

Part III

Household Food Security: Concepts and Definitions — An Annotated Bibliography

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Introduction

This annotated bibliography contains nearly 200 items which together trace developments in the concept of household food security. The concept of “food security” is found as early as the 1970s, but the construct of “household food security” is more recent: the bulk of the literature dates from the 1980s. The evolution of “food security,” from concern with national food stocks in the 1970s to a preoccupation with individual entitlements in the 1980s, is an important part of the story this bibliography tells.

Beyond that, the bibliography illustrates the many themes and sub-themes in studies of household food security: from the relationship between food security and nutrition, to wider concerns of livelihood security and long-term sustainability. There is no single definition (though some definitions are more often cited than others), but rather a complex weave of inter-related strands, which are adjusted to suit the needs and priorities of individual users.

Some clear patterns emerge. The studies produced under the auspices of national governments have tended to give high priority to food production, with the overall objective of national self-sufficiency. International agencies and the academic literature have taken a different tack, focusing more on consumption and nutritional outcomes. Geographically, all regions are represented, but sub-Saharan Africa dominates, especially in the later entries.

Household food security is linked increasingly to environmental considerations. Contrary to expectations, perhaps, the two issues were brought together as early as 1978, although it is only in more recent work that the complex links between environmental and food security concerns have been explored. Similarly, the role of gender relations in determining intra-household resource allocation has influenced food security studies, shaping their focus on individual food access. Finally, and perhaps heralding the issues which will dominate the literature in the coming decade, food security is being linked to wider concerns of human rights and cultural dignity.

A word on sources and methods: we have trawled both the academic literature and, so far as possible, the “grey” literature of government reports and unpublished manuscripts. In preparing abstracts, we have tried to quote the text verbatim, giving page references to aid citation. We should also make clear that we have limited ourselves to concepts and definitions, excluding questions relating to measurement and, importantly, policy. This is not because we

think those topics unimportant; on the contrary. Rather, we see clearer conceptual frameworks as essential ground-clearing, before moving on to policy.

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1. Adedeji, Adebayo, (1989) Interaction between Structuralism, Structural Adjustment and Food Security Policies in Development Policy Management, ECDPM Occasional Paper, Maastricht.

While the concept of food security was highlighted during the World Food Conference of 1974, emphasis was essentially on increasing food production in food-deficit countries and on creating a coordinated system of national and international grain reserves. This approach overlooked the demand side of the issue, especially the access of vulnerable groups to enough food for a normal life. Currently, the widely accepted definition of food security is “access by all people at all times to enough food for an active, healthy life.” Its essential elements are the availability of food and the ability to acquire it. Food security is thus defined in much broader terms than food self-sufficiency which emphasises increasing domestic food production to meet domestic consumption. (p13).

2. Adelman, I., and P. Berck, (1991) “Food security policy in a stochastic world,” Journal of Development Economics, vol 34 no 1, pp25-55.

We accept the definition of food security offered by Reutlinger and Knapp (1980) — that it represents a condition in which the probability of a country’s citizens falling below a minimal level of food consumption is quite low. Aside from the conceptual problems inherent in defining minimal nutritional standards, common to all food security analyses, this approach requires evaluating the probability of below-subsistence food consumption for all population groups in the economy as a function of international and domestic conditions. For each population group, this probability is clearly related to both the group’s mean food consumption and to the variance of its food consumption. (p26).

3. Advisory Council on Development Co-operation, (1985) Food Security in Africa, Report and Recommendations, Republic of Ireland, Dublin, December.

The concept of food security is taken as embracing three specific aims:

ensuring production of adequate food supplies; maximising stability in the growth of supplies; and securing access to available supplies on the part of those who need them. (Report of the English session of the Committee on World Food Security, FAO, PL83/10, May, 1983). (p13).

4. Africa Leadership Forum, (1989) The Challenges of Agricultural Production and Food Security in Africa, Report of a Conference 27-30 July 1989, Ota, Nigeria.

National food security should be defined within the context of national food self-reliance. It must imply adequate access by all people at national and household levels to adequate and largely domestically produced food at all times. It involves regular and sustainable access without dependence on

commercial and foreign-exchange-consuming imports or food aid detrimental to local production in Africa. In this context, food security should not hinder intra-African trade as a policy instrument, rather it should encourage and emphasise the full utilisation of Africa's productive food resources. (p2).

5. Alamgir, M., and P. Arora, (1991) Providing Food Security for All, International Fund for Agricultural Development, New York University Press, USA.

A food secure household should be defined as one which has enough food available to ensure a minimum necessary intake by all members. The minimum is related to, among other things, body size, weight, sex, nature of work and, for women, pregnancy or lactation status. (p6).

Food security at the sub-national level means the assured availability of food for individual households to draw on to meet their minimum consumption requirements during a given period. To be operational, the concept of "minimum" has to be modified here to reflect, at least partially, tastes and preferences and household status. (p7).

National food security is the sum of household and sub-national food security, and more. At the national level, food security can be defined as assured national availability of food to meet current minimum requirements per capita during a reference period (a year normally) and, also, to meet any unexpected shortfall over a limited period (say three months). (p7)

Global food security is the assurance of an adequate food supply and/or access to it for all, both at national and sub-national levels. (p8).

6. Amani, H.K.R. et al., (1988) "Effects of market liberalisation of food security in Tanzania" in M.Rukuni and R.H.Bernsten (eds), Southern Africa: Food Security Policy Options, Proceedings of the Third Annual Conference on Food Security Research in Southern Africa, 1-5 November, 1987. University of Zimbabwe/Michigan State University Food Security Research Project, Department of Agricultural Economics and Extension, Harare.

Broadly defined, food security means "access by all people at all times to enough food for an active, healthy life" (World Bank, 1986). It entails both the availability of food and the ability of all members of society to have access to adequate amounts of food. At the aggregate level, the country should have adequate food from production, stocks, and imports to meet its citizens' food requirements for an active healthy life. At the household and individual level, all citizens should have entitlement to adequate food (Sen, 1982). (p65).

7. Amity, M., (1982) "Food Security and Shortage Policies." Proceedings of the workshop on Food Policy Research Priorities, held in Nairobi 14-17 June, 1982.

“Food security generally implies arrangements whereby people are assured a minimum adequate level of food grain supply in periods of normal as well as poor harvest. It can be defined at rural, national, regional and international levels. It can also be seen from the viewpoint of either developed countries (the food surplus areas) or developing countries (food deficit areas).” (p154).

National Food Security: “It is a function of the ability of the country’s production, marketing, trade and institutional systems to provide a continuously adequate supply of food to inhabitants even in times of adverse domestic production and international market conditions. It therefore depends on such critical factors as internal food production, income generation and distribution, foreign exchange earning capacity, provision on availability of storage and transportation, distribution facilities for meeting seasonal and emergency food needs plus other factors that may affect the maintenance and improvement of per capita food consumption.” (p156).

International Food Security: “World food security includes the general attainment of food security in individual countries, and introduces the concept of collective or collaborative policy-making. As production changes, either stocks or consumption (or both) have to vary in response. The extent of trade liberalization, commodity price agreement, food aid and the like are powerless to alter this reality.” (p162).

8. Badiane, O., (1988) National Food Security and Regional Integration in West Africa, Wissenschaftsverlag Vauk, Kiel.

Food security is defined as “the ability of food deficit countries, or regions or households within these countries, to meet target consumption levels on a year-to-year basis.” (p1).

Food insecurity, aside from an inability to consume the desired amount of food at the individual level, can also exist in the form of excessive costs incurred by the economy to ensure food availability. (p7.)

9. Balaam, D.N., (1986) “Self-Sufficiency in Japanese agriculture: Telescoping and reconciling the food security-efficiency dilemma” in W.P.Browne and D.F.Hadwiger (eds), World Food Policies: Toward Agricultural Interdependence, Lynne Rienner Publishers, Boulder.

This analysis contends that until 1978 the issue of self-sufficiency in Japan was cast largely in terms of food security (enough food produced locally to meet demand) and efficiency (some food produced locally but excess demand met by importing cheaper food-stuffs). (p91).

10. Ballenger, N., and C. Mabbs-Zeno, (1990) "Targeting Food Security and Food Aid Issues at the GATT," National Center for Food and Agricultural Policy, Discussion Paper Series no FAP90-07, April.

Three types of food security are defined here: global, national, and individual... Global food security requires that a sufficient quantity of food be present to feed the world's people... National food security is defined as an acceptable likelihood that food available for consumption within country is at least equal to biological needs throughout the year... Individual food security is defined as an acceptable likelihood that each person's income, broadly interpreted, is sufficient to satisfy all needs. (pp5-6).

11. Bapna, S.L., (1990) "Food security through the PDS: the Indian experience" in D.S. Tyagi and V.S. Vyas,(eds) Increasing Access to Food: The Asian Experience, Sage Publications, New Delhi and London

Food security is defined as "access to adequate food for all people at all times," (World Bank, Poverty and Hunger, 1986). (p99).

12. Barraclough, S., and P. Utting, (1987) "Food Security Trends and Prospects in Latin America," Working Paper no 99, Helen Kellogg Institute for International Studies, University of Notre Dame, USA.

The normative concept of food security used for the research signifies an assured supply and distribution of food to all social groups and individuals adequate in quality and quantity to meet their nutritional needs, as well as effective demand above this minimum. Food systems offering food security should have the following characteristics: 1) the capacity to generate a sufficient internal food supply (via production, adequate storage and stocks and imports) to meet the basic food needs of all social groups and also of expanding effective demand; 2) have a maximum of autonomy and self-determination, reducing vulnerability to international market fluctuations and external political pressures (autonomy does not imply autarky, however, but rather dependability while taking prudent advantage of gains to be had from specialisation); 3) be reliable so that seasonal and cyclical variations in access to food are minimized; 4) possess long-term sustainability (ie the production base (the ecosystem) should be preserved and improved); 5) finally it should ensure equity, meaning, as a minimum, dependable access to adequate food for all social classes, groups and strata. (p2).

13. Barraclough, S.L., and M.F. Scott, (1988) "The Rich Have Already Eaten.." Roots of Catastrophe in Central America, Working Paper no 105, Helen Kellogg Institute for International Studies, University of Notre Dame, USA, January.

Food security can be defined as assured access by all social groups and individuals to food adequate in quantity and quality to meet nutritional needs.

Five characteristics of a secure food system are described (as in Barraclough and Utting 1987). (p4).

14. Benson, C., E.J. Clay and R.H. Green, (1986) Food Security in Sub-Saharan Africa, IDS, University of Sussex, Brighton.

National food security can be defined as a country having adequate assured supplies of food to meet aggregate consumption needs. It involves stability of supplies and secure access to available supplies on the part of those who need them.

Household food security can be defined as a household having assured sets of entitlements — from food production, cash income, reserves of food or assets and/or government assistance programmes — such that in times of need they will be able to maintain sufficient nutritional intake for physical well-being. There are three important elements in determining household security: the average level of household income, the magnitude and probability of seasonal and annual fluctuations around the average and the value and form of stocks a household can maintain. (pp2-6).

15. Bigman, D., (1982) Coping with Hunger: Toward a System of Food Security and Price Stabilization, Ballinger Publishing Company, Cambridge, Massachusetts.

Food security is measured by the probability that the quantity available for consumption by “poor” consumers does not fall below subsistence level (p.xxix) and is defined thus: “food security represents the ability of a country or the world at large to supply the food needs of all its people at all times, now and in the future.” (p13).

16. Blein, Roger, (1990) “Marché céréalier et sécurité alimentaire,” La Lettre de Solagral — Stratégies Alimentaires no 33.

Following Coulibaly, food security means the regular availability of food supplies taking into account the food habits and economic power of the population. (p14).

17. Botswana, Rural Development Unit, Ministry of Finance and Development Planning, (1985) Report on the National Food Strategy, Gaborone.

The problem areas whose existence necessitated the adoption of an NFS in Botswana are as follows: inadequate food production, poor nutritional status and lack of food security for the nation. Low productivity in arable agriculture is a major factor, as are generally low household incomes, and the pattern and extent of malnutrition is closely linked to this. National food security is viewed in terms of Botswana’s inability to rely on internal supplies produced almost

entirely under rainfed conditions, the rising levels of imports during the current drought period, and the problems posed by being landlocked and situated within an unstable region. (p1).

18. Brandt, Hartmut, (1984) "Food Security Programmes in the Sudano-Sahel," Occasional Paper no 78, German Development Institute, Berlin.

Food security signifies a form of global supply which at least ensures the continued availability of an average per capita quantity of food as population grows. Nutritional security is achieved when food is so distributed that the minimum physiological requirements of final consumers in all sections of the population are satisfied at all times. (p1)

19. Brandt, H., (1990) "Food security aspects in price and market policies for grain-based food systems of sub-Saharan Africa" in E.Chole (ed), Food Crisis in Africa: Policy and Management Issues, Vikas Publishing House PVT Ltd., New Delhi.

The overall objective of food and nutrition security consists of three subsidiary objectives of central importance: increase in the availability of food, at least in line with demographic growth; stabilisation of food, ie., balancing annual fluctuations in supply; and improvement in the distribution of food to final consumer groups. (pp138-139).

20. Bryceson, D.F., (1990) Food Insecurity and the Social Division of Labour in Tanzania 1919-85, Macmillan, Oxford.

Food insecurity, defined as "the inadequacy of the quantity and quality of food consumption, as well as the irregularity over time," can lead to the contraction and ineffectiveness of the institutions that might serve as positive spurs to the enhancement of food production and distribution. (p15)

21. Buchanan-Smith, M., J. Bailey and S. Maxwell, (1990) "Famine in Sudan: A Symposium held at the Institute of Development Studies, University of Sussex, 23 October 1990," in Disasters, vol 15 no 2, pp196-202.

"Food insecurity.." "lack of enough food for an active, healthy life" or "the fear that there will not be enough to eat." (p196).

22. Calkins. P., (1988) "La sécurité alimentaire: Première démarche dans un jeu difficile," Série Conférences no 6, Centre Sahel de l'Université Laval, Québec.

Food security means the capacity of a population to produce or to buy enough food, even in the worst years, to satisfy its basic food needs. (p4).

23. Calon, M.L.H., (1990) "Population, farming systems and food security," Paper no 7(E), International Course for Development Oriented Research in Agriculture. Farming Systems Analysis.

Food security is linked with food self-sufficiency and is measured by the ability of the household to secure its need for staple food. Food security depends on the availability of cash which will enable a household to purchase staple food and basic factors of production such as land and labour. (p19).

24. CARE, (1988) "Project Food Aid: A Classification of its Uses as a Development Resource," CARE, New York, May.

"Food security" refers to availability of a country's population of an adequate and reliable supply of food. This can involve a number of elements:

1. Increasing local food production
2. Improving the stability of food supplies
3. Guaranteeing access to food supplies (through either purchasing power or compensatory mechanisms). (p1).

25. Cathie, J., and H. Dick, (1987) Food Security and Macroeconomic Stabilization: A Case Study of Botswana 1965-1984, Institut für Weltwirtschaft an der Universität Kiel, Tübingen.

At the most general level, food security has been defined as "access by all people at all times to enough food for an active, healthy life." [Reutlinger, 1985].

Food security can be refined to consider both its long-term and short-term aspects. Long-term food insecurity, or chronic insecurity is defined in terms of the persistent existence of malnutrition and the associated lack of development and growth in low-income developing economies or regions of those economies. ... The inability to attain food security in the short-term, or transitory food insecurity, is defined as a temporary decline in a household's or region's or nation's access to food. (p4).

26. Chisholm, A.H., and R. Tyers, (eds) (1982) "Introduction and overview," Food Security: Theory, Policy, and Perspectives from Asia and the Pacific Rim, Lexington Books, Massachusetts.

Food security may be defined as the ability of countries to meet target consumption levels. The choice of the target consumption levels is perhaps the most important aspect of a developing country's food policy, and it can be viewed under two time frames. First, there is the problem of chronic and persistent malnutrition that is caused by low productive capacity and secular problems of poverty. This constitutes a long-term problem that can be overcome

only by a steady continuing rise in productive capacity and the real income levels of the poor...The second problem..is that of short-term variability of entitlements of consumers to food. Food insecurity in this sense is ultimately a problem that stems from real income fluctuations that affect the ability of people to command adequate food through legal means. (p5).

27. Christensen, Garry, (1991) "Towards food security in the horn of Africa," Working Paper no 4, Food Studies Group, Oxford.

Food security is obtained when there is an adequate food supply to which all members of the population have full access. (p1).

28. CIDA, (1989) "Food Security: a Working Paper for the 4A's," Area Coordination Group, July.

What is food security? Food security is a development priority and a programming objective. It is founded on and aimed specifically at redressing the global problem of food insecurity: the lack of access to adequate food. (p5).

29. Clay, E., (1981) "Food policy issues in low-income countries: an overview" in "Food Policy Issues in Low Income Countries," World Bank Staff Working Paper, no 473, World Bank, Washington DC, August.

Food security is a problem most often conceptualised as a macro phenomenon — deviations from trend in aggregate consumption. However, as a human problem it is primarily one of the welfare vulnerability of distinct categories of people within the population. (p5).

30. Clay, E., S. Jones, A. Rahman and Q. Shahabuddin, (1988) "Introduction" in Food Strategies in Bangladesh, Proceedings of a Seminar held in Dhaka 8-10 October, and jointly sponsored by the Government of Bangladesh and the Commission of the European Communities, University Press Ltd.

The term "food security" has two senses: national and individual. At the national level, typically it means the availability in the country of sufficient stocks of food to meet national needs (however defined) until such time as stocks can be replenished from harvests or imports. At the individual level, it means that all members of society have access to the food they need, either from the market, from their own production, or from the Public Food Distribution System (eg the ration system, or Food-for-Work). (p3).

31. Commission of the European Communities, (1988) "Food Security Policy: Examination of Recent Experiences in sub-Saharan Africa," Commission Staff Paper, Brussels, 28 July.

In its broadest sense, food security can be defined as access for everybody at all times to adequate quantities of good-quality food. This definition is very wide and various components of food security may be distinguished.

First, a distinction must be made between the various ways in which food security can be expressed at the different levels of socioeconomic life:

- ▶ at the microeconomic level (family, village);
- ▶ at the macroeconomic level (nation);
- ▶ at the regional level.

Secondly, various aspects relating to the food sector proper may be distinguished: production, marketing, processing, storage and transport, international trade in food products and food aid. Furthermore, all these points are related to a wider nexus of problems: income distribution, relations between town and country, macroeconomic policy, etc. (p3).

32. Corbett, J., (1988) "Famine and household coping strategies," World Development, vol 16 no 9, pp 1099-1112.

Food insecurity to many families in Africa is seen as problems in obtaining stable and adequate access to food. It remains one of the most visible manifestations of their poverty. Such food insecurity varies from the recurrent and predictable food deficits to more severe entitlement failures, which arise from a mix of socio-economic, environmental and political factors and which at their worst may lead to famine. (p1099).

33. Curtis, D., Hubbard, M., Shepherd, A., (1988) Preventing Famine: Policies and Prospects for Africa, Routledge, London.

The World Bank's definition and prescription is considered. The following is considered as an integral part in reducing food insecurity in sub-Saharan Africa:

"Strengthening of agricultural production by raising producer prices of internationally traded products to border price levels, and improving the technical, input, and marketing support to agriculture, for the production of both traded and non-traded agricultural commodities." They also consider that increasing food production must be a major part of policy to increase food security in many African countries. (p7).

34. Davies, O., and M. Witter, (1986) Issues in Food Security in Jamaica, National Food and Nutrition Co-ordinating Committee of Jamaica, Kingston.

The major objective of ensuring food and nutrition security for the people of Jamaica is easily stated. It entails the ability of the country to maintain, on a

continuous basis, the supply and distribution of food to all segments of the population, at or above specified nutritional levels. ...

Specifically, national food and nutrition security implies:

1. adequacy and continuity of food supply at the national level;
2. an efficient distribution system for both imports and domestic production;
3. equity in terms of access to food among households at all income levels;
4. reserve stocks in case of disasters;
5. the attainment of minimum levels of nutritional status of all households; and
6. a maximisation of the contribution to supply of domestic resources. (p1).

35. Davies, S. and M. Lipton, (1985) "A New Start: Preconditions for A Food Strategy in Zaire," report of Food Strategy Team's Mission to Zaire, 18 March, 1985.

"The objectives of national food security — the experience in some African countries (Kenya, Rwanda, Mali, Zambia) shows that there are four major objectives of national food strategies. These are (1) self-sufficiency, providing balance of payments relief from reduced imports of food; (2) effective growth in food and agricultural sector; (3) adequate or raised levels of nutrition or consumption for groups of the population at nutritional risk; (4) food security, defined as the stabilization of access to calories by a population." (p10).

36. Davies, S., Leach, M., David, R., (1991) "Food security and the environment: conflict and complementarity," Discussion Paper no 285, IDS, University of Sussex, April 1991.

The World Bank (1986) definition of food security is quoted: "access by all people at all times to enough food for an active, healthy life." (p1).

37. Dey, Jennie, (1984) Women in Food Production and Food Security in Africa, FAO, Rome, pp3-4.

The recognition of the inter-related technical, social and economic dimensions of food security systems has led to a revised broader concept of food security by FAO. The ultimate objective is "to ensure that all people at all times have both physical and economic access to the basic food they need." Food security is seen to have three specific aims: "ensuring production of adequate food supplies; maximizing stability in the flow of supplies; and securing access to available supplies on the part of those who need them."

38. Diab, M., (1990) "Guidelines for Food Security Assessment," World Food Programme, Draft.

Food security is defined as a physical and economic access to food at all times by individuals and households in a nation for an active and healthy life. The two major elements of food security are the availability of food and economic ability to acquire it. (p5).

39. Diakosavvas, D., (1989) "On the causes of food insecurity in less developed countries: an empirical evaluation," World Development, vol 17 no 2, February, pp223-236.

For our purposes, food security is interpreted, as is usual in empirical studies in this field, as the short-term (year to year) variability of average per capita cereal consumption for a country as a whole. This variability is defined with shortfalls below "normal" levels identified either as a trend or an average. (p224).

40. Dommen, A., (1983) "Mali's National Food Strategy," paper prepared for the Food and Agricultural Political Panel, 26th Annual Meeting of the African Studies Association, Boston.

National Food Security: "A national food strategy is distinguished by the following characteristics: (a) it links directly consumption needs to production objectives; (b) it emphasises the integration of policies and project activities and avoids fragmentation and duplication; (c) as a continuing process designed to sustain adequate priority for the food sector, it includes provisions for strengthening the institutions necessary for its implementation; (d) it facilitates national decisions over time covering the whole range of activities affecting food; (e) it facilitates the increased and coordinated international assistance needs for its implementation. 'A food strategy thus translates into effective action on a government's decision to resolve its food problem.'" (pp13-14).

"The strategy established seven strategic objectives, namely: (1) heighten food security; (2) attain food self-sufficiency; (3) improve the nutritional status of the population; (4) reduce consumer food costs; (5) reduce the government's budget deficit; (6) improve the balance of trade; (7) strengthen rural income." (p23).

41. Downing, Thomas E., et al., (1989) Coping with Drought in Kenya, Lynne Rienner Publishers, Boulder, pp169-170.

Food shortage refers to the availability of food relative to consumption requirements. It may be aggregated at a regional, national, community or household level. Food poverty refers to the ability of households to purchase food, primarily in local markets. Food deprivation implies that hunger is ultimately experienced by individuals who have insufficient food due to the failure of production, social, economic or political systems. Underlying these characteristics of hunger are two resource dimensions: temporal persistence and resource endowment.

42. Drèze, J., and A. Sen, (1989) Hunger and Public Action WIDER, Oxford

Drèze and Sen do not mention food security but link hunger and livelihood failure by use of the concept of entitlements. Entitlements are the means, in the broadest sense, by which individuals gain their livelihoods. The concept is best understood as *the set of bundles of "commodities" over which a person can establish command* given the existing social structure — the legal, political and economic arrangements and institutions that form and constrain individual preference. From this analysis, it becomes clear that, "The mere presence of food in the economy, or in the market, does not entitle a person to consume it." (p9).

That is, an individual's commodity bundles may be limited or extensive and what a person can consume depends directly on what these bundles constitute. (p9).

The definition is primarily in terms of ownership and exchange rights, and derives from the collapse in employment opportunities in famine situations where possession of labour power did not result in access to food in markets. However, there are also use rights — where use is guaranteed, and extended entitlements: socially sanctioned rights eg. of male head of household to more or better food.

The notion of food security, in more recent and sophisticated uses, depends implicitly on the concept of entitlements to explain why availability of food is not equivalent to equal distribution.

43. Economic Commission for Africa, (1991) Regional Cooperation in Food Security, Paper presented to the Symposium on Food Security in Africa, Dakar.

The concept of food security has gradually gone beyond reserve stocks to the final objective of ensuring that every individual can not only have access at all times to the food he needs but that he also has the necessary means to acquire it. Essential elements of food security include adequate levels of food production, stabilization of food supplies and guarantee of food availability for all. For the ECA, food insecurity in Africa is mainly due to low levels of production. (p3-4).

44. Eicher, C., (1986) "Facing up to Africa's food crisis" in J. Ravenhill (ed) Africa in Economic Crisis, MacMillan, Basingstoke.

Donors should urge African policy-makers to focus on policies and strategies to achieve a reliable food surplus (food security) based on local production, storage, and international trade. (p173).

45. Eicher, Carl K., (1990) "Africa's food battles" in Carl K. Eicher and John M. Staatz (eds), Agricultural Development in the Third World, John Hopkins University Press, Baltimore.

The linkages between food availability, poverty and access to food can be described as two sides of the food security equation. "The first is that increasing food production, storage, and trade can ensure national food availability, but food availability will not automatically end hunger and ensure that all people have enough to eat. The second is that because poverty is a central cause of hunger and malnutrition, special public and private efforts are needed to help resource-poor farmers and the landless increase their access to food through expanded home production, off-farm employment, new income streams, and targeted food transfer programs." The promotion of food security requires that both sides of the equation are addressed. (p506).

46. Eicher, C.K., and J.M.Staatz, (1986) "Food security policy in sub-Saharan Africa" in A.Maunders (ed) Agriculture in a Turbulent World Economy, Gower, Aldershot.

We define food security as the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable, and nutritionally adequate supply of food. (p216).

47. Eicher, Carl K., and John M. Staatz (eds), (1990) Agricultural Development in the Third World, John Hopkins University Press, Baltimore.

Food security is one of four major components of food policy analysis (along with price policy, trade policy and food aid).

Food security is related to both price policy and technological change in agriculture and is best addressed within a framework that takes account of the linkages among the various sectors of the economy.

Food security can be addressed at four levels: international, regional, national (or subnational), and household. In the 1980s, focus shifted from the international and regional levels to the national and household levels. Analysis of national food security focuses on how domestic production, marketing and trade can achieve national food availability and access goals, including adequate nutrition. Increasing attention has been paid to household food security because of the growing understanding that expanded food production will not ensure that all families will be able to secure their food needs. (p118).

48. Eide, W.B., (1990) Proceedings of the Agriculture-Nutrition Linkage Workshop, Vol 1, February 12-13, Virginia.

Need for an appropriate definition of food security in the context of the need to explore, understand and improve the linkages among agriculture, food security and adequate nutritional status. Argues for adoption of a definition of food security that includes a number of elements that can be used in a normative framework for developing and evaluating interventions. Elements of the definition include:

Food Adequacy:

- a) nutritional adequacy
- b) cultural acceptability
- c) food safety;

Viable procurement of foods given households' strategies for exploiting available food resources;

Sustainability of adequacy including:

- a) endurance of food access and availability
- b) improvement of the resilience of systems
- c) avoidance of system fragility through the stabilisation of the food base with attention to culturally acceptable approaches and use of traditional/indigenous foods and strategies for food procurement.

Also, linkages take place at multiple levels of organisation — international, national/regional, community, household and individual, and all are somewhat different conceptually. (p35-36).

49. Eide, W.B., (1990) "Household Food Security — a 'nutritional safety net,'" Discussion Paper, International Fund for Agricultural Development, October.

Household food security is here defined through a set of principles or values that ought to be adhered to in all development measures to ensure access to adequate food by and for households over time. (p10).

50. Falcon, W.P., C.T. Kurien, F. Monckeberg, A.P. Okeyo, S.O. Olayide, F. Rabar and W. Tims, (1987) "The world food and hunger problem: changing perspectives and possibilities, 1974-84" in J.P. Gittinger, J. Leslie and C. Hoisington (eds), Food Policy: Integrating Supply, Distribution and Consumption, John Hopkins University Press, Baltimore and London.

A nation's food security is achieved when it can assure both physical and economic access to food for all its citizens over both the short and the long run. Behind this simplified definition, however, lie a number of complex and overlapping components involving agricultural production, international trade and economic interdependence, national stocking policies, development aid, and

a range of direct measures designed to enhance household consumption levels. (p20).

51. FAO, (1979) The Struggle for Food Security, FAO, Rome.

Food security means either being able to produce enough food for one's own needs or having enough money to buy provisions in the market. (p6).

52. FAO, (1981) Agriculture: Toward 2000, FAO, Rome.

Food security in its broadest sense is the availability of adequate food supplies now and in the future. In the narrower sense, food security means food stocks and arrangements to govern their establishment and use as a protection against crop failures or shortfalls in imported food supplies. In this sense, too, it has relevance to long-term development strategy. Better food security discourages countries from indulging in costly degrees of food autarky. Also the existence of food security stocks makes it less necessary to interrupt imports of capital goods and other development requisites, as inevitably occurs when foreign exchange has to be unexpectedly diverted to food imports. Finally, stocks are an essential source of emergency supplies for combating sudden famines and other disasters. (p114).

53. FAO, (1983) "World food security: a reappraisal of the concepts and approaches," Director-General's Report, Rome.

Food security is ensuring that all people at all times have both physical and economic access to the food they need.

54. FAO, (1988) "Agricultural policies, protectionism and trade: selected working papers, 1985-1987," FAO Economic and Social Development Paper No 75, FAO, Rome.

A broadened concept of food security which has as its principal aims the enhancement of access to and distribution of food as well as the acceleration of food production in developing countries, to be achieved through both domestic and international measures. Wider access to markets to permit a steady growth in the export earnings of developing food deficit countries is argued to be an integral part of food security. (p1).

55. FAO, (1989) "Preparation of Comprehensive National Food Security Programmes: Overall Approach and Issues," Second Ad Hoc Consultation with FSAS Donors, Rome, 27 October.

In April 1983, the Director-General of FAO, recognising that the conceptual framework of world food security must include very broad policy issues relating to agricultural and rural development, food production, stabilisation mechanism,

improved access and international trade, put forward an enlarged concept of food security to the Committee on World Food Security (CFS). In order to take action on a broad front, and yet remain within a manageable focus, he proposed that food security efforts be directed to three specific goals: adequacy of food supplies; stability in food supplies and markets; and security of access to supplies. The ultimate objective of this broader concept of food security is to ensure that all people at all times have both physical and economic access to the basic food they need. This broader concept of food security was endorsed by the CFS, the FAO Council and Conference, and by the World Food Council and ECOSOC. It has been referred to in numerous texts and resolutions since then, and forms the basis of the international consensus on actions required at global, regional and national level to achieve world food security. (p2).

56. FAO, (1989) "Food Security Assistance Programmes: Methodology for Preparing Comprehensive National Food Security Programmes," Second Ad Hoc Consultation with FSAS Donors, Rome, 27 October.

The ultimate objective of food security as defined by Committee on World Food Security, the Council and the Conference 1983 is "to ensure that all people at all times have both physical and economic access to the basic foods they need." (p2).

57. FAO, (1991) "Analysis of National Policies to be Pursued and the External Assistance Needed to Attain Food Security," Paper presented to the Symposium on Food Security in Africa, Dakar.

By food insecurity we mean a situation in which the individuals of a society have neither the physical nor the economic access to the nourishment they need. In some cases, there is not enough food at the time and location required to fulfil the needs of all members of the community, whether it be a nation, a region, a village or a household. This dimension constitutes the problem of the physical availability of food supplies. On the other hand, in order to provide physical access to food, it is necessary to have an efficient distribution system, including processing, storage, transportation and marketing to ensure the dispatch of food products within a specific country in the desired time. (p1).

58. Fones-Sundell, Melinda and Dennin Brasch, (1989) "World Food Crisis: Myth and Reality," Issue Paper No 11, Swedish University of Agricultural Sciences, Uppsala.

Food security is a widely misunderstood expression because it is often used without definition and because it has different meanings at different levels. Since the early 1980s concepts of food security have been revised to include the regional and household level. "It is not until we discuss food security at the individual level that it incorporates distributive and nutritional aspects. At this

level the focus on the balance of aggregate supply and demand for food is replaced with the notion of individual food needs.” (p10).

59. Frankenberger, T.R. et al., (1990) Proceedings of the Agriculture-Nutrition Linkage Workshop, Volume I, USAID, Arlington, pp35-36.

These authors use a definition of food security based on Eide (1990).

60. Frankenberger, T. R., and Goldstein, D. M., (1991) “The Long and Short of It: Household Food Security, Coping Strategies, and Environmental Degradation in Africa,” mimeo, Office of Arid Land Studies, The University of Arizona.

“..food insecurity [is] when the viability of the household as a productive and reproductive unit is threatened by food shortage” (p2).

Their definition of food security is based on that used by the World Bank — “access by all people at all times to enough food for an active and healthy life.” However, they argue that operationalising the concept at the household level and national level are not the same. The issue at national level is one of overall supply through local production and food imports. At regional and household levels, access is determined by both productive and economic factors as well as overall availability. Stable access and availability are also determined by local coping mechanisms. (p37).

61. Gittinger, J., S. Chernick, N.R. Hosenstein and K. Saiter, (no date) “Household Food Security and the Role of Women,” World Bank Discussion Papers No 96, The World Bank, Washington DC.

Causes of Household Food Insecurity: “Food insecurity arises from variation in the amount of food provided by the work and wealth of the household. The level of food consumption can vary because of shock in work, in production or in assets. The shock can be a change in the quantity available or a change in the price.” (p13).

62. Green, Christopher and Colin Kirkpatrick, (1981) “Insecurity, food financing and the IMF,” Food Policy, vol 6 no 3, August 1981, pp 135-146.

The food security problem has two principal dimensions: long-term and short-term. Problems of long-term food insecurity are reflected in the increasing gap between the consumption needs and production capacities of the developing countries. Irrespective of the long-run trend in per capita food consumption, however, variability in per capita consumption is per se a significant cause of food security. Short-run insecurity in food supplies has two main sources: domestic food production and foreign exchange availability. (p136).

63. Green, C., and Kirkpatrick, C., (1982) "A cross-section of food insecurity in developing countries: its magnitude and sources," The Journal of Development Studies vol 18 no 2, January, pp184-204.

Aim to expand current concept of food insecurity beyond the long term trend of increasing food imports by developing countries, and short term insecurity caused by fluctuations in annual supply. "Conventional estimates tend to suppose that insecurity can be identified with actual short-term variation in food consumption. In general, it is also believed that the principal source of food insecurity arises from variations in domestic food production." (p186).

Their argument places greater weight on the manner in which a country responds to periodic shortfalls in food supplies. Food insecurity may be concealed by a country's willingness to sacrifice other imports to maintain consumption levels.

"In short, the relations between food production and consumption cannot be analysed in isolation from the balance of payments position...it may be a misleading assumption to identify food insecurity with food consumption variability." (p193).

64. Hay, R.W. and M. Rukuni, (1988) "SADCC strategies: evolution and role," World Development, vol 16 no 9, pp1013-1024.

Food security is a notion capable of many interpretations. Indeed, it runs the danger of becoming a catch all concept. The ways SADCC officials, their advisors and national policymakers in the region have conceived of "food security," and the emphasis they have placed on dealing with the threats which might jeopardise it, have been subject to considerable change since the first SADCC food security activities were defined in 1981.

There are three main views of food security which have predominated at one time or another during the last seven years: food security based on the growth and stabilisation of food output; food security based on market supply stabilisation; and food security based on the growth and stability of food consumption. Although each of these three views has tended to predominate in turn, shifts in emphasis have not necessarily displaced former concerns; strands of all three now exist in activities promoted by SADCC.

SADCC's (1987) updated strategy paper defines food security as ".....ensuring that all members of a household, nation or region have access to an adequate diet to lead an active and normal life."

Whether or not this definition is adequate, it reflects the extent to which SADCC thinking has changed from an emphasis on production self-sufficiency to one of food availability and access to food. (pp1023-1024).

65. Heald, C., and M. Lipton, (1984) African Food Strategies and the EEC's Role: An Interim Review, Commissioned Study, no 6, Institute of Development Studies, Brighton.

Food security is best defined as the stabilisation of access, or of proportionate shortfalls in access, to calories by a population. (p11).

66. Hopkins, R.F., (1986) "Food security, policy options and the evolution of state responsibility," in Tullis, F.L. and Hollist, W.L. (eds), Food, the State and International Political Economy: Dilemmas of Developing Countries, University of Nebraska Press, Lincoln and London.

Food insecurity arises at various systems levels — household, national, and international — and does so because of a unit's insufficient "adaptive capacity." Households, the state, or the international system are unable to adjust patterns of food-related activities with a minimum of financial cost or dietary loss. (p3).

Ultimately, food insecurity is a national-level problem. It occurs in countries that experience variations in production or inadequate production to meet consumption needs. These countries cannot smooth out production variability through domestic carry-over or have a population whose consumption habits regularly exceed absolute production capacity or lack adequate internal mechanisms for re-allocating domestic food supplies. In such situations, household level actions, at least in the short run, put pressures on national governments which in turn frequently turn to international markets, either for commercial or concessional food imports....Ultimately, however, in order to achieve food security, insecure states must establish and carry out national policies to improve their adaptive capacity.

"...food security is a practical test of whether a government is a success or a failure." (p4).

Food security stands as a fundamental need, basic to all human needs and the organisation of social life. Access to necessary nutrients is fundamental not only to life per se, but also to stable and enduring social order.

Food security is the assurance of access to adequate nutrition, either through direct effort or exchange at acceptable prices. Its opposite, food insecurity, is best understood as a relative phenomenon. (p11).

67. Hopkins, R.H., (1987) "Aid for development: what motivates the donors" in Clay, E. and Shaw, J. (eds), Poverty, Development and Food, Macmillan, London.

The concept of food security implies an effort to integrate welfare needs and macropolicy, both in developing countries and in policy-linked aid commitments from donors. (p169).

68. Huddleston, B., D. Gale Johnson, S. Reutlinger and A. Valdes, (1984) International Finance for Food Security, John Hopkins University Press, Baltimore.

Food security is the assurance that supplies and financing will be available to meet minimally adequate consumption requirements without domestic price increases, regardless of world market conditions. (p3).

69. Huddleston, B., (1990) "FAO's overall approach and methodology for formulating national food security programmes in developing countries," IDS Bulletin, vol 21 no 3, Institute of Development Studies, Brighton, July.

..the FAO Committee on World Food Security, Council and Conference adopted a broadened concept of food security in 1983. The ultimate objective or goal of food security set forth in the broadened concept is "to ensure that all people at all times have both physical and economic access to the basic food they need." At the global level food security has three specific aims: "ensuring production of adequate food supplies; maximising stability in the flow of supplies; and securing access to available supplies on the part of those who need them." At the national level, the three components of national food security programmes are to be set in a broad policy framework and are defined as follows: "ensuring adequacy of food supplies to all consumers." (p72).

70. Hunger Project, (1989) "Ending Hunger: the Cyprus Initiative. A summary of the report presented to the president of the World Food Council," Fifteenth Ministerial Session of the World Food Council, Cairo, Egypt, 22-25 May, Occasional Paper.

Food security is defined as all people at all times having access to enough food for an active and healthy life. It is the equivalent of ending chronic and persistent hunger on a sustainable basis. (p4).

71. IFAD, (1991) "Food Security in Africa," Paper presented to the Symposium of Food Security in Africa, Dakar, pp3-4.

Food security is associated with food intake at the individual, household, sub-national, national and global levels. A food secure household can be defined as one which has access to enough food to ensure the minimum necessary food intake for all individual members to lead a healthy life. At the sub-national level, the concept has to reflect the assured availability of food during a given period for individual households to draw on to meet their minimum requirements. A food secure nation is able to assure availability of food

nationally, to meet current and future per capita requirements. Finally, global food security implies universal access to an adequate food supply.

It is critical to understand that food security relates equally to purchasing power and entitlement as to production/supply. Food security is directly related to the structural problems of poverty.

72. IGADD, (1990) "Food Security Strategy Study," Vol 1, Final Report, IGADD, Djibouti, October.

The overall objective is to provide food security, that is, to ensure that every person in the IGADD region has sufficient food at all times for an active and healthy life. (pv).

73. Jonsson, U., and D. Toole, (1991) "Household Food Security and Nutrition: A Conceptual Analysis," mimeo, UNICEF, New York, April.

Household food security is defined here as "access to food, adequate in quantity and quality, to fulfill all nutritional requirements for all household members throughout the year" (UNICEF 1986).

Analysis must therefore include two primary components:

- ▶ physical availability of food in proximity of household, regardless of process through which it was made available
- ▶ the level and type of resources expended to attain household food security relative to the total resources available at the household level

In defining concepts such as household food security it is equally important to spell out that the concept excludes as much as what it includes. Household food security does not include dietary intake. (p6).

74. Jonsson, U., and D. Toole, (1991) "Conceptual Analysis of Resources and Resource Control in Relation to Malnutrition, Disease and Mortality," mimeo, UNICEF, New York.

These authors identify adequate household food security as one of three conditions necessary for good nutrition. They argue that any assessment of the three conditions (the other two being care and health services), must include an investigation into the resources used to ensure their fulfillment. This permits "food secure" households to be differentiated by the share of total resources used to achieve food access. The higher the share the more vulnerable the household is to becoming food insecure. (p4).

75. Jones, J.V.S., (1988) "Food security and economic development in Tanzania: past problems and proposals for a new strategy," The African Review, vol 15 no 2, pp56-80.

Food security is more than simply ensuring adequate staple supply and distribution....food security requires the supply and consumption of a wide variety of foods and means to keep the foods in good condition. (p56).

76. Josling, T., (1975) "The world food problem — national and international aspects," Food Policy, vol 1 no 1, November, pp3-14.

"World food security" is the essence of the international aspect of the food problems of individual countries. It relates in part to the monitoring of global trends to give countries advance warning of problems which are likely to arise from shortages of raw materials and inputs into agriculture and to watch investment patterns in these supply industries as well as in agricultural output. (p10).

77. Kabeer, Naila, (1990) "Women, household food security and coping strategies" in United Nations, Women and Nutrition, United Nations, Geneva.

The concept of household food security refers to the ability of a household to assure all its members sustained access to sufficient quantity and quality of food to live active, healthy lives. (p171).

78. Kennedy, E., and B. Cogill, (1988) "The commercialisation of agriculture and household-level food security: the case of south-western Kenya," World Development, vol 16 no 9. pp1075-1081.

Household food security can be thought of as the ability to provide adequate energy intake either from food produced directly by household members and/or through the availability of sufficient income to purchase food. (p1076).

79. Kennes, W. (1990) "The European Community and food security," IDS Bulletin, vol 21 no 3, Institute of Development Studies, Brighton.

Food security can most simply be defined as the absence of hunger and malnutrition. For this to be possible, households, villages or countries must have enough resources to produce or otherwise obtain food. This condition is necessary, but not sufficient because the resources must also be used well. It is useful to subdivide food insecurity problems into transitory and chronic (see eg in the World Bank report of 1986 on Poverty and Hunger). Transitory food insecurity refers to a temporary decline in household's food intake resulting from instability in food production, food prices or income. In its extreme form it can mean famine, a situation where a sizeable population group lacks the resources for even a minimum subsistence diet. Chronic food insecurity occurs

when households on a more permanent basis lack the resources to acquire enough food for a healthy and active life, while they are not directly threatened by starvation. It is worthwhile to further subdivide chronic food insecurity into a lack of overall food quantity, normally measured in energy, ie calorie intake and insufficiencies at the level of particular nutrients. In most cases, the satisfaction of overall calorie needs implies that the needs for specific nutrients are covered as well. However, if the diet lacks variety, the intake of specific nutrients, such as iron, iodine and vitamins is often not guaranteed. This type of food insecurity does not necessarily result from lack of resources or income, it can be the consequence of a lack of information or nutritional knowledge. (p67).

80. Kenya, Republic of, (1982) "The concept of food security and how it relates to Kenya," Proceedings of the workshop on Food Policy Research Priorities held in Nairobi, 14-17 June, 1982.

Food security may be defined as the ability of countries and regions or households to meet adequate levels of food consumption on an annual basis. Two features are salient in this definition. First, the pursuit of policies, using the available resources to those countries, regions or households to be able to provide or make available the total complement of food required by the population. The total food complement is calculated on the basis of the calorific requirement of each member of the population. The total food requirement can therefore be met either from domestic food production or imports or a mixture of the two.

The second feature of the definition is the capacity of those countries or regions to make available all the food requirements of the population to be able to purchase quantities to satisfy their consumption requirements. (p143).

81. Khadka, N., (1990) "Regional cooperation for food security in South Asia," Food Policy, vol 15 no 6, December 1990, pp492-504.

Food insecurity in South Asia is strongly linked with poverty and hunger. Therefore the eradication of poverty and hunger and the achievement of regional food security would enable the poorer section of the population to buy enough food through the generation of employment opportunities and the redistribution of income and assets. (p504).

82. Khadka, N., (1991) "Regional food security through regional food reserve in South Asia: The Prospect," Quarterly Journal of International Agriculture, vol 30 no 3, July-September, pp264-283.

Food insecurity is defined as lack of access by members of society and nations to enough food throughout the year to live healthily. This is a situation caused

either by inadequate food availability ie lack of adequate supply or by inadequate entitlements ie lack of effective demand, or both. (p264).

83. Koester, Ulrich, (1986) Regional Cooperation to Improve Food Security in Southern and Eastern African Countries, IFPRI, Washington.

Food security is defined as the ability of food-deficit countries, or regions, or households within these countries to meet target consumption levels on a year-to-year basis. Food security has two facets: First, real income may be too low to provide target consumption for all groups of the society even in years of normal or above-normal domestic production, and second, real income may fluctuate as the result of variations in domestic production of food and nonfood products or of import and export prices or both. (p12).

84. Kracht, U., (1981) "Food Security for People in the 1980s," Paper prepared for discussion at the North — South Food Roundtable Meeting, Washington.

The term food security is used in this draft in its most fundamental sense, meaning that everyone has enough to eat at any time — enough for life, health and growth of the young, and for productive effort. In assessing food security, the paper adopts the concept of "economic entitlements," which are the goods and services over which people can establish command through the economic, political and legal mechanisms in operation in a given country. (pi).

85. Kumar, S.K., (1988) "Effect of seasonal food shortage on agricultural production in Zambia," World Development, vol 16 no 9, pp1051-1063.

... in the semi-arid tropical areas with unimodal rainfall and little or no dry season cultivation. These areas also tend to have a high level of year-to-year fluctuations in agricultural production, as well as a relatively high degree of subsistence orientation. They are also characterized by food-stock depletion early in the crop cycles associated with seasonal migration on crop cum livestock shortages to buffer the seasonal dip in food availability. Household food scarcities of this type depend on both production and food supply conditions and income and food demand conditions. (p1051).

86. Leslie, K., and Rankine, L.B. (eds) (1987) Papers and Recommendations on Food and Nutrition Security in Jamaica in the 1980s and Beyond, National Food and Nutrition Co-ordinating Committee of Jamaica, Kingston.

For the purpose of the workshop, the term "food and nutrition security" was defined as "the ability of the nation and the household to secure at all times a dependable and adequate supply of food in order to achieve a satisfactory level of nutritional well-being."

More specifically, the term was used to involve: (a) the mobilisation and co-ordination of national and household resources for the production of food for local consumption as well as for export to purchase necessary food and other imports; (b) a level of processing, storage and distribution which permits a reduction of the effects of gluts and scarcities, and provides adequate insurance against periods of natural or man-made disasters; (c) a level of economic activity in the country which generates satisfactory levels of effective household food demand; and (d) sufficient knowledge about nutrition to encourage households to make wise food choices and to pursue desirable nutritional practices. (p1 preface).

87. Longhurst, Richard, (1988) "Cash crops, household food security and nutrition," IDS Bulletin, vol 19 no 2, University of Sussex, April 1988.

In examining the impact of increased cash-cropping on household food security and nutrition Longhurst accepts four elements in the cash crop/food security nexus identified by Pinstrup-Anderson (1983):

- i) availability of food
- ii) ability of the household to obtain food
- iii) desire of the household to obtain food, and
- iv) household distribution of food. (p28).

88. Malambo, L.M., (1988) "Rural food security in Zambia" in Studies in International Development, No 29, Hamburg.

The broadest definition of food security, which, p5 constitutes the various elements discussed in the literature, is summarized as the ability of a country, regions, or households to meet target consumption levels on a yearly basis in the face of fluctuating production, prices and incomes. (p5).

89. Marot, E., (1987) "Autosuffisance Alimentaire: Une Stratégie pour le Développement Économique et la Sécurité Alimentaire?," MSc. thesis, Université de Namur.

Food security at the household level therefore entails the security of supply at the national level, but demands in addition that households be able to obtain for themselves the food that is available on the national market. (p3-4).

90. Maxwell, Simon, (1988) "National food security planning: first thoughts from Sudan," Paper presented to Workshop on Food Security in the Sudan, IDS, Sussex, 3-5 October 1988; and in Maxwell, Simon (ed), 1991, To Cure All Hunger: Food policy and food security in Sudan, IT Publications, London, 1991

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. Food security will be achieved when equitable growth ensures that these groups have sustainable livelihoods: in the meantime and in addition, however, food security requires the efficient and equitable operation of the food system. . . "Efficient" means that 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 distributed equally and that food should be available to all.

91. Maxwell, Simon, (1989) Food Insecurity in North Sudan, Discussion Paper No 262, IDS, University of Sussex, Brighton.

The definition of food security which appears in the World Bank document, "Poverty and Hunger" (1986) has many virtues. It stresses consumption over production, allows for seasonal variation, distinguishes between chronic and transitory food insecurity and stresses the functionality of an adequate diet rather than a simple calorie count.

The roots of this definition can be traced to Sen's concept of "entitlement." (Sen, 1982) In recent years, Sen's basic model has been extended in several directions. First, there has been increased emphasis on the subjective dimensions of food security. Secondly, factors influencing "entitlements" such as assets and resiliency have received more attention. Thirdly, attempts to understand the underlying causes and dynamic nature of food security has become important.

Based on these ideas, the World Bank definition can be extended, especially to incorporate the subjective dimension and to lay greater emphasis on secure and sustainable livelihoods for poor people. The definition in Maxwell (1988) is cited.

In conceptual terms, the three dimensions of food security (poverty, vulnerability and malnutrition) can be depicted as overlapping circles. Transitory food security will be concentrated in the overlap between poverty and vulnerability, whereas chronic food insecurity will be concentrated in the area of overlap between the three.

92. Maxwell, Simon, (1990) "Food security in developing countries: issues and options for the 1990s," IDS Bulletin, vol 21 no 3, Institute of Development Studies, University of Sussex, Brighton.

Different definitions of food security reflect, in some cases, no more than a desire for product differentiation in a crowded market. In other respects, however, they do offer genuine differences of emphasis: on the importance of subjective assessments of food security; on the relationship between

malnutrition, access to food and livelihood security; and on the need for an efficient national food system. (p2).

The definitions by Clay, World Bank, FAO, EC and Maxwell are reviewed.

Three common themes which run through each of the definitions are:

- i) focus on access to food rather than simply on supply
- ii) attention to variability as well as to trends (including the distinction between chronic and transitory food insecurity)
- iii) focus on the broad mandate of food security, encompassing production, marketing and consumption levels and ranging from household to international levels of analysis

Differences among the various definitions include:

- i) the choice of individual or household as a unit of analysis
- ii) varying emphasis given to the perceptions and feelings of the food insecure themselves, in the wider context of livelihood security
- iii) varying emphasis regarding the efficiency of the national food system
- iv) attention to the distinction between mild and acute food security as an additional dimension of analysis.

93. Maxwell, S. (ed) (1991) To Cure all Hunger: Food Policy and Food Security in Sudan, Intermediate Technology Publications, London.

Cites definition in Maxwell 1988.

94. Maxwell, S., J. Swift and M. Buchanan-Smith, (1990) "Is food security targeting possible in sub-Saharan Africa? evidence from North Sudan," IDS Bulletin, vol 21 no 3, Institute of Development Studies, University of Sussex.

The widely accepted definition of food security is: "access by all people at all times to enough food for an active, healthy life" (World Bank 1986:1). Food insecurity is the lack of access to enough food: chronic food insecurity is defined as a "continuously inadequate diet caused by the inability to acquire food," and transitory food insecurity as a "temporary decline in a household's access to enough food."

We find these definitions incomplete. As Maxwell has suggested elsewhere, they lay insufficient emphasis on subjective perceptions of food insecurity (Maxwell 1989:40). In addition, we find a unidimensional distinction between chronic and transitory food insecurity inadequate, since it deals only with the periodicity or incidence of food insecurity. Another dimension has to be introduced to describe the intensity or severity of episodes of food insecurity. A simple classification of "none," "mild" and "severe" is used.. to illustrate the point.

This perspective introduces a dynamic element into the analysis: policy makers and planners are primarily concerned with the movement of a population from one category describing the degree of food insecurity to another. (p53).

95. Maxwell, S., and M. Smith, et al, (1992) "Household food security: a conceptual review," mimeo, March, Institute of Development Studies, University of Sussex.

This paper is a conceptual review on household food security. The paper traces the shift in the focus of attention from national and global supply issues in the 1970s, to questions of access to food at household and individual levels in the 1980s. It identifies the core concepts underlying food security as (a) sufficiency of food, defined as the calories needed for an active, healthy life; (b) access to food, defined by entitlement to produce, purchase or exchange food or receive it as a gift; (c) security, defined by the balance between vulnerability, risk and insurance; and (d) time, where food insecurity can be chronic, transitory or cyclical.

Beyond these core concepts, the paper traces developments in relation to the household, nutrition adaptation, livelihood security, sustainability, people's own perceptions, and issues of efficiency and cost-effectiveness. The paper concludes that household food security must be treated as a multi-objective phenomenon, where the identification and weighting of objectives can only be decided by the food insecure themselves.

96. Mbogoh, S.G., (1982) "A Review of Kenya's National Food Policy: Proceedings of the workshop on Food Policy Research Priorities," Nairobi 14-17 June, 1982.

The broad objectives of Kenya's food policy are:

- i) to maintain a position of broad self-sufficiency in the basic food stuffs,
 - ii) to ensure security of food supply in every area of the country and
 - iii) to provide nutritionally adequate diet to every member of the population.
- (p117).

97. McInerney, J., (1983) "A synoptic view of policy making for the food sector" in J.Burns., J.McInerney, and A.Swinbank (eds), The Food Industry, Heineman, London.

First, an improved availability of food (measured in terms of some standard unit) is desirable to cater for a growing population, to allow everyone to be quantitatively better fed, and to strengthen what is now discussed as "food security." The concept of "food security" — which is an amalgam of the level, reliability and sustainability of food supplies — has recently gained prominence in both an international and various individual country contexts. (p167).

98. McIntire, J., (1981) "Food security in the Sahel: variable import levy, grain reserves, and foreign exchange assistance" IFPRI Research Report No 26, IFPRI, Washington.

Short term food security is the attainment of stable agricultural production and consumption of essential foods at an acceptable level. Short term food security has been linked to food self-sufficiency — often said to be the best guarantee of the former. Long-run food security would be attained by developing agricultural and industrial productivity by managing supplies, including imports and food aid. (p12).

99. Mellor J W., (1987) "Food aid for security and development" in Clay, E., and Shaw, J., (eds) Poverty, Development and Food Macmillan, London.

Identifies chronic long-term food insecurity as a problem of aggregate food supply, and short-term transitory food insecurity as the result of fluctuations in annual food supply. (p177).

100. Mellor, J., (1988) "Global food balances and food security," World Development, vol 16 no 9, pp997-1011.

Food insecurity is the inability of poor countries, poor families and poor individuals to purchase sufficient quantities of food from existing supplies. Improving food security requires both increasing the purchasing power of the poor and boosting overall food production. Developing countries can develop a two-pronged strategy to promote food security. In the long run, efforts must be made to increase the purchasing power of the poor by raising the overall level of food production in the Third World. Increased food supplies and purchasing power must be inextricably linked to elements of any long-term food security efforts. In the short run, redistributing food supplies from the developed to the developing world is likely to be the best way to meet the more immediate food security needs of the poor. (p997).

101. Mellor, John W., (1990) "Global food balances and food security" in Carl K. Eicher and John M. Staatz (eds), Agricultural Development in the Third World, John Hopkins University Press, Baltimore.

In the late 1980s, food insecurity was defined as "the inability of poor countries, poor families and poor individuals to purchase sufficient quantities of food from existing supplies." The present food security situation is recognized as being much more complex and linked to acute structural imbalances. The promotion of food security requires: i) increasing the purchasing power of the poor, and ii) raising the overall level of food production in the Third World.

In the developing world, agricultural production must be stimulated through cost-decreasing technological change...Food transfers from the structurally food-

deficient nations must be achieved through mechanisms which boost the purchasing power of the poor, while also increasing the incentives to raise agricultural and food production over the long run. (pp123-124).

102. Mellor, John W., Christopher L. Delgado and Malcolm J. Blackie (eds), (1987) Accelerating Food Production in Africa, IFPRI, Washington.

Food security has often been ill-defined by African governments as being synonymous with national food self-sufficiency. (p336).

103. Millman, S., (1991) "The Hunger Report, update 1991," The Alan Shawn Feinstein World Hunger Program, Brown University, Providence.

Distinguished primarily by the level of human organisation, from population to household to individual, at which scarcity is manifested, three distinct but related hunger situations — food shortage, food poverty and food deprivation — can be identified. "Food shortage" occurs when total food supplies within a bounded regions are insufficient to meet the needs of the population within that region. "Food poverty" refers to the situation in which a household cannot obtain enough food to meet the needs of all its members. "Food deprivation" refers to individual consumption of insufficient food. "Food security" refers to the ability to avoid hunger in any of the three hunger situations. Food shortage is one of the causes of food poverty, which in turn is one of the causes of food deprivation. However, other factors may operate to bring about food poverty even when there is no food shortage, and food deprivation where there is no food poverty. (p1).

104. Minhas, B.S., (1976) "Presidential Address-towards National Food Security." Indian Journal of Agricultural Economics, vol 31 no 4, October-December 1976, pp8-19.

Food security is considered on a national level rather than on a household one. A National Food Security System is defined as a means which will enable India to opt out of importing food thus reducing her vulnerability in the balance of payments which is considered to be inconsistent with a stable and self-reliant pattern of development. The maximum level of grain stocks (reserve plus operational) which will permit this is quantified. (pp14-18).

105. Mlambo, Lovejoy, (1988) "Rural Food Security in Zambia," Studies Related to Integrated Rural Development, N.29. Justus-Liebig-Giessen University, Hamburg.

At the World Food Conference in Rome in 1974, attainment of food security referred to the assurance of adequate food supplies. Currently, the broadest definition of food security is summarized as the ability of a country, region, or household to meet target consumption levels on a yearly basis in face of

fluctuating production, prices and incomes. Thus the current meaning of food security incorporates both supply and demand.

Food security has a chronic as well as transitory dimension. Chronic food insecurity is a problem which affects households that chronically lack sufficient purchasing power. Transitory food insecurity on the other hand, is a problem that concerns fluctuations in household income food consumption and the unavailability of food at national as well as village level. In this connection, transitory food insecurity is concerned with temporary lack of access to sufficient food supply. (pp5-7).

106. Mudimu, G., et. al., (1988) "Household food insecurity in low-rainfall areas of Zimbabwe: Initial findings in Mudzi, Mutoko and Buhera Communal Areas" in M.Rukuni and R.H.Bernsten (eds), Southern Africa: Food Security Policy Options, Proceedings of the Third Annual Conference on Food Security Research in Southern Africa, 1-5 November, 1987. University of Zimbabwe/Michigan state University Food Security Research Project, Department of Agricultural Economics and Extension, Harare.

A household is food secure when it is able to acquire — through transfers, production or purchase — food in qualities and quantities that meet the nutritional requirements of its members. (p218).

107. Muhammed, A., (1987) "Present Situation and Future Outlook for Food Security in the Muslim World," in Food Security in the Muslim World, Proceedings of the Seminar on Food Security in the Muslim World, Organized by the Islamic Academy of Sciences, Amman, Jordan, 5-7 December.

Food security has been defined as the ability of food-deficit countries or regions, or households to meet target consumption levels on year to year basis. Food security has two facets:

a) The real family income of the vulnerable groups may be too low to provide the basic food requirements for all members of the family even in years of normal and above normal domestic food production.

b) It may be due to reduced domestic production or policy changes and a major dislocation in food imports, which reduces the overall per capita availability of food in the country, even though the average income is adequate to purchase food at normal prices, if available. (p104).

108. Mwaka, V.M., (1991) "The environment and food security in Uganda," Eastern and Southern Africa Geographical Journal, vol 2 no 1, pp67-82.

The ultimate objective of any nation should be to ensure that at all times, people have both physical and economic access to basic food needs. In this context

food security is seen to have five basic aims: i) Ensuring production of adequate food supplies both in quality and quantity to avoid malnutrition and undernutrition; ii) Maximisation of the stability in the flow of supplies from surplus to deficit areas; iii) Ensuring availability of food surpluses for periods of scarcity; iv) Being in a position to supply food to other nations in want; v) Maintaining a sound ecological balance so that the natural resources on which agriculture itself is dependent are well managed so that they can be exploited in perpetuity. (p68).

109. US Agency for International Development (1992) "Definition of Food Security," Policy Determination, No. 19, Document PN-AAV-468, USAID, Washington, April.

Food security is when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and health life (p1). It requires food available food availability, food access and food utilization/consumption.

110. Nour, M.A., (1987) "The constraints that have faced the Muslim world in making progress towards food security," in Food Security in the Muslim World, Proceedings of the Seminar on Food Security in the Muslim World, Organized by the Islamic Academy of Sciences, Amman, Jordan, 5-7 December, 1987.

Food security is essentially access by all people at all times to enough food for an active, healthy life. (p155).

111. Oomen, Ir. A., (1988) "Food security: experiences and prospects" in From Beyond Adjustment: SDA, Africa Seminar, Maastricht.

A widely shared definition of food security is "access by all people at all times to enough food of good quality for an active and healthy life."

Ensuring food security entails four conditions: first, to ensure that there are adequate food supplies available; secondly, to ensure that households have adequate ability to acquire food, either because they produce it or because they have the income to acquire it; thirdly, to ensure a stable availability on the market and a stable relation between wages and food prices; and, finally, an adequate quality of the food from the point of view of appreciation by the consumers (local food habits) and from the point of view of nutrition and health. (p167).

112. Oshaug, A., (1985) "The composite concept of food security," in Introducing Nutritional Considerations into Rural Development Programs with Focus on Agriculture, Report No 1, A Theoretical Contribution, Institute for Nutrition Research, University of Oslo, June.

A society which can be said to enjoy food security is not only one which has reached the Food Norm (here defined as “a basket of food, nutritionally adequate, culturally acceptable, and procured in keeping with human dignity”), but which has also developed the internal structures that will enable it to sustain the Norm in the face of crises threatening to lower the achieved level of food consumption. The internal structures form the basis of the capacity to endure. The definition of food security will thus be:

Food Security = Food Norm + Endurance

The meaning of endurance here needs further elaboration. We suggest the following general definition:

The capacity of a given social system/unit to undergo a perturbation without a decline in the degree of progress made towards the Food Norm. (p?).

113. Otzen, U., Hilderbrand, K., Hellberg, R., Ralle, B., Korte, R., Camman, L., (1979) “Integrated rural development planning with emphasis on nutritional basic needs for Serowe District/Botswana.” German Development Institute.

Quotes the FAO policy and action plan for strengthening national food security. This considers the following general objectives to be reasonable and consistent with general national development aims:

-there is a need to produce more food; there is a need to retain for consumption in Botswana all food grains grown in the country; there is a need to make food available to the consumer within price policies which are consistent; there is a need for the Government to have and observe stocking policies for foodgrains. (p19).

114. Phillips, T., et al, (1991) “Background Paper on Food Security: Penultimate Report,” University of Guelph, Ontario, September.

This paper reviews the historical evolution of the food security concept. It is claimed that the mid-1980s marked a watershed in the understanding of the concept with access to food by all individuals replacing the traditional concern of food supplies. To support the argument, a list of six definitions of food security is presented, all originating in this period. The elements of the definitions reviewed (FAO 1983; World Bank 1986; UNSTD 1986; Eide 1990; UNICEF 1990; SCN 1991) are remarkably similar.

Generally speaking, there are a number of commonly recognised features of food security. One, food insecurity is a problem ultimately faced by individuals, although food security is commonly defined in terms of household or nation. Two, household and national level food insecurity is generally seen as result of

lack of actual food supplies or lack of access (via purchasing power) to acquire food supplies.

Three, it is commonly agreed that incidence of food insecurity differ in both frequency and intensity. The frequency of food insecurity is often defined as transitory, chronic or seasonal in nature. The intensity of food insecurity is often defined as a lack of overall food quantity or insufficiencies of particular nutrients. Food insecurity is recognised as a result of man-made and natural phenomenon and is increasingly being recognised as a dynamic concept that affects all segments of the population equally.

Finally, the paper argues that food security can be considered an objective; a strategy; a set of linked policies and programmes; and, a measure of success. (p8).

115. Phillips, T., and D. Taylor, (1990) "Food Security: An Analysis of the SEARCA/Guelph Survey," Centre for Food Security WPO11, University of Guelph, Ontario, July.

A state of food insecurity exists when members of a household have an inadequate diet, during part or all of the year, or face the possibility of having an inadequate diet in the future.

The two fundamental concepts implicit in the above definition are that it is defined in terms of the individual, and that it relates to both the current and future adequacy of the diet of individuals within the household. (p2).

116. _____ (1990) "Optimal control of food insecurity: A conceptual framework," American Journal of Agricultural Economics, vol 72 no 5, December, pp1304-1310.

The definition of food insecurity adopted in this paper is: A state of food insecurity exists when members of a household have an inadequate diet for part or all of the year or face the possibility of an inadequate diet in the future...States of food insecurity may be defined in terms of types of food insecurity (eg temporary, cyclical, chronic), levels of food insecurity (eg dietary intake as a percentage of an acceptable standard), or a combination of both. Food insecurity results from an unfavourable balance between risk and insurance. (p1305).

117. Pinstrup-Andersen, P., (1983) "Export crop production and malnutrition," Food and Nutrition, vol 9 no 2, pp 6-14.

This author identifies four essential elements to food security; (a) the physical availability of food; (b) the ability to acquire food; (c) the desire to acquire food and (d) the distribution of food within the household.

118. Pinstrup-Andersen, P., (ed), (1988) Food Subsidies in Developing Countries: Costs, Benefits, and Policy Options, John Hopkins University Press, Baltimore and London.

Household-level food security is here defined as a measure of access to food over time. (p8).

119. Reardon, T., and P. Matlon, (1989) "Seasonal food insecurity and vulnerability in drought-affected regions of Burkina Faso," in D.E. Sahn (ed), Seasonal Variability in Third World Agriculture: the Consequences for Food Security, John Hopkins University Press, Baltimore and London.

We define food insecurity in a farm household as the consumption of less than 80 percent of what the World Health Organisation (WHO) considers to be an average required daily caloric intake of 2,850 kilocalories (kcal) for a moderately active adult equivalent (FAO-WHO-UNU 1985). This then includes households that consume less than 2,280 kcal per adult equivalent (AE) per day. We define a household to have chronic food insecurity when consumption during two or more seasons is inadequate, particularly if consumption is deficient during the cropping season. Households that are chronically food-insecure constitute the highest-risk group and for policy purposes might be considered a primary target group for aid. (p118-119).

120. Reutlinger, S., (1977) "Food insecurity: magnitude and remedies," World Bank Staff Working Paper no 267, World Bank, Washington DC.

Abstract

Food insecurity is given an operational definition: the probability of food grain consumption in developing countries falling below a desired level due to a fixed upper limit on the food import bill they can afford and an unfavourable combination of poor harvests and world food grain prices.

121. Reutlinger, S., (1982) "Policies for food security in food-importing developing countries," in A.H. Chisholm and R. Tyers, (eds) Food Security: Theory, Policy, and Perspectives from Asia and the Pacific Rim, Lexington Books, Massachusetts.

The ultimate goal of food security might be described as the freedom from food deprivation for all of the world's people all of the time. (p21).

122. Reutlinger, S., (1985) "Policy Options for food security," Discussion Paper, Report no: ARU 44, Agriculture and Rural Development Department, Research Unit, World Bank, Washington DC.

The author claims the term “food security” came into use in the mid-1970s. He reviews briefly the different meanings which have been given to the term and alleges that while numerous authors define food security as a problem of people not having enough to eat, their recommendations imply that the problem originates in slow production growth or rapid increases in food imports. He further argues that the “confusion” can be attributed to the political difficulties of focusing on income distribution which leads writers to concentrate on problems of production and supply. (p2).

123. Reutlinger, S., (1985) “Food security and poverty in LDCs,” Finance and Development, vol 22 no 4, pp7-11.

Food security is defined as “access by all people at all times to enough food for an active and healthy life.” Food insecurity is the converse and a distinction is drawn between chronic and transitory insecurity. (p7).

This definition was adopted by the World Bank in their influential report *Poverty and Hunger* (1986).

124. Reutlinger, S. (1987) “Food security and poverty in developing countries,” in J.P. Gittinger, J. Leslie and C. Hoisington (eds), Food Policy: Integrating Supply, Distribution and Consumption, John Hopkins University Press, Baltimore and London.

Food security defined as access by all people at all times to enough food for an active, healthy life. Its essential elements are the availability of food and the ability to acquire it. Conversely, food insecurity is the lack of access to sufficient food and can be either chronic or transitory. Chronic food insecurity is a continuously inadequate diet resulting from the lack of resources to produce or acquire food. Transitory food insecurity, however, is a temporary decline in a household’s access to enough food. It results from instability in food production and prices or in household incomes. The worst form of transitory food insecurity is famine. (p205).

125. Reutlinger, S., and K. Knapp, (1980) “Food security in food deficit countries,” World Bank Staff Working Paper no 393, World Bank, Washington DC.

This report defines food security as “the assurance of a minimally adequate level of food consumption.” (p1).

126. Roche, C., (1991) “An NGO perspective on food security and the environment: ACORD in the Sahel and Horn of Africa,” IDS Bulletin, vol 22 no 3, July, Institute of Development Studies, University of Sussex.

Although ACORD does not have its own definition of food security, it recognises that to be food secure means more than producing enough to eat.

Entitlements to food, the seasonal and intra-seasonal variance of food insecurity, and the impact of macro-level factors all have to be taken into account. (p32).

127. Roumasset, J., (1982) "Rural food security," in A.H. Chisholm and R. Tyers (eds), Food Security: Theory, Policy, and Perspectives from Asia and the Pacific Rim, Lexington Books, Massachusetts.

Food security is commonly regarded as the ability to meet target consumption levels in the face of fluctuating production, prices and incomes. (p129).

128. Rukuni, M. and Eicher, CK., (1988) "The food security equation." in C. Bryant (ed), Poverty, Policy, and Food Security in Southern Africa, Mansell Publishing Limited, England.

They adopt the World Bank's definition of food security "ensuring that all members of society have access to enough food throughout the year to lead an active and healthy life." (p140).

129. Rukuni, M., and R.H. Bernstein, (1988) "Major issues in designing a research programme on household food insecurity" in M.Rukuni and R.H.Bernsten (eds), Southern Africa: Food Security Policy Options, Proceedings of the Third Annual Conference on Food Security Research in Southern Africa, 1-5 November, 1987. University of Zimbabwe/Michigan State University Food Security Research Project, Department of Agricultural Economics and Extension, Harare.

Food security is defined as the ability of all households in a nation to acquire a calorie-adequate diet throughout the year. Food security has two interrelated components: food availability through production, storage, or trade; and access to food through production, purchases in the market from income earned or food transfers. Food insecurity has both short-run and long-run dimensions. Short-run food insecurity results from intra and interseasonal shortfalls in food supplies and effective demand for food. Long-run food insecurity arises from a persistent failure of the economy to assure stable, long term growth in food supplies — especially for nutritionally at risk groups — as population increases and consumer demands change as a consequence of income growth and urbanisation. (p175-176).

130. Sahn, D.E., (1989) "A conceptual framework for examining the seasonal aspects of household food security," in D.E. Sahn (ed), Seasonal Variability in Third World Agriculture: the Consequences for Food Security, John Hopkins University Press, Baltimore and London.

Food security, at the household level, is defined as adequate access to enough food to supply the energy needed for all family members to live healthy, active and productive lives. Country-level aggregate data obscure the fact that even though a country may achieve adequate and relatively stable levels of food

supply and prices, there may be great regional and local inequality and seasonal disparities in the distribution of consumption. For example, within a given town or village, only part of the population may face a seasonal shortage of food or display marked deficiencies in its level of food intake. Similarly, aggregate data do not account for the fact that some members of a household may receive less food than others; thus the data may conceal the fact that some individuals, most likely women or children, may suffer from transitory seasonal declines in food intake while other family members do not. The concept of food security is based on target levels of consumption. A number of factors determine whether the normative target levels are consumed. These include the availability of food in the market or on the farm, the command over adequate resources to grow or purchase food, and the desire to acquire sufficient food. (p3-4).

131. Sakiyama, Teruji, (1986) Trade and Food Security in the Pacific Region, Centre for Japan — U.S. Relations, International University of Japan.

It is important to clarify the basic principles of food security because the implications and perceptions borne in mind among those food surplus (exporting) countries are sometimes greatly different from those held by food deficit (importing) countries.

Military and political security is an essential underlying principle of food security. Food security is a combination of hardware factors (food supplies, storage, transportation facilities, etc.) and software factors (the state system of government, governability of the citizens, etc.). (pp7-11).

132. Sarris, A.H., (1989) "Food security and international security," Discussion Paper no 301, Centre for Economic Policy Research, London, May.

Food security is the ability of a group (an individual, a family, a village, a nation etc) to satisfy adequately food consumption needs for a normal and healthy life at all times. Food insecurity is the opposite of food security. (p1).

133. SCN, (1991) "Some options for improving nutrition in the 1990s," SCN News no 7: in Supplement, United Nations, Geneva.

An operational definition of household food security is proposed as: "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, safety and culturally acceptable), and when it is not at undue risk of losing such access." (p5).

134. Scott, M., (1987) "The role of non-government organizations in famine relief and prevention" in M.Glantz (ed), Drought and Hunger in Africa: Denying Famine a Future, Cambridge University Press, Cambridge.

Food security for the majority implies broad popular participation by the majority in defining policy and carrying out programs of social and economic development. ... food security means "minimum" access to staple foods for all persons and groups. (p355).

135. Shamala, M., (1982) "Food security and storage policies," Proceedings of the workshop on Food Policy Research Priorities, held in Nairobi, 14-17 June, 1982.

National Food Security and Nutrition: The national food security policy recognizes the interrelationship between food itself as well as its nutritive values. Thus, a sound national food nutrition policy must aim to provide the citizens of this country with adequate food supplies at all times while ensuring that each food supply also provides sufficient nutrient requirements. In trying to achieve the objectives of food security therefore, adequate consideration ought to be given to the concomitant factor of nutritive efficiency. Whereas efficient bulk of food should be stored to ensure security, the income distribution must aim at ensuring that every adult citizen has means to afford a variety of food that may not be locally grown on his holding.

In combating malnutrition problems, this should involve integration of nutrition in the overall development programme in relation to increased food production, increased employment and income for rural population so that they can afford improved consumption and nutrition requirements, increase population education on nutrition, health and family planning. (p141).

136. Shuttleworth, G., R. Bull and P. Hodgkinson, (1988) "Food security through seasonal destabilisation: the case of Madagascar," Food Policy, vol 13 no 2, May, pp150-153.

Food security is the guarantee that all members of a society have continuous access to their basic food requirements. (p140).

137. Siamwalla, A., and A. Valdes, (1980) "Food insecurity in developing countries," Food Policy, vol 5 no 4, November, pp258-272.

Food security may be defined as the ability of food-deficit countries, or regions or households within these countries, to meet target levels of consumption on a yearly basis. What constitutes target consumption levels, and whose ability to maintain consumption is being referred to, are two central issues of a country's food policy. (p258).

138. Siamwalla, A., and A. Valdes, (1984) "Food security in developing countries, international issues" in C. Eider and J.M. Staatz (eds), Agricultural Development in the Third World, John Hopkins University Press, Baltimore.

Food security may be defined as the ability of food-deficit countries, and regions or households within these countries, to meet target levels of consumption on a yearly basis. (p190).

139. Srinivasan, T.N., (1983) "Hunger: Defining it, estimating its global incidence, and alleviating it" in D.G. Johnson and G.E. Schuh (eds), The Role of Markets in the World Food Economy, Westview Press Inc., Boulder.

It is therefore of interest to look both at the distribution of aggregate food output and the access to the available food (through trade and transfer) among countries, as well as among socio-economic groups within countries. ... This is the issue of food security for countries and for socioeconomic groups within countries. (p78).

140. Staatz, J., (1990) "Food security and agricultural policy," in T.R. Frankenberger et al., Proceedings of the Agriculture-Nutrition Linkage Workshop, Volume I, USAID, Arlington.

In the mid-1970s and early 1980s, food security analyses focused primarily on stabilizing the supply of basic staples at the international and national levels. Since the mid-1980s, more emphasis has been placed on assuring access of households and individuals to reliable food supplies. The focus has thus shifted from simply producing and stocking food at the national and regional levels to the creation of reliable income streams for the poor and the improvement of rural and urban food markets to allow the poor greater access to food.

Food security is the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable and nutritionally adequate supply of food.

A three-dimensional matrix can be used to illustrate the interacting elements of food security. The three dimensions are: i) Transitory v. Chronic; ii) Supply v. Effective Demand; and iii) Individual v. Household v. National/Regional. (pp7-8).

141. Staatz, J., (1990) "Food security and agricultural policy: summary," Proceedings of the Agriculture-Nutrition Linkage Workshop, vol 1, February 12-13, Virginia.

Food security is the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable, and nutritionally adequate supply of food. (p7).

142. Staatz, John M., Victoire C. D'Agostino and Shelly Sundberg, (1990) "Measuring food security in Africa: conceptual, empirical and policy issues," American Journal of Agricultural Economics, vol 72 no 5, December 1990, pp1311-1317.

Initially, food security meant avoiding transitory shortfalls in the aggregate supply of food. The conceptual understanding of food security has evolved gradually over the past fifteen years to include not only transitory problems of inadequate supply at the national level but also chronic problems of inadequate access and unequal distribution at the household level. Food security can be perceived at the national, regional, household and individual level. (p1311).

143. Staatz, John M., and Carl K. Eicher, (1990) "Agricultural development ideas in historical perspective," in Carl K. Eicher and John M. Staatz (eds), Agricultural Development in the Third World, John Hopkins University Press, Baltimore.

In the mid 1980s, policy makers in many countries became increasingly concerned about food security, moving beyond the belief that national food self-sufficiency could solve problems of famine and malnutrition. Food security involves assuring both an adequate supply of food (through production and trade) and access by the population to that supply. Food insecurity can be either transitory (the short-term inability to secure adequate food due to temporary shortfalls in either production or income) or chronic (a long-term problem of inadequate food intake due to low productivity and incomes). (p22).

144. Streeten, P., (1987) What Price Food? Macmillan, London.

National food security in the face of international uncertainties is listed as one of the fundamental goals of development. (p5)

Food security has been defined in a number of different ways. In its widest sense it means assured physical and economic access to food, at all times, to all citizens. Recognises chronic, transitory, anticipated and unanticipated, regular and random, and seasonal and year to year insecurity. In relevant section confines the meaning to reducing fluctuations in food consumption and to the international contribution to food security. (p44).

145. Stryker, J. Dirck., (1978) "Food Security, Self-Sufficiency, and Economic Growth in the Sahelian Countries of West Africa" prepared for USAID from Food Research Institute, Stanford University.

Food security is defined in terms of national food supplies probably positively related to self-sufficiency. National food security is when a country can ensure that even in the worst years, their populations have adequate food and water, and at the same time, the national environment is preserved so that it may be used to sustain their needs over an indefinite period of time. This definition requires further clarification: what is meant by "adequate food and water," for example? This might alternatively imply the physiological minimum required for survival or that which permits worker productivity to be maintained, or the minimum subsistence which is socially acceptable within any given "historical and cross-cultural context." There is also the question of for whom must food

and water supplies be adequate, at what point does the increase in the numbers of the normally food insecure become critical. Variations in supply constitute a further dimension, as do fluctuations in price and the availability of foreign exchange and food aid. It is recognised that food security may conflict with self-sufficiency, and economic growth and efficiency. (p?).

146. Sudan, Republic of, (1988) "Proceedings of the National Food Security Workshop," Khartoum, 4-5 June.

Food security .. could be defined as "access by all people at all times to enough food for an active, healthy life." (p3).

147. Sudan, Republic of, Ministry of Finance and Economic Planning (1988) Food Security Study: Phase 1, Final Report, Institute of Development Studies, University of Sussex.

Food security is defined as "adequate" access to food for all sections of the population at all times. "Adequate" means enough for an active, healthy life. "Access" means the ability to acquire food by production, purchase or exchange. (p1).

148. Swaminathan, M.S., (1986) "Building national and global nutrition security systems," in M.S. Swaminathan and S.K. Sinha (eds), Global Aspects of Food Production, Tycooly International, Oxford.

(a) The ultimate objective of world food security should be to ensure that all people at all times have both the physical and economic access to the food they need.

(b) Food security should have three specific aims, namely ensuring production of adequate food supplies; maximising the stability in the flow of supplies; and ensuring access to available supplies on the part of those who need them. (p419).

149. Swift, J.J., (1989) "Why are rural people vulnerable to famine?," IDS Bulletin, vol 20 no 2, Institute of Development Studies, University of Sussex, Brighton.

This author does not employ the term food security, but is discussing the vulnerability of rural households to famine, he raises many of the issues found in food security studies. He argues that vulnerability to famine, defined as a "sudden, catastrophic and prolonged consumption deficit," is a function of the asset status of rural households and communities. Swift divides assets into tangible and intangible investments, stores, and claims on individuals or institutions. These are accumulated in periods when households are able to generate resources over and above their immediate needs and are drawn down during periods of crisis. While the form of assets will differ among households

and communities, their primary function is similar; notably, to act as consumption buffers during times of adverse economic or social shocks. As successive crises deplete the range of buffering mechanisms, the vulnerability of households to famine can be understood with respect to the number of crises to which the household has been exposed previously and their severity and duration.

150. Swift, J.J., Gray, J., (1989) "Report on Darfur food security policy and planning," The Republic of Sudan Darfur Regional Government, under assignment from the Overseas Development Administration.

An analysis is made of food insecurity according to three inter-relating components: production, exchange and assets, emphasising the recent recognition of the role of assets in determining food security. A distinction is drawn between "chronic" and "acute" food insecurity. (p9).

151. Syarief, H., (1990) "Combating malnutrition through improvements in food and nutrition systems" in D.S.Tyagi and V.S.Vyas (eds), Increasing Access to Food: the Asian Experience, Sage Publications, New Delhi and London.

The problem is to have enough food available at all times and at all places to permit every member of the population to lead an active and healthy life. Food security as defined by the World Bank (1986) is considered essential in promoting the nutritional status of the people. (pp301-302).

152. Tanzania, Ministry of Agriculture and Livestock Development, (1984) Tanzania National Food Strategy. Volume II: A Framework for Action, Dar-es-Salaam.

The Government is determined to provide food security for all households under all circumstances. This task has four dimensions: that food production be expanded and made less susceptible to variations in the weather; that arrangements be made to meet unforeseen strategies; that all households be capable of meeting certain minimum food requirements; and that machinery be set up to give advance warning of impending food shortages. (p196).

153. Tanzania, Republic of, Ministry of Agriculture and Livestock, (1984) Tanzania National Food Strategy: Report on Zanzibar, printed by FAO, Rome.

Zanzibar Food Strategy: The strategy forms an integral part of Zanzibar's overall agricultural strategy of achieving greater self-sufficiency in the production of staple foods, increasing the supply of animal and fish protein, increasing and diversifying cash crop production and increasing agricultural processing. The four major objectives of the strategy are: (a) raising nutrition levels; (b) meeting future demand increases; (c) establishing food reserves; (d) minimizing the food import bill. (p21).

154. Tapsoba, E.K., (1990) "Food security policy issues in West Africa: past lessons and future prospects," FAO Economic and Social Development Paper No 93, FAO Rome.

Uses Reutlinger (1985) and FAO (1989) definitions. (p17-18).

155. Taylor, D., (1991) "Assessing household food insecurity: a framework and questionnaire," Centre for Food Security, University of Guelph, Ontario, mimeo.

Food insecurity is a state that exists when members of a household have an inadequate diet, during part or all of the year, or face the possibility of having an inadequate diet in the future. (p2).

156. Tekolla, Y., (1990) "The African food crisis" in E.Chole (ed), Food Crisis in Africa: Policy and Management Issues, Vikas Publishing House PVT Ltd., New Delhi.

A significant component of such measures is the establishment of a viable food security system geared to the requirements of the country's vulnerable population. The requirements for such a system are the existence of adequate food reserves; early warning devices; efficient storage structures; and effective country-wide distribution networks. (p14).

157. Teller, C. H., Frankenberger, T. and Yambi, O., (1991) "Developing a Regional Nutrition Strategy for East and Southern Africa: strategic elements and practical opportunities for A.I.D" Food and Nutrition Division, The Pragma Corporation, A Working Document.

Attempts to give conceptual and definitional clarity to the World Bank definition of "access by all people at all times to enough food for an active and healthy life" (World Bank 1986) by building on the differential operationalisation of this concept at household and national levels. Result is the conceptual framework of household food security that entails the "availability of adequate food (e.g.culturally acceptable, safe and nutritionally adequate) as well as the ability of the household to have stable access to such food through its own production or purchase. Availability and access are keys to household food security. Viable procurement entails different types of access to assets, credit, non-farm income, social networks of shared food, etc. Stable access is also influenced by local, informal social mechanisms (e.g.food sharing networks) that buffer households from periodic shocks and the stability of the government."

(Frankenberger and Goldstein, 1991, also use this conceptual framework). (p15).

158. Thompson, R.L., (1983) "The role of trade in food security and agricultural development" in D.G. Johnson and G.E. Schuh (eds), The Role of Markets in the World Food Economy, Westview Press Inc., Boulder.

Ultimately, food security concerns the individual or the family unit. Its principal determinant is purchasing power-income adjusted for the cost of what that income must buy. Much of the recent literature on food security concerns what we might call a country's "aggregate food security," not the individual food security discussed so far. One definition of aggregate food security is ensuring adequate food supplies to feed the country's population at reasonable prices, regardless of how crop yields fluctuate from year to year. (pp228-229).

159. Toole, Daniel, (1989) Reaching the Poor in Africa: Household Food Security in Africa: An Overview of UNICEF Experience, UNICEF, New York.

In reviewing UNICEF's experience, the author highlights the mid-1980s as the period when household food security came to be seen as a major determinant of malnutrition and death. As a consequence, UNICEF programmes took as a starting point the idea that "all households should be able to assure adequate food for all family members throughout the year." (p2).

160. Tullis, F. L., and Hollist, W. L. (eds) (1986) Food, the State, and International Political Economy: dilemmas of developing countries University of Nebraska Press, Lincoln and London.

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[Food insecurity is]... domestic and international vulnerability to shifts in food and agricultural production and exchange practices...the insecurity that could result from international food shortfall or boycott. Some governments found that "cheap food" seemed less desirable than secure food and the political tranquillity that such security implied. Increased food security may lead to increased protection and subsidisation of national food production. (pviii).

161. Tyagi, D.S., (1990) "Increasing access to food through interaction of price and technology policies-the Indian experience" in D.S.Tyagi and V.S.Vyas (eds), Increasing Access to Food: the Asian Experience, Sage Publications, New Delhi.

These essential elements of India's national food policy also broadly coincide with the three specific goals of food security as they are commonly understood, namely, attaining desirable levels of food production, ensuring access to food supplies on the part of those who need it, and increasing the stability of food supply through the mechanism of buffer stocking. (p65).

162. UNICEF, Malawi, (1990) Poverty Reduction from Below: A Household Food Security Approach, mimeo, UNICEF, Lilongwe.

This report argues that national food security can only be achieved when all households in the country are food secure. Security at the household level is reached when households are “able to obtain adequate levels of food, either through home production, purchases or exchanges, to maintain a healthy and active life throughout the year.” It is further argued that child nutritional status is a good proxy for measuring household food security. (p2).

163. UNICEF, (1990) *Strategy for Improved Nutrition of Children and Women in Developing Countries*, UNICEF Policy Review, New York.

Household food security requires special attention. For a long time nutrition has almost been equated with food supply, primarily because for a large number of people, food accessibility is not assured. Access to food is necessary for adequate nutrition, but it does not guarantee it. This difference is underlined in the distinction between national and household food security. National food security means adequate food supplies through local production and food imports. National food policies often neglect to take into account the common maldistribution of food among households or even communities and regions. Household food security, on the other hand, focuses on the family's capacity to produce and acquire food. In addition, explicit attention is paid to how food is produced, in particular the effect on women's work-load and how that food is distributed within the household. All of those factors have a direct effect on nutrition at the household level. (p20).

164. UNICEF, Namibia, (1991) A Situation Analysis of Children and Women in Namibia, mimeo, UNICEF, Windhoek.

This report draws a distinction between national food security, denoted as sufficiency of aggregate food supply, and household food security, which focuses on the capacity to produce or acquire food by individual families. It argues that national food security is a necessary but not sufficient condition for household food security and that household food security, while necessary, does not guarantee improved nutrition. (p31).

165. United Nations, (1975) Report of the World Food Conference, Rome, 5-16 November 1974, New York.

..the urgent need to ensure availability at all times of adequate world supplies of basic food-stuffs, particularly so as to avoid acute food shortages in the event of widespread crop failure, natural or other disasters, to sustain a steady expansion of food consumption in countries with low levels of per capita intake and to offset fluctuations in production and prices. (p14).

166. United Nations, (1988) Towards Sustainable Food Security: Critical Issues, Report by the Secretariat, World Food Council, Fourteenth Ministerial Session, Nicosia, Cyprus, 23-26 May.

Food security implies two things. First, it implies that food is available, accessible, affordable — when and where needed — in sufficient quantity and quality. Second, it implies an assurance that this state of affairs can reasonably be expected to continue; or in other words, that it can be sustained. To put it simply, food security exists when adequate food is available to all people on a regular basis. (p2).

167. United Nations, (1989) Right to Adequate Food as a Human Right, United Nations, New York.

It is proposed to use, as the framework for analysing “de lege ferenda” the range of State obligations in meeting the right to food, the concept of food security, and to give it a content which can accommodate both developmental and legislative perspectives. The concept as used here deviates somewhat from recent usage in food agencies. National food security, as used in this study, should be considered as the ultimate achievement of food security for all members of a nation. (p25-26).

168. United Nations, (1990) “Nutrition-Relevant Actions in the Eighties: Some Experience and Lessons from Developing Countries,” Background Paper for the ACC/SCN Ad Hoc Group Meeting on Policies to Alleviate Underconsumption and Malnutrition in Deprived Areas, 12-14 November, London.

While food security refers to the self-perceived ability of household members to provision themselves with adequate food through whatever means, ensuring it is often not sufficient to ensure the adequate nutrition of its individual members.

There has recently been considerable debate as to what exactly “food security” is and is not. This has to a large extent been fuelled by the need perceived by many development agencies to separate out food issues from nutrition issues in order to avoid departmental overlap in programme planning. Household food security essentially refers to the ability of household members to assure themselves sustained access to a sufficient quantity and quality of food to live active, healthy lives. This may occur as a result of adequate home production of food and/or adequate economic and physical access to food. Economic access comes from an adequate purchasing power, while physical access refers to the proximity of markets or other distribution channels through which food may be acquired. The distinction between chronic and transitory states of food insecurity is necessary to keep in mind. The latter may be triggered by seasonal fluctuations in food availability, food prices and/or incomes, which themselves may result in seasonal fluctuations in individual nutritional status. While not as serious as chronic food insecurity, it is nevertheless important, particularly as it may precipitate the chronic condition. It is also worth noting here that the concept can be both subjective — as households members perceive it — and objective, as security in fact turns out. (p7, 18).

169. UNSTD, (1986) Report of the Ad Hoc Panel of Specialists on Science, Technology and Food Security, Harare, 7-13 January, United Nations Advisory Committee on Science and Technology for Development.

Food security refers to a country's ability to have stable and reliable access to the food it needs through a mixture of production, trade, purchase or barter. The mixture is seen to vary according to the resource endowments of the country and its comparative advantage in different types of food, fibre and industrial production. Food security can also be used at the household level and implies stability in access to food through sufficient food self-provisioning and/or food purchasing power whatever the season of the year. (p6)

170. US Dept. of Agriculture, Office of the Secretary, (1977) "The Relationship Between Trade and World Food Security," Speech by Dale Hathaway, Assistant Secretary for International Affairs and Commodity Programs before the International Food Conference at the Pan American Health Organisation, Washington DC, April 29.

Food security has both a long-term and a short-term meaning. In the long-term, food security is the assurance that per capita food consumption can at least be maintained at current levels and preferably increased over time, particularly in poor countries. In the short-term, food security is the capability to prevent sharp declines in supplies and resultant sharp increases in prices to levels which many low income consumers at home and abroad cannot afford.

171. Valdes, A., and Panos Konandreas, (1981) "Assessing food insecurity based on national aggregates in developing countries," in Alberto Valdes (ed), Food Security for Developing Countries, Westview Press, Boulder.

Food insecurity in developing countries is the uncertain ability to finance needed imports to meet immediate targets for consumption levels. There are two main causes of food insecurity: shortfalls in domestic production and sudden fluctuations in the prices of food imports and national food or non-food exports. (p25).

172. Valdes, A., and Ammar Siamwalla, (1981) "Introduction," in Alberto Valdes (ed.), Food Security for Developing Countries, Westview Press, Boulder.

Food security may be defined as the ability of food-deficit countries, or regions within those countries, to meet target consumption levels on a year-to-year basis. (p1).

173. Valdes, A., (1983) "Discussion" in D.G.Johnson and G.E.Schuh (eds), The Role of Markets in the World Food Economy, Westview Press Inc., Boulder.

In our discussion of food security, I believe we are mainly concerned with how international trade should support the attempts of countries to meet annual targets of food consumption on a year-to-year basis. (p266).

174. Van Zyl, J., and G.K. Coetzee, (1990) "Food security and structural adjustment: Empirical evidence on the food price dilemma in Southern Africa," Development Southern Africa, vol 7 no 1, pp105-116.

In recent years food security has come to be defined as "the ability of a country or region to assure, on a long term basis, that its food system provides the total population access to a timely, reliable and nutritionally adequate supply of food." (p106).

175. von Braun, J.(1988) "Effects of technological change in agriculture on food consumption and nutrition: rice in a West African setting," World Development, vol 16 no 9, pp1083-1098.

Food security is understood in this context as the ability of all members of a household to acquire sufficient amounts of food continuously over time for a healthy and productive life. (p1083).

176. von Braun, J., (1991) "Improving Household Food Security," a "Theme Paper" in preparation for the FAO/WHO International Conference on Nutrition, International Food Policy Research Institute, Washington, DC. October.

Food security at the household and individual levels is defined, in its most basic form, as access by all people at all times to the food needed for a healthy life. The food security concept addresses people's risks of not having access to needed food. Those risks can be with respect to incomes and food production, for instance. Typically, those risks are higher the closer a household is even in a "normal situation" to inadequate dietary intake. Thus, at the household level, food security is the ability of the household to secure enough food to ensure adequate dietary intake for all of its members. Availability of food *and* access to food are two essential determinants of food security. Argues that household food security is not necessarily related to national food availability, and accepts the chronic/transitory distinctions of household food security. Distinguishes between rural and urban household food security: in urban areas this is a function of the real wage rate affected by a frequently poor health environment. (pp3-4).

177. von Braun, J., (1991) "A Policy Agenda for Famine Prevention in Africa" Food Policy Report, International Food Policy Research Institute.

"Food insecurity is the risk of an ongoing lack of access by people to the food they need to lead healthy lives." (p1). Food insecurity, with its severest expression in famine, is the outcome of an interaction between environmental

and socioeconomic factors, both in the short and the long terms, and a failure of policy to deal with them. (4). "Food insecurity and famine are inseparable from poverty." (p201).

178. von Braun, J., D. Hotchkiss and M. Immink, (1989) "Non-traditional export crops in Guatemala: effects on production, income and nutrition," Research Report no 73, International Food Policy Research Institute, Washington DC, May.

Food security... is understood in the broad sense as the ability of households and their members to acquire sufficient quantities of food over time, whether from their own produce or from the market. (p15).

179. Warley, T.K., (1983) "Discussion" in D.G. Johnson and G.E. Schuh (eds), The Role of Markets in the World Food Economy, Westview Press Inc., Boulder.

In the long term, enhanced food security requires the assured availability of increasing per capita food supplies. ... The shorter-term concept of food security dealt with here entails developing the capacity to avoid sharp reductions in the food consumption of countries, regions, groups, and individuals due to variation in incomes, food prices, supplies, and availability. (p271).

180. Watts, M., (1987) "Drought, environment and food security: some reflections on peasants, pastoralists and commoditization in dryland west Africa," in M. Glantz (ed), Drought and Hunger in Africa: Denying Famine a Future, Cambridge University Press, Cambridge.

Considers food security in terms of social relations between households and more generally, of the inter-section of commodity markets. A strong sense of food security is given in relation to household inequality by examining, first, the cycle of reproduction and, then, what one might call the social relations of trade, particularly seasonal sequences of grain sale and purchase and the critical role of debt. (p201).

181. Weber, M.T., J.M. Staatz, J.S. Holtzman, E.W. Crawford and R.H. Bernstein, (1988) "Informing food security decisions in Africa: empirical analysis and policy dialogue" American Journal of Agricultural Economics, vol 70 no 5, December, pp1044-1052

In recent years food security has come to be defined as "the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable and nutritionally adequate supply of food." Food security thus involves assuring both an adequate supply of food and access of the population to that supply, usually through generating adequate levels of effective demand via income growth or transfers. Food security is therefore influenced by both micro and macro factors, ranging from the

technology and support institutions available to farmers and merchants, to monetary, fiscal, and exchange rate policies that affect the overall rate of growth and distribution of income. Food insecurity can be either short-term (eg a famine resulting from a crop failure) or chronic (long-term undernutrition). (p1044).

182. Weber, M.T. and T.S. Jayne, (1991) "Food security and its relationship to technology, institutions, policies, and human capital" in G. Johnson et al. (eds), Social Science Agricultural Agendas and Strategies, Michigan State University Press, East Lansing.

We define food security as a situation in which all individuals in a population possess the resources to assure access to enough food for an active and healthy life. This definition highlights three critical dimensions: (1) supply/demand, (2) time, (3) level of aggregation. (pII-114).

183. World Bank, (1980) "Food Security in Food Deficit Countries," World Bank Staff Working Paper no 393, Washington D.C., June.

Food security.. meaning the assurance of a minimally adequate level of food consumption... (p1).

184. World Bank, (1986) Poverty and Hunger: Issues and Options for Food Security in Developing Countries, World Bank Policy Study, Washington D.C.

The term "food security," although interpreted in many ways, is defined here as access by all people at all times to enough food for an active, healthy life. Its essential elements are the availability of food and the ability to acquire it. Food insecurity, in turn, is the lack of access to enough food. There are two kinds of food insecurity: chronic and transitory. Chronic food insecurity is a continuously inadequate diet caused by the inability to acquire food. It affects households that persistently lack the ability either to buy enough food or to produce their own. Transitory food insecurity is a temporary decline in a household's access to enough food. It results from instability in food prices, food production, or household incomes — and in its worst form it produces famine. (p1).

185. World Bank, (1988) Food Security in Africa: Task Force Report, Washington D.C.

This report agrees with the World Bank Policy Study, "Poverty and Hunger" (1988) in defining food security as "access by all people at all times to enough food for an active and healthy life." Achieving food security entails ensuring the availability of adequate food supplies and the ability of vulnerable households to acquire food. (p?).

186. World Bank, (1988) The Challenge of Hunger in Africa, Washington D.C.

Food security has two main requirements: one is assuring the availability of food, and the other is assuring the ability of households to acquire food.

In any country, the food insecure comprise different sub-groups. Cost-effective programs to improve food security must be tailored to the needs and the circumstances of each group of food insecure. (p3).

187. World Bank, (1989) Mozambique Food Security Study, Washington D.C., Draft.

Food security is best defined as access by all people at all times to sufficient food for a healthy and productive life. Within the framework of this definition, attainment of food security requires fulfilling certain conditions for the supply, demand and household-level utilisation of food. At the national level, an aggregate supply of food (either from domestic production or imports) is a necessary condition for food security — however, it is not sufficient. The “access” part of the definition of food security is also critical. Food security requires that all households have the ability to acquire enough food, either by producing it themselves or by generating sufficient income to purchase needed food supplies. Moreover, to the extent that household food security is not an end in itself but rather a means to achieving an active and healthy life, it also requires satisfactory health conditions and social practices — to ensure efficient allocation of available food among household members and optimal physiological utilisation by individual household members of nutrients contained in the food. These factors, in turn, have an impact on nutritional status and, hence, on the capacity of household members to work and so provide food. (p1).

188. World Bank, (1989) Analysis Plan: Food Security and Nutrition, World Bank, Draft.

Food security has been defined as the (secure) access by all people at all times to enough food for an active and healthy life. This definition implies that access to adequate food is subjected to threats of different types and that the analysis of risk of inadequate access is an important concern. There are two main dimensions to analysis of food security issues. The first concerns the level of analysis. Food security can be analysed at an individual, household, community, regional or national level. The second dimension relates to the time frame. Individuals or groups of people may suffer from inadequate food consumption all of the time. The focus of the analysis in this situation is on the level of food consumption and the factors that determine this. In other circumstances, the average level of food consumption may be adequate when compared with some measure of need but variations around this average imply that people do not have enough to eat for some of the time. In this case, the analytical concentration should be on the variability in food consumption (typically between seasons and between years) and the main consequences of this variation. A working definition of food security can only be specified when the level and time frame of the desired analysis is also specified. (p3).

189. World Bank, (1990) Symposium on Household Food Security and the Role of Women, Harare, January 21 -24, 1990.

Food security may be defined as access by all people at all times to sufficient food for a healthy and productive life. It comprises two main elements: i) assuring the availability of adequate food and supplies, through domestic production or imports; and ii) assuring the ability of households to acquire food, either by producing it themselves or by having the income to purchase it.

National food security is a necessary but not a sufficient condition for household food security. (pp1-2).

190. World Bank and World Food Programme, (1991) Food Aid in Africa: An Agenda for the 1990s, Washington D.C.

Food security is “access by all people at all times to enough food for an active and healthy life.” Food security entails ensuring: i) that there are adequate food supplies (through domestic production or imports); and ii) that people who suffer from undernutrition can acquire food by producing it themselves or buying it.

Food insecurity is either chronic (meaning a continuously inadequate diet) or transitory (implying a temporary decline in a household’s access to enough food). (p14).

191. World Food Council, (1988) Towards Sustainable Food Security: Critical Issues, Report by the World Food Council Secretariat, Fourteenth Ministerial Session, Nicosia, Cyprus, 23-6 May, WFC/1988/5.

Food security implies two things. First, it implies that food is available, accessible, affordable — when and where needed — in sufficient quantity and quality. Second, it implies an assurance that this state of affairs can reasonably be expected to continue; or, in other words, that it can be sustained. To put it simply, food security exists when adequate food is available to all people on a regular basis. (p2).

192. World Food Council, (1989) Ending Hunger: The Cyprus Initiative, Fifteenth Ministerial Session of the World Food Council, Cairo.

Food security is defined as all people at all times having access to enough food for an active and healthy life. It is the equivalent of ending chronic and persistent hunger on a sustainable basis. (p4).

193. World Food Programme, (1989) WFP Guidelines on Women and Development: Gender Variables in Food-Assisted Projects, Rome.

Food security refers to the sustained ability of all people to have physical and economic access to their basic food consumption needs at all times. A successful national food security strategy cannot be achieved without assuring food security at the household level. (p?).

194. Zipperer, S., (1987) Food Security and Agricultural Policy and Hunger, Zimbabwe Foundation for Education with Production, Harare.

“Food Security” means always having enough to eat. People reach food security by: 1. having land and resources to grow food; or 2. having employment which pays enough to buy food. (p5).

