

ORIGINAL ARTICLE

FOOD SECURITY: CONCEPTS AND DEFINITIONS

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ABSTRACT

Introduction: The purpose of this article is to review the definitions of food security and food insecurity as well as the concepts related to food security.

Methodology: This is a systematic review on a few papers, research, and articles according to studies and research by various organizations, experts, scholars on food security in developed and developing countries.

Result: The first definition of food security was given to reflect the comprehensive concerns on the availability of world food supplies. The definition was expanded to incorporate accessibility of food for all people at all times. Then, the complex definitions of food security incorporated food accessibility and availability as well as the quality of food intake. Latest definition integrates the social aspect of food that should be accessed in a socially acceptable way. Broad definition of food insecurity and several terms that closely related were also discovered. The four main concepts of food security from these definitions were identified; availability, accessibility, acceptability and adequacy. These concepts of food security are relevant to micro, meso and macro levels of social and administrative organizations.

Conclusion: Understanding definitions and concepts of food security can assist researchers, policy makers and program implementers to conduct research that address the issues of food security.

Keywords: Food Security, Food Insecurity, Definitions, Concepts.

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INTRODUCTION

Food security is a flexible concept as reflected in the numerous attempts at definition in research. Food security and insecurity are terms used to describe whether or not people have access to adequate quality and quantity of food. The term food security was created in international literature in the 1960s and 1970s. Over time, a large number of different definitions of food security have been proposed. The concept of food security has also developed and expanded over time to incorporate a broad range of food related issues and to completely reflect the complexity of food in human society. The declaration of Human Rights in 1948 recognized that everybody has the right to a standard of living adequate for the health and well being of himself and his family including food. The methodology of this paper was a systematic review of a few papers, research, and articles according to studies and research by various organizations, experts, and scholars on food security and food insecurity in developed and developing countries. Thus, this article aims to review the definitions of food security and food insecurity as well as the concepts related to food security in regional, community, households and individuals.

Definitions of Food Security and Food Insecurity

Food security issues were first discussed during the Universal Declaration of Human Rights in 1948, which recognized the right to food as a core element of an adequate standard of living¹. The public concerns in global and national food security grew rapidly after the world's oil crisis and related food crisis in 1972-1974. Approximately 200 definitions of food security have been proposed since the World Food Conference in 1974. Food security was first defined as the availability (at all times) of adequate world's supplies of basic food stuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices¹. This definition was given to reflect the global concerns on the volume and stability of food supplies.

Food security became an important issue in the second half of the 1980s and continued to be the focal issue of concerns in the 1990s. In 1983, the definition was expanded to incorporate accessibility in that people at all times to have both physical and economic access to the food that they need². Later, the World Bank focused on the temporal dynamics

of food insecurity (i.e., transitory and chronic food insecurity)³. Transitory food insecurity involved periods of intensified pressure due to economic collapse or natural disasters while chronic food insecurity associated with problems of continuing due to poverty and low incomes. Then, food security is further elaborated as an access for all the people at all times in getting enough food for an active and healthy life. This definition of food security has become the most commonly cited which emphasizes on the relevance of food for individuals and their rights to food.

By the mid 1990s, food security was recognized as a significant concern at the individual, household, national, regional and global levels. Food security is achieved when all people have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life at all times⁴. This complex description of food security incorporated food accessibility and availability, at the macro and micro levels, as well as the quality of food intakes. In 2002, FAO refined the definition of food security as a situation when all people have physical, social and economic access to sufficient, safe and nutritious food that meet their dietary needs and food preferences for an active and healthy life at all times. This latest definition incorporates the social aspect which emphasizes that food should be accessed in a socially acceptable way (i.e. foods purchased from shops, markets or supermarkets), and not through the unacceptable ways (i.e. food obtained from welfare, wild foods or stealing). Hence, these definitions of food security have gone through three major paradigm shifts since the World Food Conference in 1974. These are: (1) the shift from the global and national to the household and the individual level; (2) the shift from the food first perspective to the livelihood perspective; and (3) the shift from the objective indicators to the subjective perception⁵.

On the other hand, the broad definition of food insecurity was developed by the expert panel convened in 1989 by the Life Science Research Office (LSRO)⁶. Food insecurity exists when the availability of nutritionally adequate and safe food or the ability to acquire acceptable food in a socially acceptable way is limited or uncertain⁷. This shows that food insecurity discovers people who frequently do not get or have enough food to eat, based on the accepted cultural norms⁸. There are several terms that are closely related to food insecurity

such as hunger, under-nourishment (food insufficiency) and malnutrition (Table 1). The term of hunger covers a spectrum from the short-term physical experience of discomfort

to chronic food shortage to severe and life-threatening lack of food⁹.

Table 1: Terms Related to Food Insecurity

Terms	Definitions
Food Security	Exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life ⁵ .
Nutrition Security	Adequate nutritional status in terms of protein, energy, micronutrients and minerals for all household members ⁹ .
Food Insecurity	Whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain ⁸ .
Hunger	The uneasy or painful sensation caused by a lack of food. Hunger is a potential, although not necessary, consequence of food insecurity ⁸ .
Under-nourishment Malnutrition	Inadequate ingesting food to meet the energy needs ⁵ Results from deficiencies, excesses or imbalances in the consumption of macro and/or micro nutrient.

According to Anderson, hunger is an uneasy or painful sensation or feeling of weakness caused by lack of food, or the recurrent and involuntary lack of food¹⁰. It is also considered potential, but not necessarily a consequence of food insecurity. According to the United Nations Food and Agricultural Organization (FAO), the term ‘under-nourishment’ is a state whereby there is not enough ingesting food to meet the energy needs. Similarly, the term malnutrition is related to as condition where there is insufficient intake of nutrients to meet biological requirements. Generally, the term ‘mal’ refers to both over- and under-intakes, but the typical usage in bulk of research on malnutrition has been directly related to the understanding inadequate intakes of macro and

micronutrients¹¹. Figure 1 illustrates the relationship between the terms of food insecurity, hunger, under-nourishment and malnutrition in developed and developing countries¹². The circle's size for food insecurity, hunger, under-nourishment and malnutrition in this figure indicate that these phenomena are major public health problems in developing countries compared to developed countries. Under-nourishment and malnutrition problems are fewer in developed countries than developing countries. Meanwhile, under-nourishment and malnutrition problems are almost not occurring in the developed countries.

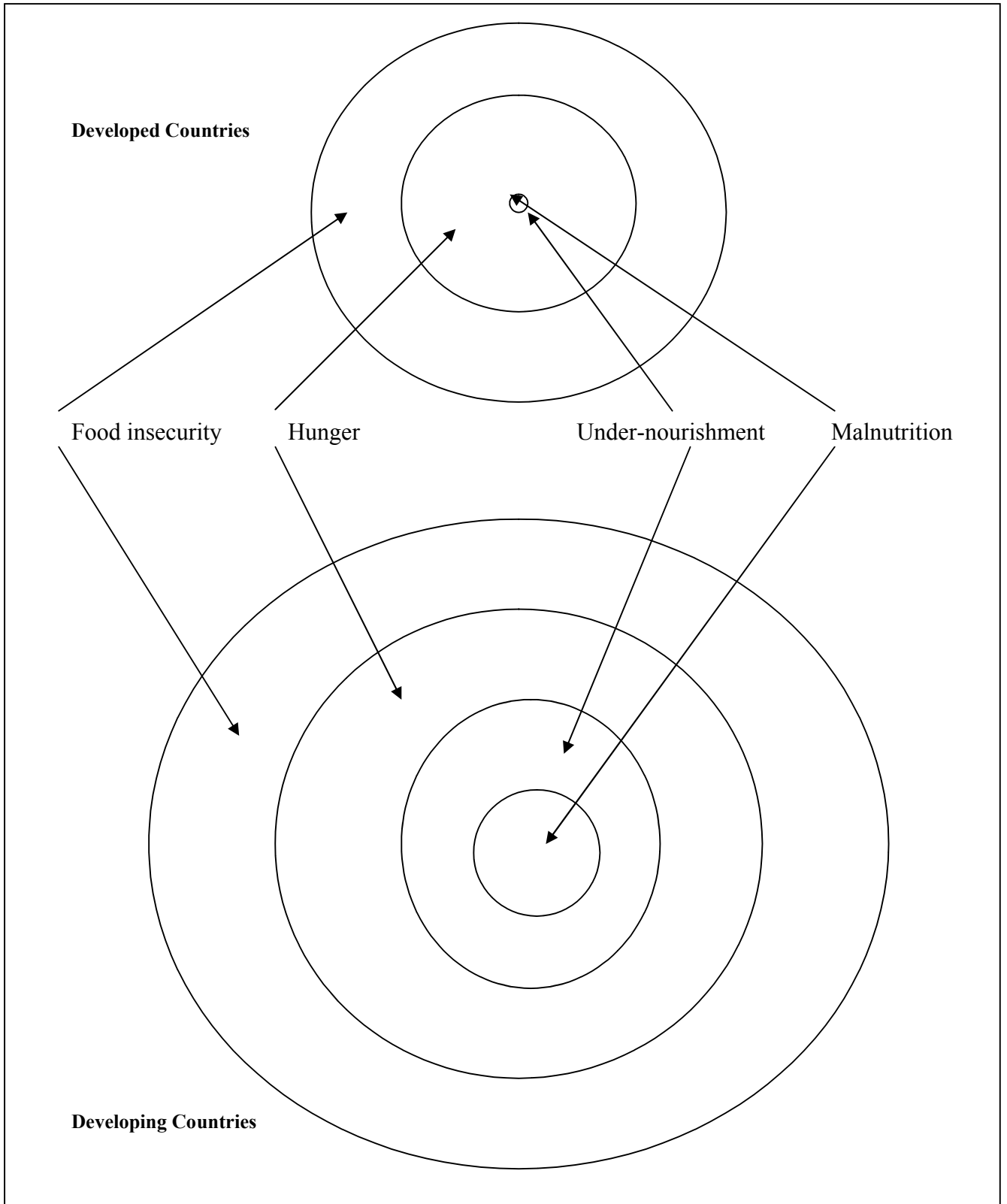


Figure 1: Relationships between the Food Insecurity, Hunger, Under-Nourishment and Malnutrition

Concepts of Food Security

Fundamental concepts of food security can be identified from the many definitions of food security^{13,14,15}. Maxwell and Frankenberger identified the concept of food security based on many definitions and the key defining characteristic of household food security is “secure access at all time to enough food” that from the concept of secure, access, time and enough. Conversely, Ganapathy and Power identified the concept of food security related to food access in terms of sufficient quantity and quality of food that is available. The conceptualization of food security, according to Koc and Dahlberg, goes beyond the adequacy of quantity and quality and should be expanded to include four important concepts of availability, accessibility, acceptability and adequacy. Food security requires a sufficient supply of food be available (quantity) and should be accessible to all equally. Acceptability addresses food’s cultural that the food available and accessible should respect individuals’ cultural traditions. Adequacy refers to the long-term sustainability of food systems (quality).

The food security concepts of availability, accessibility, acceptability and adequacy are relevant to all levels of social and administrative organizations from the individuals and the households (micro level) to the community (meso level) and the national and the global level (macro level)¹⁶. At the micro level, the ability of the households to access food is determined through the household income which includes the goods produced (i.e. food) and services provided (i.e. child care) and those which do not enter the market and the in-kind transfers of foods and services. Individual food security is defined as an individual’s access to a nutritionally sufficient diet for physical activities, disease prevention, and adequate growth, as well as during pregnancy and lactating¹⁷. Figure 2 illustrates the common concepts of food security at both the micro and meso levels. The common concepts of food security at both the micro and meso levels were identified i.e. universality, stability, dignity, quantity and quality.

At the meso level, community food security exists when all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone¹⁸. Community food security also considers the

community social, economic and institutional factors can affect the components of food system¹⁹ (Figure 3). Community food security is concerned with the viability of the natural resources to provide food and the food system dependence on non-renewable energy resources. Hence, community food security ought to promote sustainable food production practices throughout the food chain²⁰.

Community food security encourages social equality as a basis for participation in the food system. Isolated communities and aboriginal people are particularly at-risk to food insecurity due to decrease availability and accessibility to food²¹. Food insecurity at the community level is associated with negative health outcomes^{22,23}, and food safety²⁴. Therefore, community food security should promote health and safety of the food supply especially to isolated communities and aboriginal people. Community food security can promote community self reliance and supports community economic development throughout innovative direct marketing, local processing and other value-added activities. These activities can strengthen their economic health by creating jobs, reinvesting financial capital, adequate wages and working conditions among those who earn their livelihood from the food system²⁵.

At the macro level, food availability is determined through the world food production. The national food availability is influenced by the country’s own food production, food stocks, net food import and food aids. However, food insecurity could still occur at the community, household and individual levels, even when the national food security has been achieved^{26,27}.

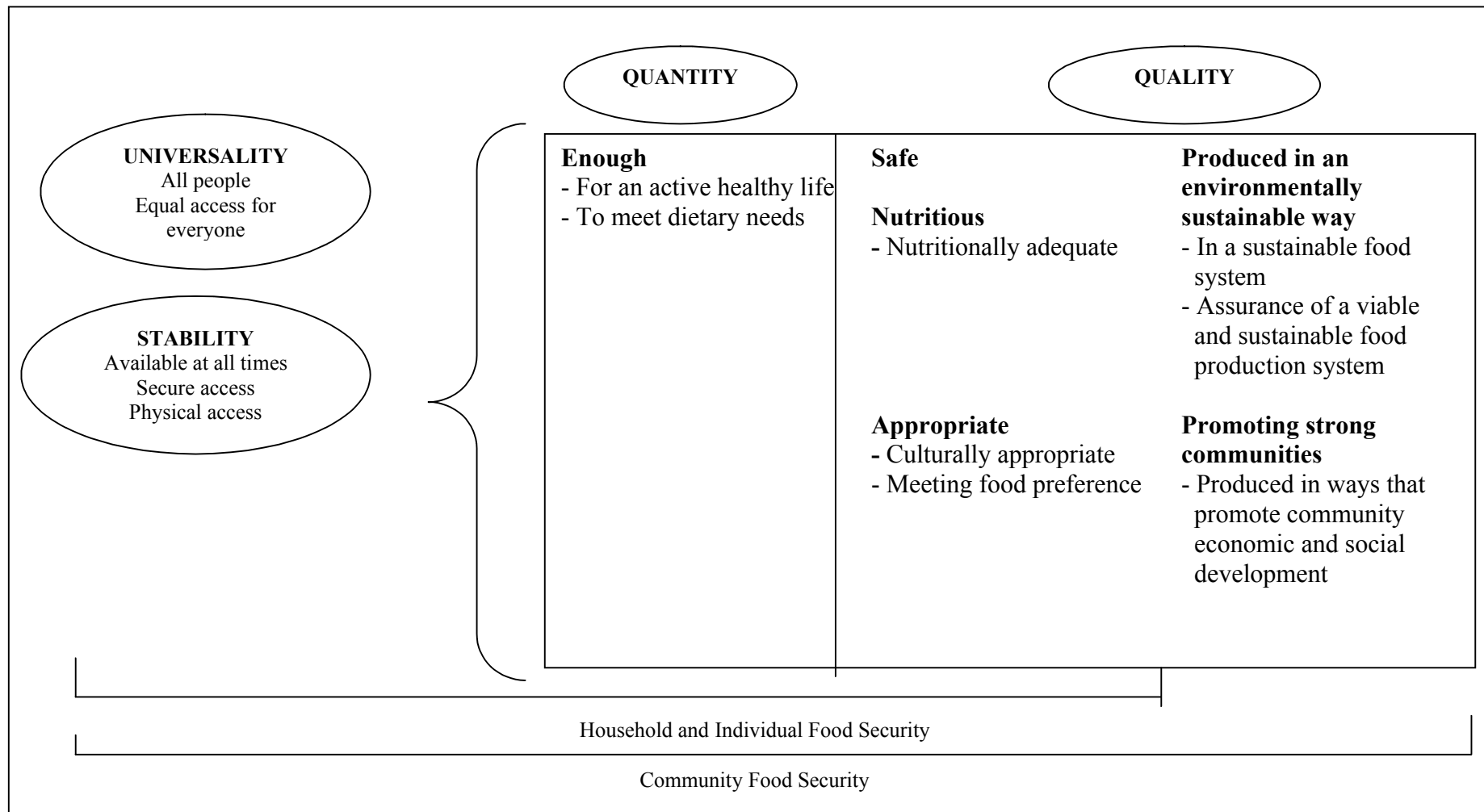


Figure 2: Community, Household and Individual Components of Food Security

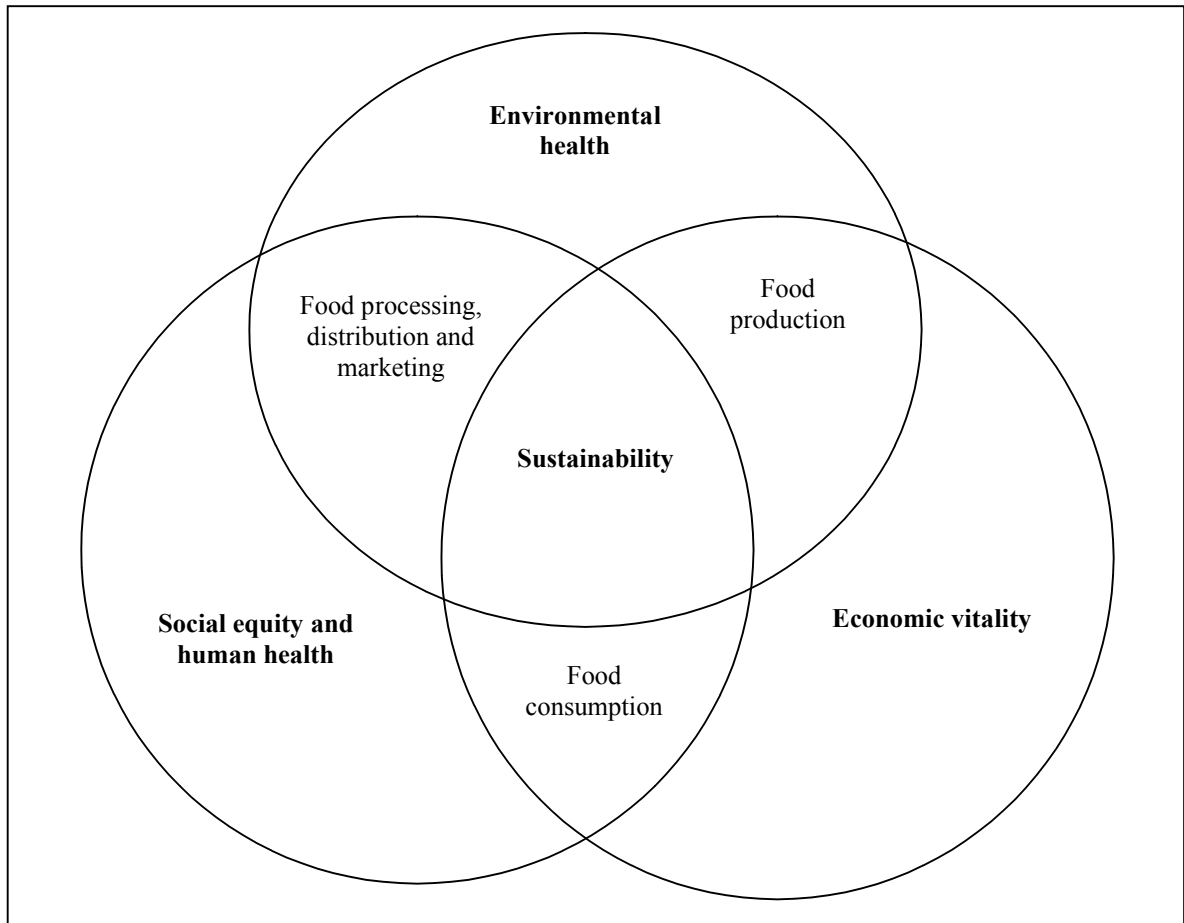


Figure 3: Community Food System

CONCLUSION

Food security is a multi-dimensional phenomenon. The ongoing evolution of food security as an operational concept has reflected the broader recognition of the complexities of the technical and policy issues concerned. A comparison of these definitions and concepts highlights the significant reconstruction of official thinking on food security that has occurred over many years. These definitions and concepts also provide indications to the policy analyses that have re-shaped understanding of food security as a problem of international and national responsibility. Hence, the information regarding the current understanding of definitions and concepts of food security can assist researchers, policy makers and program implementers conduct research that address the issues of food security in the regional, community, households or individuals.

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