



PLOW Learning Resource: Food Security

Important Note:

This learning resource was developed as part of the Professional Development for Livelihoods Advisers Website (PLOW) which was operational between 2006-2008.

PLOW was funded by the Department for International Development (DFID) and supported the professional development of DFID livelihoods advisers. PLOW hosted 17 learning modules of which this is one. Modules were produced using guidance provided by the Livelihoods Technical Competence Framework that described technical competencies, knowledge, and experience required by DFID Livelihoods Advisers.

PLOW modules were designed to help advisers get up to speed on areas of the competency framework, to prepare for new postings, or to refresh existing knowledge on particular subject areas. They were produced and developed by a partnership comprising the Programme of Advisory Support Service (PASS) and Livelihoods Connect based at the Institute of Development Studies (IDS). Each module was written by an expert or experts in the subject and provided:

- an overview of the subject in a briefing note;
- key texts;
- a summary of recent policy debates;
- points on where to find other resources; and
- a glossary of key terms used in the briefing note.

Although the learning modules produced were written with the DFID Livelihoods cadre in mind they were accessible to a global audience through the website.

Twelve of the original PLOW modules are now hosted on the Evidence on Demand website. This PLOW module was produced between 2005 and 2008 and has not been updated since. Some of the material that it draws upon may no longer represent current thinking and some of the links to resources may no longer exist. Nevertheless, we believe that it is still a useful resource that provides useful reference material.





Food Security

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Food insecurity is one of the most visceral dimensions of poverty. The pain of going to bed hungry, or worrying about where the next meal is coming from, is - at a personal level - inconceivable to most of us in the development profession. Yet it is the reality facing 800 million people in the developing world. At a global level, the world is food secure - it is at the community, household and individual levels that access to food breaks down. This breakdown in access represents a failure of individuals to claim rights and of states to deliver on obligations, either for political, economic or social reasons - usually a combination of all three. Food insecurity means that poverty today is more likely due to greater chances of sickness and low labour productivity in adults. It also guarantees lower productivity in the next generation of adults, because malnourished infants grow into lower productivity adults. And because malnourished mothers give birth to malnourished babies, poverty is transmitted - ruthlessly - across generations.

The **Briefing Note** defines food insecurity, hunger and malnutrition and identifies their key causes. It then describes some of the main policy and programme interventions that have proven important in fighting food insecurity. In addition to the Briefing Note, two Key Texts on food security are recommended, as well as highlights of emerging policy concerns and unfinished agenda action items in dealing with food insecurity.

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Briefing Notes

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What is food security and how is it related to hunger and malnutrition?

The terms food insecurity, hunger and malnutrition are often used interchangeably. The concepts do exhibit a significant amount of overlap, but it is only partial and the areas of non-overlap generate important insights into the causes of the outcome in question.

Food Security, according to the definition adopted at the World Food Summit, “exists 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.” Food security is multi-dimensional. Firstly, it is affected by food availability such as insufficient production at national level or market failure and inadequate infrastructure at the sub-national level. Secondly, households and individuals may be unable to access food due to production difficulties, an inability to purchase it and unequal distribution of food between household members. The ability to access food is closely related in spirit to Sen's work on food entitlements. Thirdly, an individual's utilisation of food for growth and development is affected by various illnesses such as diarrhoea that depress appetite and reduce the ability to absorb nutrients.

Hunger is defined as an uncomfortable or painful sensation caused by a lack of food. Hunger can be experienced temporarily by people who are not food insecure, as well as by those who are. The term ‘hunger’ is used when referring in general terms to the Millennium Development Goal on poverty and hunger and to people's experience of food insecurity.

Malnutrition results from the interaction of inadequate diet and infection and is reflected in poor infant growth and an excess of morbidity and mortality in adults and children alike. Undernutrition is malnutrition due to a deficiency of calories or vitamins and minerals. Undernutrition due to lack of specific nutrients can lead to specific conditions such as scurvy and pellagra. Overnutrition is malnutrition due to an excess of certain food components such as saturated fats and added sugars in combination with low levels of physical activity. The vast majority of malnourished individuals in the developing world experience undernutrition.

Vulnerability and shocks are important in determining food security. Vulnerability depends externally on a person's exposure to shocks, stresses and risks, and internally on a person's ability to manage these shocks. The greater the exposure to shocks and the greater the inability to manage the consequences of shocks, the greater the vulnerability to food insecurity. The chronically food insecure are in particular need of some form of safety net or social protection mechanism that reduces vulnerability to shocks and stresses - either by minimising exposure to shocks or strengthening the capacity to manage the consequences of the shocks.

The MDG target of reducing poverty and hunger by half by 2015 uses several indicators to monitor progress - two of which are food-related: infant underweight (low weight for age - a form of undernutrition) and food supply data from FAO. Neither indicator is ideal from a food security perspective. The former gives too much weight to non-food factors such as water and sanitation, while the latter gives too much weight to food production and not enough to food access.

Understanding the causes of food insecurity

There are a number of frameworks that can be used to understand the causes of hunger, food insecurity and malnutrition. The food security community tends to use a food availability-food access-food utilisation model, which breaks food security into food production and marketing (availability), income and prices (access) and food absorption for growth (utilisation). The nutrition community uses the UN conceptual model that breaks the determinants of malnutrition into immediate (diet and infection), underlying (household food security, care and health environment) and basic (physical, economic, political, social, and cultural factors). The former framework underplays the political and social determinants of food security and the latter framework goes well beyond food security.

A unifying way of thinking about food insecurity is via different types of access: physical, economic, socio-political and, optionally, physiological access. Physical access issues relate to food production, agricultural productivity and the ability of markets to deliver food to consumers and inputs to farmers. Economic access relates to prices and incomes—what is the affordability of the food in the market for poor consumers? Socio-political access acknowledges that certain members of households and communities are unable to gain sufficient access to food because their needs are either undervalued or because they lack the power to press their claims. Women, infants, and ethnic minorities are particularly vulnerable to such inequalities in access. Finally, physiological access refers to the body's ability to use the nutrients for growth and development, as infection diminishes access to ingested nutrients. These are outlined in Figure 2.

Figure 2: Access to food in the quantity and quality necessary for a healthy life: Four Dimensions

Type of Access	Question
Physical	Is there food in the fields and in the markets?
Economic	Can people afford to purchase food in market or consume home production?
Sociopolitical	Can certain groups within the household and community get access to food purchased or grown?
Physiological	Can the body use food consumed for growth and development or are disease loads too high?

Public action to achieve food security

The international voluntary guidelines on the right to food make it clear that the progressive realisation of the right to food is the responsibility of governments. Most development interventions attempt to improve the broad environment in which households exist or to raise levels of human or physical capital. These do not directly affect food security outcomes but instead attempt to raise incomes. However, the causes of food insecurity are highly context specific and availability, access and utilisation are affected by a range of factors such as agro-ecology, infrastructure, governance, economic stability, markets and their regulation, social exclusion, health services and cultural practices. Not all factors are susceptible to public policy changes and they all tend to interact in unpredictable ways. Therefore there is not always a strong link between higher income and food security and nutrition outcomes. A holistic approach is required. The list below (Table 1), although not an exhaustive list, is a way of starting to think about causes of food insecurity and some options for public action.

Table 1: Some public actions to achieve food security

Type of Access	Question	Options for Public Action
Physical	Is there food in the fields in the markets?	<p>Improve, in a sustainable way, the productivity of land, seeds, water, soil, other natural resources, labour, and capital applied to agriculture. Invest in Agricultural Research and Development that does this in a pro-poor way. Build market institutions. Give farmers a strong voice in innovation process for technology, institutions and policy. Ensure that innovations are reliably profitable for small farmers. Invest in credit, savings and insurance institutions aimed to smallholder farmers and other rural entrepreneurs. Link better weather forecasting with farm communities via existing information and communication technologies.</p> <p>Open foreign markets for export; invest in standards compliance capacity; invest in farmer associations to improve negotiating power, improve coordination, and increase information flow and learning.</p> <p>In all regions, but particularly in AIDS-affected regions, focus even more on labour constraints, on farmer-to farmer learning, on clarifying property rights, whether formal or informal. Improve the management of food stocks and grain storage facilities.</p>
Economic	Can people afford to purchase food in market or consume home production?	<p>Improve access to markets, market information, market institutions to strengthen poverty reducing transmission mechanisms such as (a) increasing the demand for locally produced non-farm products, (b) lowering of food prices for net food purchasers, and (c) lowering of production costs for farmers. Invest in market infrastructure that meets the need of the poor. Ensure that assistance to the most vulnerable is free. Improve access to assets, and employment, via labour intensive public works, especially during seasonal downturns in production and employment demand. Labour based systems should not interfere with prospects for production next season.</p> <p>Microcredit can be important for some small and medium enterprise income generation. Microinsurance to minimise vulnerability to shocks.</p> <p>Fortifying staple foods with vitamins and minerals. Distribution of supplements to highest need groups (infants, adolescent girls and women of child bearing age).</p>
Socio-political	Can certain groups within the household and community get access to food purchased or grown?	<p>Pay attention to how power relations mediate access to technology, farm inputs, decisions about farming practices (especially labour requirement from women), access to markets and control over income from crop sales. Understand how public action can affect those power relationships. Invest in monitoring systems that can detect inequalities in a real-time sensitive manner. Create space for greater voluntary participation of excluded groups in decision making fora and invest in their ability to do so.</p>
Physiological	Can the body use food consumed for growth and development or are disease loads too high?	<p>Work with health, sanitation and water experts, and behaviour change practitioners to ensure food access and consumption is not undermined by illness and poor caring practices such as poor infant feeding, poor hygiene and poor child care. Diseases from poor sanitation, AIDS, malaria and parasitic infections are particularly important.</p>

Key Texts

Food Security in Sub-Saharan Africa

Devereux, S. and Maxwell, S. (eds), 2001, London: ITDG Publishing
(Recommend Reading: Chapter 1 - S. Maxwell, 'The Evolution of Thinking About Food Security')

Sub-Saharan Africa is the only region in the world currently facing both widespread chronic food insecurity and threats of famine. Why is this so and what can be done? In seeking to answer these questions, Stephen Devereux (IDS) and Simon Maxwell (ODI) have brought together eleven different perspectives on critical food security issues, from the causes of food insecurity to planning and policy interventions. They have drawn on a variety of disciplines, from agricultural economics to nutrition. The editors and contributors are all food security experts with long experience of research and advisory work in Africa and of teaching and training in their respective areas (adapted from publishers summary).

Ending Hunger in Our Lifetime: Food Security and Globalization

C. Ford Runge, B. Senauer, P. Pardey and M. Rosegrant, 2003, Johns Hopkins University Press
(Recommended Reading: Chapters 1, 2 and 8)

At a time in history when conflict erupts daily, ending severe deprivation may be critical to global peace and stability. While the goal of reducing hunger by 2025 is as yet far from being reached, Ford Runge, Benjamin Senauer, Phillip Pardey (University of Minnesota) and Mark Rosegrant (IFPRI) argue that hunger can be banished in our lifetime. The book distills what is already known about fighting hunger and then reports on new research findings and projections that show it can be done, through new and renewed institutions, scientific innovation, global economics and investment, and sustainable environmental practices (adapted from publishers summary).

Policy Debates

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Strategy

Recent papers from DFID setting out the strategy for achieving the Millennium Development Goal on Hunger and a review paper from IFPRI

Key DFID Publication: Eliminating Hunger : Strategy for Achieving the Millennium Goal on Hunger, DFID, 2002

Key DFID Publication: Hunger Factsheet

Other Key Text: Overcoming Child Malnutrition in Developing Countries: Past Achievements and Future Choices , Smith, L.C. and Haddad, L., 2000, IFPRI Discussion Paper 30, Washington DC, IFPRI

Trade

Trade and Food Security

Will the lowering of EU trade barriers really be such a spur to African farm exports or will these markets get captured by other developing countries that have invested in the market infrastructure needed to compete in a globalising world?

Key Text: International Trade, Livelihoods and Food Security in Developing Countries , Stevens, C. et al, 2003, IDS Working Paper 215, Brighton, IDS

HIV/AIDS and Food Security

What is the best response to food insecurity in AIDS-ravaged areas? What needs to be done differently with respect to agricultural research and development and safety nets?

Key Text: Effective Food and Nutrition Policy Responses to HIV/AIDS: What We Know and What We Need to Know, Haddad, L. and S. Gillespie, 2001, Journal of International Development 13 (May): 487-511

Key Text: Nutrition Fact Sheet, UNICEF, 2004

Urbanisation and Food Security

Are the causes of urban hunger very different than in rural areas? How to invest in addressing urban hunger without attracting huge levels of rural to urban migration? Is public policy in urban areas really more captured by elites than it is in rural areas?

Key Text: The Urban Facts of Life: Implications for Food and Nutrition Policy, Ruel, M., L. Haddad., and J. Garrett, 1999, World Development, 27(11):1917-1939

Social Protection and Food Security

Why are policies to address risk and vulnerability seen as residual to growth rather than central to it? Is there any basis for the centrality to growth argument? What are the best investments in terms of minimising risk and vulnerability in prevention, preparation, mitigation and care?

Key Text: Can Social Safety Nets Reduce Poverty? Devereux, S, Development Policy Review, Volume 20 (5), Nov 2002

Key Text: Food Security and Social Protection, Cromwell, E., and Slater, R., 2004, PASS

Climate Change and Food Security

How much of a threat to food security is climate change? Is agriculture a major contributor to climate change? How does this vary by region?

Key Text: Climate Change and Food Security , Devereux, S. and J. Edwards, 2004, IDS Bulletin, 35 (3)

Africa and Food Security

Why hasn't agricultural productivity risen in much of SSA? Where it has, what have been the factors? How to promote local-level innovation within SSA agriculture so as to match what is best in the multiple contexts in terms of institutions and technology to the rapidly changing context, with influences from within and outside of the agricultural sector. How to prioritise actions in multiple and dynamic agricultural contexts?

Key Text: Understanding Linkages Among Food Availability, Access, Consumption and Nutrition in Africa : Empirical Findings and Issues from the Literature, Diskin, P., 1995, SD Technical Paper 11, USAID

Key Text: Hunger and Vulnerability in Southern Africa: A DFID Regional Strategy Paper, DFID

Biotechnology and Food Security

Under which conditions can biotechnology be a force for reducing food security? Do any of those conditions hold now? If yes, how to reproduce them?

Key Text: Agricultural Biotechnology and Food Security: exploring the debate, Scoones, I. 2002, IDS Working Paper 145

Human Rights and Food Security

What is the relevance of the human rights perspective for food security? Does it mean provide food to all? Does it mean provide space for citizens to claim rights from governments in terms of making markets work for the poor? Does it mean equipping governments to deliver on food security?

Key Text : How Does the Human Rights Perspective Help to Shape the Food and Nutrition Policy Research Agenda? Haddad, L. and A. Oshaug, 1998, Food Policy 23 (5): 329-345

Direct Budget Support and Food Security

Not specific to food security, but what happens if urban-biased governments decide to spend less than the donors would like on food security?

Key Text: Reforming Food Aid: Time to Grasp the Nettle, 2000, ODI Briefing Paper, London: ODI

Further Reading

Research and technical resources to explore Food Security themes in more depth

International Food Policy Research Institute (IFPRI)

Web: www.ifpri.org

Email: ifpri@cgiar.org

Washington based international research centre within the CGIAR network focusing on economic growth and poverty alleviation in low-income countries, improvement of the well-being of poor people, and sound management of the natural resource base that supports agriculture.

Food Security Program Michigan State University

Web: <http://aec.msu.edu/fs2/>

USAID funded research programme email to: aec@msu.edu looking at food security from a structural transformation context that takes into account the role of trade, non-farm income generation, and implications for poverty alleviation and sustainable natural resource use.

Food and Nutrition Technical Assistance Project (FANTA)

Web: www.fantaproject.org

Email: fanta@aed.org

USAID funded technical programme supporting integrated food security and nutrition programming (e.g. integrating nutrition into the strategic planning process; providing analyses for food security and nutrition policy development). Recommended resource is Food Security pages: www.fantaproject.org/focus/foodsecurity.shtml

Guides to exploring Food Security themes, organisations and events comparatively

Eldis Food Security Resource Guide

Web: www.eldis.org/food/index.htm

Edited guide to key documents, organisations, research themes, discussions and other key resources on food security drawn from global sources by the Eldis team at IDS. Themes covered include: Food aid; Right to food; Biotechnology; IPRs and food security; Food trade; Making food policy; Social protection and safety nets; Livelihoods, coping and assets; Household responses to food security; HIV/AIDS and food security; Gender and food security; Nutrition; Urban issues; Role of small producers. Recommended resource is Food Aid: www.eldis.org/go/topics/resource-guides/food-security/food-aid

Development Gateway Food Security Pages

Web: <http://topics.developmentgateway.org/foodsecurity>

World Bank portal on food security issues, policies, organisations and events. Currently highlighting: Africa, Agriculture, Biotechnology and GMOs; Emergencies; Gender; Nutrition and Health; Policy; Sustainable Livelihoods; the Right to Food; Training; Water. Recommended resource is Policy.



Food Security The condition 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.

Food Insecurity The absence of food security

Hunger A condition in which people lack the basic food intake to provide them with the energy and nutrients for fully productive, active lives, is an outcome of food insecurity. All hungry people are food insecure, but not all food insecure people are hungry.

Malnutrition A condition resulting from the interaction of inadequate diet and infection and is reflected in poor infant growth and an excess of morbidity and mortality in adults and children alike.

Macronutrients The proteins, carbohydrates and fats that are required by the body in large amounts and, available to be used for energy. They are measured in grams.

Micronutrients Called “micronutrients” because they are needed in only miniscule amounts, these substances are the “magic wands” that enable the body to produce enzymes, hormones and other substances essential for proper growth and development. As tiny as the amounts are, the consequences of their absence are severe. Iodine, vitamin A and iron are most important in global public health terms; their lack represents a major threat to the health and development of populations the world over, particularly to preschool children and pregnant women in low-income countries .

Micro-Credit / Micro-Insurance Providing very poor families with very small loans (microcredit) to help them engage in productive activities or grow their tiny businesses. Over time, microfinance has come to include insurance, credit, savings, etc because the poor require access to wide variety of financial products.

Overnutrition A form of malnutrition due to an excess of certain nutrients such as saturated fats and added sugars in combination with low levels of physical activity.

Seasonality Changes within the year, such as those related to climate, that affect assets, activities, prices, production, health, employment opportunities etc. vulnerability arising from seasonality is often due to seasonal changes in the value and productivity of natural capital and human capital (through sickness, hunger etc). The poor are often more vulnerable to these changes than wealthier groups.

Shocks Usually sudden events that have a significant impact (usually negative) on livelihoods. They are irregular and vary in intensity and include events such as natural disasters, civil conflict, losing one's job, a collapse in crop prices for farmers etc. They can be classified into the following categories:

- Human shocks (e.g. illness, accidents)
- Natural shocks (e.g. floods, earthquakes)
- Economic shocks (e.g. job losses, sudden price changes)
- Conflict (e.g. war, violent disputes)
- Crop/livestock health shocks.

Shocks and trends may be linked. For example some changes that appear as trends at a national or even regional level (such as increased infection rate for diseases such as AIDS and malaria) can impact upon a household or individual as severe shocks (i.e. death in the family).

Trends Involve changes that take place over a longer period of time than is the case with changes brought about by shocks or seasonality. They can have either a positive or a negative effect on livelihoods. Examples of trends include the following:

- Population trends (e.g. increasing population pressure)
- Resource trends (e.g. soil erosion, deforestation)

- Economic trends (e.g. declining commodity prices, development of new markets)
- Trends in governance/politics (e.g. increasing accountability)
- Technological trends (e.g. the development of more efficient production techniques)

Undernutrition A form of malnutrition due to a deficiency of calories and vitamins and minerals interacted with acute infection.

VAM VAM stands for "Vulnerability Analysis and Mapping" - a systematic set of methods and tools to assess and map food security and vulnerability. In this sense, the primary goal of VAM is to provide timely, accurate and relevant information about the nature of food insecurity and vulnerability among the hungry poor.

Vulnerability Context The shocks, trends and seasonality that affect people's livelihoods (often, but not always, negatively). The key feature of all these factors is that they are not controllable by local people in the immediate or medium-term. Vulnerability or livelihood insecurity resulting from these factors is a constant reality for many poor people.

Vulnerability The probability or risk of falling into, or deeper into, poverty.