as well as national and regional gaps in development (ibid.).
- *Cultural acceptability*: the food system and practices of food distribution should reflect the social and cultural diversity of people, and this includes the suitability and acceptability of

new scientific innovations to the social and ecological concerns of the nation in any given country (ibid.).

- *Food utilisation*: has a socioeconomic and biological aspect. It concerns a household's decision making on the kind of food needed and how the food is allocated between the members of the household, in addition to the composition and the balance of the consumed food (carbohydrate, fat, protein, vitamins, and minerals). It also includes employing proper food processing, storage, provision, and the application of an adequate knowledge of nutrition and child-care techniques, along with adequate health and sanitation services (USAID 1992).
- *Sustainability*: is defined in terms of the adequacy of relevant measures to guarantee the sustainability of production, distribution, consumption, and waste management. A sustainable food system should help to satisfy current basic human needs, without compromising the ability of future generations to meet their needs. It must therefore maintain the ecological integrity of natural resources such as soil, water, fish stocks, forests, and overall biodiversity (ibid.).

WHAT IS FOOD INSECURITY?

Food insecurity is the lack of access to enough food; it can be chronic, and/or transitory and cyclical (World Bank, 1985: 1).

Chronic food insecurity is 'a continuously inadequate diet caused by the inability to gain food'. It affects households that lack the ability either to buy enough food or to produce their own. Poverty is considered the root cause of chronic food insecurity (World Bank 1985: 1). Moreover, a continuously inadequate diet is synonymous with the term hunger or undernutrition, which is a medical term describing a situation of 'stunting' or stunted growth, resulting from food intake that is continuously insufficient to meet dietary energy requirements (FAO 2005a). This process starts *in utero* if the mother is malnourished, and continues until approximately the third year of the child's life, leading to higher infant and child mortality. Once stunting has occurred, improved nutritional intake later in life cannot reverse the damage.

There are four types of malnutrition, according to Mayer (in Leathers and Foster 2004: 25). Firstly, over-nutrition occurs when a person consumes too many calories, and this is the most common nutritional problem in high-income countries and among high-income people in developing countries. The diet of the world's

high-income people usually consists of higher calories, saturated fats, salt, and sugar. Their diet-related illnesses include obesity, diabetes and hypertension.

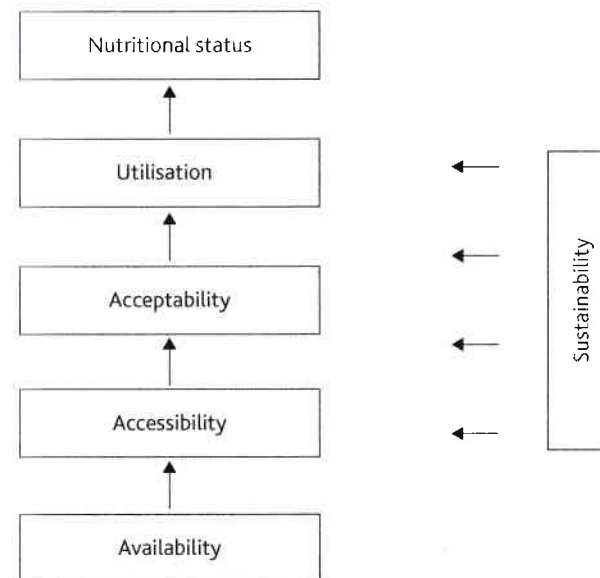


Diagram 1.1 Conditions of food and nutrition security

Sources: Adapted from Gross (1999) and Hahn (2000).

Secondly, when a person has a condition or illness that prevents proper digestion or absorption of food they have secondary malnutrition. Public-health measures such as providing sanitary human-waste disposal and clean water are especially important in reducing secondary malnutrition. Low-income people in developing countries are at risk of undernutrition (insufficient calories), which is commonly exacerbated by secondary malnutrition (for example, a diarrheal infection that robs the body of nutrients). Because of the strong link between the two, undernutrition and secondary malnutrition are commonly grouped together and called simply undernutrition (Leathers and Foster 2004: 25–33).

Thirdly, dietary deficiency or micronutrition is concerned with deficiencies in vitamin A, iodine, and iron. Fourthly, there are two other related types of malnutrition, protein-calorie malnutrition (PCM) and protein-energy malnutrition (PEM). PCM, is concerned with under consumption of protein and PEM is caused by a diet

short of the protein and minerals (such as zinc) that are needed for normal growth, health, and activity, and which are essential to the growth of very young children. Vitamin D deficiency causes diseases including rickets (soft bones) and scurvy, and beriberi and pellagra¹ are caused by deficiencies in B vitamins. Kwashiorkor and marasmus represent extreme forms of PCM and are most prevalent in low-income countries where poverty is widespread (ibid).

The causes of chronic food insecurity

One of the key factors affecting all underlying determinants of chronic food insecurity is poverty.² A person is considered to be in absolute poverty when he/she is unable to satisfy basic needs such as food, basic health, clean water, basic education, and shelter (UN 1993; World Bank 1993; Frankenberger 1996; Sachs 2005). The effects of poverty on child malnutrition are pervasive. Poor households and individuals have inadequate resources to generate enough income and are unable to utilise food or contribute to enhancing their resources in order to maintain their health and wellbeing and to achieve food security on a sustainable basis (Smith and Haddad 1999; Hahn 2000; Bne Saad 2002).

Measuring chronic food insecurity or nutrition insecurity is important for determining the nature, extent, and causes of food and nutrition insecurity. Most literature begins with an identification of the food insecure, determines their geographic location, and attempts to measure the extent of malnutrition at the individual level.

Table 1.1 shows that, on average, the proportion of undernourished people in the developing world is about 16 per cent of the total population. The vast majority of the world's food insecure people live in Asia (see FAO 2009a: 47–50).

However, the most recent 'Global Hunger Index' published by the IFPRI (2011) indicates large percentage increases of hunger from 1990 to 2011 in 6 countries, with the Democratic Republic of Congo topping the list with 63 per cent, followed by Burundi at 21 per cent, North Korea at 18 per cent, Comoros at 17 per cent, Swaziland at 15 per cent, and Cote d'Ivoire at 8 per cent.

Past nutrition intervention programmes have often been consumption-oriented (FAO 2004), with an emphasis on nutrition education and food production. This was influenced by earlier research and writing by experts such as Reutlinger and Knapp (1980) on the 'minimal level of food consumption'; Siamwalla and Valdes (1980) on the 'target level of consumption'; and the FAO (1983) on 'food adequate intake to meet nutritional needs', and Maxwell and

Table 1.1 Prevalence of undernourishment and daily energy supply (DES) in world regions

<i>World regions</i>	<i>Total population 2001–2006 (millions)</i>	<i>No. of people undernourished 2001–2006* (millions)</i>	<i>Proportion of undernourished in total population 2001–2006 (%)</i>
World	6,483.3	872.9	13
Developed countries	1,269.5	15.2	—
Developing countries	5,213.8	857.7	16
Asia and Pacific	3,518.7	566.2	16
East Asia	1,394.5	136.3	10
Southeast Asia	551.9	84.7	15
South Asia	1,492.0	336.6	23
Central Asia	58.4	5.8	10
Western Asia	15.8	2.1	13
Latin America and the Caribbean	551.1	45.3	8
North East and North Africa	427.7	33.8	8
Sub-Saharan Africa	716.3	212.3	30

Source: Compiled from FAO (2008).

* The FAO estimates that 1.02 billion people were undernourished worldwide in 2009.

Frankenberger (1992) on 'Household food security indicators and measurements'. Such nutrition interventions can temporarily address problems of specific low-income population groups which do not adequately benefit from the national development processes. Thus, nutrition needs to be recognised and addressed within the context of national development policy to enable long-term sustainable improvement in the nutritional status of the whole population (FAO 2004: vii–viii).

In determining the causes of chronic food and nutrition insecurity, there is a need to focus on food security at both the individual and the household level (see, Gross 1999; Hahn 2000; FAO 2004; Leathers and Foster 2004). Two broad concepts of food insecurity represent different views on ways of solving this problem. UNICEF, according to Hahn (2000: 4–7), focuses on the problem of malnutrition among children with due consideration to their health situations. The second concept takes into account more relevant determining factors such as food availability 'supply-side', health, environmental, and social considerations (dietary habits and practices which are influenced by cultural norms and value systems), yet it omits other important

factors such as political processes, macroeconomic conditions, and the capacity of both private and public institutions to tackle the problem of chronic food and nutrition insecurity (see Diagram 1.2).

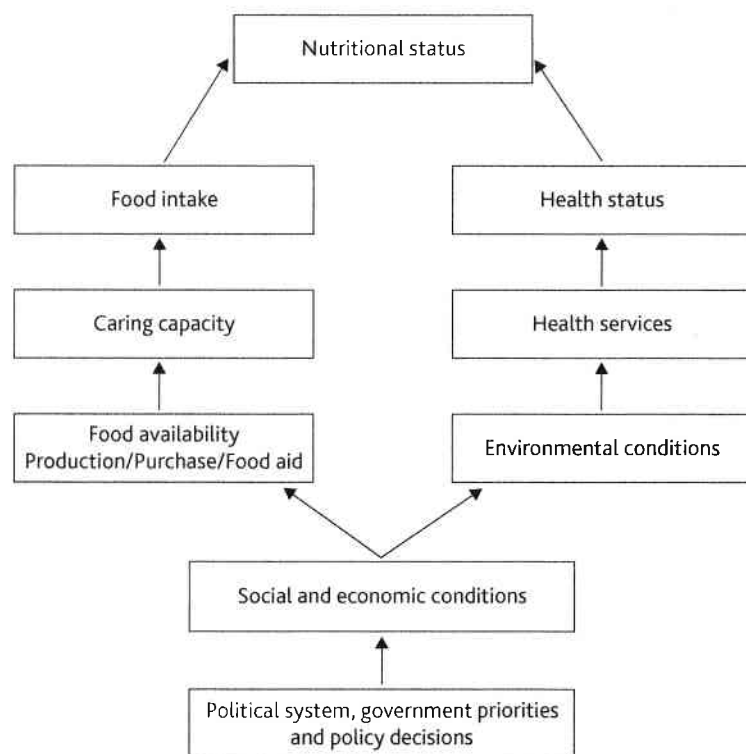


Diagram 1.2 Conceptual frameworks for nutritional status at household level

Source: Adapted from Hahn (2000: 5).

MEASURING CHRONIC FOOD INSECURITY

Various methods are used to assess and measure nutritional status at the individual level, and findings are usually aggregated over community, district, or subregional levels (Hahn 2000: 7). Leathers and Foster (2004: 41) outline four common methods of direct assessment of the nutritional status of an individual. These are: clinical, biochemical, dietary, and anthropometric. Each method has shortcomings and each may result in a somewhat different assessment of the nature and extent of nutritional disorders. Box 1.1 briefly introduces some of the methods used to measure under-nutrition.

Box 1.1 Measuring chronic undernutrition for individuals

Clinical assessment: this relies on the examination of physical signs on the body that are symptomatic of nutritional disorders. Most common are the micro-nutrient deficiencies of vitamin A and iodine (see Leathers and Foster (2004: 41 for details).

Biochemical assessment: this requires examination of bodily fluids such as blood or urine for the complex metabolic changes that accompany nutritional disorders such as anaemia by hemoglobinometry (to detect iron deficiency). Anaemia leads to a reduced degree of physical activity in an individual and increases his/her vulnerability to infection (see, Guillespie 1998; Hahn 2000: 8). The difficulty with these methods is their complexity and cost – for example the effort required to organise blood samples from a large population, and the need to transport these samples to appropriate laboratory apparatus for analysis before they deteriorate, especially in hot climates (Leathers and Foster 2004: 42).

Dietary assessment: surveys are usually carried out to assess nutritional status. Two approaches are used: dietary recall, in which the person is asked to remember what he or she ate, say, during the past 24 hours or the past seven days; and dietary record, in which the amount of food consumed at mealtimes, is recorded, often by weighing it.

Anthropometric assessment: this is the science of measuring the human body and its parts. It serves as the most commonly used measure of nutritional status, based on an understanding of how human physical growth and development respond to nutritional status. Leathers and Foster (2004) provide a full explanation of the impact of undernutrition on physical growth and development and of anthropometric assessment. These measurements include: low height-for-age, or stunting; low weight-for-height, or wasting; low weight-for-age, or underweight; and fat composition of the body from mid-upper arm circumference (MUAC). Body mass index (BMI) is applied with adults and is becoming more and more accepted as an important indicator for the nutritional status of adults, and nature versus nurture (or heredity versus environment).

Another method is used to determine the *base metabolic rate* (BMR) for the population. The BMR shows the number of calories needed for survival when the body is at rest.

Source: Leathers and Foster (2004: 41–7)