

## Food security: concept and problems

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**ABSTRACT:** Food security can be an indicator for the quality of human life and security. The basic concept of it occurred from the starvation of the world's population especially for the poor and underprivileged groups. The important dimensions of the food security consist of availability, access, utilization and stability of food. From 2010 to 2012, 870 million people or 12.5% of the world's population starved and 852 million people or 14.9% of them resided in the developing countries. The food insecurity of the world's population is still in the crisis level. Although Thailand has the sufficient food from the domestic products and the imports, there are the risks of the fluctuation between the crop production and the energy crops in the long term. Both groups of poor people in the rural/urban area and people in general of urban area in the North and Northeast regions will be the risk groups who will face with the impacts of the food price increases and the cross-contaminations during the food preparations including the residual chemicals. The establishment of the food security at the household and local community levels is relevant to the sustainable development. The conditions of the food security in each context of these areas are different in terms of the economics, social and culture, therefore; the study to evaluate the condition, factors, and community local wisdom is very necessary for the determination of the government policy as well as the community policy in order to prevent and eliminate the problems which will lead to the development of the quality of life and the establishment of the sustainable human security.

**Keywords:** food security, quality of life, human security, poverty

### Introduction

Food security is necessary for the quality of life and it is also one of the elements of human security. Food serves every human being in both mental and physical living including healthy life. Food access is related to economic, social, cultural and environmental factors in the different contexts of each area. The famine, hunger, health, and sanitary problems of the world's population are the chronic problems in the developed and developing countries around the world (Anderson and Cook, 1999). The specialists and social development organizations concerned on those problems by trying to study and to analyse the situation to find out the causes and guidelines for

the solution leading to the concept of "Food security". In the early age, the initial concept focused on increasing of the food production to have sufficient food in the country which meant the food stability in the macro level, however; the ability to access to the safe and nutritious food served the need of body regularly. This could indicate the food security in individual and household level (Pinstrup-Andersen, 2009). Therefore, food security concept was developed continuously to understand the cause, and important factors which led to government policy on the development of the quality of life and the sustainable human security. This article presents the development of the food security concept and the situation of the food security problems to see

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the goal of the development and the conditions for the establishment of the current food security.

#### Food Security Concept

The concept of food security caused by the starvation of the world population between 1960 -1970 and developed continuously in order to prevent and to solve the problem effectively. The scope of food security was determined clearly in the different contexts which were necessary for the food stability, quality of life development and human security. The development of food security concept began in the World food Conference in 1974. Food security was defined in this meeting as: "the availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in productions and prices". This concept was the solution direction which focused on increasing cultivating land and developing agriculture technology in that age called "Green Revolution" to increase the sufficient food for the rapid increasing of the world's population. The impact of using technology to increase product led to the forest encroachment, soil problems, environmental degradation, and the chemical residues in food and environment, including the problems of underprivileged and poor people who were starved and could not access to the sufficient food. (Anderson and Cook, 1999)

In 1984, the World Bank offered the concept of the food security that emphasized on food access except from the sufficient food production by defining the definition of food security that "ensuring that all people at all times have both physical and economic access to the basic food that they need for well-being and living" This

concept is influenced by Amartya Sen, the Indian economist, who proposed "food entitlement" which focused on the ability to access the food security in the individual and household levels (Maswell, 1996). Agriculture industries occurred from the green evolution could not eliminate the food security problem in the macro level. However, the food insecurity in the individual level caused by the poor and underprivileged people who could not access to expensive food and the government did not provide the good welfare system. In the early 1990s, the concept of Community Food Security (CFS) was formed, and defined as a situation in which all community residents obtain a safe, cultural acceptability, and nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice (Humm and Bellows, 2003). This concept was initiated by the nutritionists, the agriculture researchers and the social development organization officers on the environment in the grass root level which aimed to find out the solution of the poverty and the hunger in the United States at that time. This group offered the concept of increasing the capability of individual or household with the low income and poverty to access the good quality and nutritious food. By promoting community self-reliance system, local food consumption, and establishment knowledge in regard of nutrition the group has shown increasing access to decent food. Furthermore, it focuses on sustainable agriculture, local marketing and distribution system, and encourages the community to plan and make decision together (Anderson and Cook, 1999). Therefore, CFS was the concept of

understanding food insecurity at the individual and household levels systematically, strengthening the community food system management in order to establish the sustainable food security of the poor and underprivileged groups.

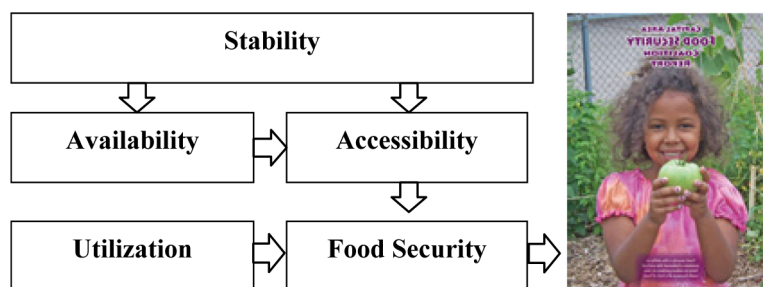
The concept of food security was interested and developed continuously. The definition of food security, especially emphasized on only the sufficient food and the food access did not cover the necessary of food to the well being of humans living. Therefore, the meeting of World Food Summit of Food and Agriculture Organization of United Nations (FAO) in 1996 considered on the safety and the nutrition value including the food in social dimension and the satisfaction of individual. In the meeting, the meaning of food security was defined that "Food security at the individual, household, national, regional and global levels is achieved by 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" (Pinstrup-Andersen, 2009). From this definition, the food security consists of 4 main dimensions which correlated with each other as appeared in **Figure 1**. This definition is still used until now (EC-FAO Food Security, 2008). There are as follows;

1) **Availability:** This dimension focuses on the supply size of the food security in both the quantity and quality of the food from the domestic production or the import. The sufficient food depends on the quantity of agriculture production, stocks or quantity which exist in the trade system and the nourishment of natural resources.

2) **Accessibility:** This dimension emphasizes on the opportunity and the right of all individuals to access to adequate food fairly by buying or finding from the natural resources or sharing which must be under the regulation, law, economics and politics issues. Food access is related to the income, economic system, and marketing system, including the right to access food in natural resources of individuals.

3) **Utilization:** This dimension focuses on the sufficient energy and food nutrition of individual on the safety and diversity of the diet and proper consuming with age and body s' condition. Food utilization also covers the food production, knowledge and understanding in food preparation, cooking, choosing proper food, clean water and health care practices.

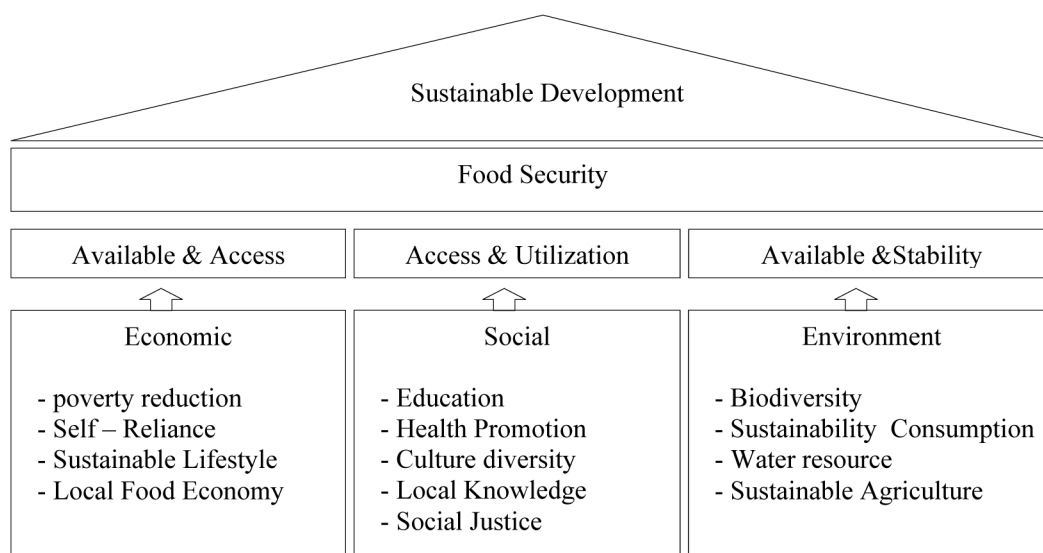
4) **Stability:** This dimension addresses the stability of food security. Individuals could access the food without the risk of the famine and hunger in the regular time or even in the disaster condition.



**Figure 1** Illustration of the model of the relationship dimensions among the food security concept

From the concept and definition of food security reflects the important goal on the establishment food security in the healthy physical and mental development by solving poverty problems, having stable economic system, and social justice. Moreover, there are the sustainable and safe food productions as well as maintaining the environmental quality and biodiversity. The concept of food security is in accordance with the sustainable development as appeared in **Figure 2**. The sustainable development objective is balancing social, economic and environmental dimensions

to develop well-balanced society with a good quality of life in which focus on good education, stable economic system with competitive capability, self-reliance and fair income distribution. The focus is also on and local wisdom, natural resource management, and environmental quality to achieve sustainable development. Therefore, the development on the establishment of the food security in the household and local community levels will be the guidelines for the quality of life development and sustainable human security.



**Figure 2** The relationship between food security and sustainable development

### Food security situation

According to the increasing of the world's population and the global crisis such as the food and energy price, financial and economic crisis and the weather and world environmental changes including the natural disaster affected the food security in the household and community,

especially the poor people in the rural and urban area which faced with the unstable food security (Ruel et al., 2010). FAO reported that from 2010 to 2012, 870 million or 12.5% of the world's population are malnutrition. Most of them were 852 million people or 14.9% which were from the developing country. This could indicate that the

food insecurity of the world's population was in the concerning level. This situation reflects the development, which economic growth of the world cannot eliminate the poverty and nutrition condition in the poor and underprivileged people in the remote area (FAO, WFP and IFAD, 2012). It is necessary to develop guideline and policy to eliminate the complex problems that associated with various factors of economic, social, environment and cultural. The problem such as increasing of world population, the change of population structure, migration, the economic development policy of the government, environmental and natural resources degradation, natural disaster, land and natural resources tenure, household income, nutritional and health status, and epidemic are affected by many factors. Therefore, every country should take the consideration on the food security and the cooperation in the prevention and elimination of the food security problem seriously (Stringer, 2000).

The Ministry of Social Development and Human Security and UNDP of Thailand made a survey on the food security condition in Thailand for 6 dimensions and reported that in general, Thailand had sufficient food from domestic production and import; however, the risk could be from the fluctuation between the food and energy crops production in the long term. The food access is the problem for the poor people in the rural and urban area in the North, the Northeast and the poor people in the urban might risk to have the impact of the increasing of food price (United Nations Development Programme, 2010). This report is correlated with the result of the study on food security at the household level of the poor people in slum areas in Bangkok. It was found

that 44 % of the households had the food security, the food insecurity was found at the average level (53%), and at the serious level (3%), respectively. This caused by the impacts of the decrease income, the physical problem, life dissatisfaction, the problem of accessing to the medical care service and the food assistance (Piaseu & Mitchell, 2004) and because the food price crisis and the increasing of agriculture production capital affected to the food security of the poor people in the rural area at the household level. Because of the decrease of buying capacity, this tends to the low quality consumption, low land tenure, and the serious impact on buying food for consumption (Isvilanonda and Bunyasiri, 2009).

Moreover, from the study of Nong Lu village, Sangkhaburi district, Kanjanaburi province by Cho et al. (2012), it showed that 95.6% of migrant households had higher food insecurity than Thai households (60.8%). The land tenure, having Thai citizen, food price condition, reliance on food from outside was the important factor on food security of the household in the area. (May Myat Cho & Atwood, 2012). Moreover, the food safety also had the risk of the food contamination in the food preparation and the residual chemical from the low quality of production (United Nations Development Programme, 2010).

Thailand concerned on the importance of the food security problem by regulated the National Food Committee in 2008 which conducted the study and analysis of the food situation within the country and determined the strategy scope on the food management of the country to be the model scheme on strengthening the food management in the country obviously appeared in 4 dimensions

consisting of food security, food quality, food safety and food education. This aims to keep the potential in domestic sufficient food production in the macro level and focuses on the establishment of food security in the micro level or community level which is the main root of Thai people to access the quality and safe food adequately. This also brings the country to the sustainability based on the self-sufficiency economy. (National Health Commission Office of Thailand, 2013).

### Conclusion

The food security concept is related to the sustainable development. Significant aims of food security establishment are the physical and mental development of human being, economic fairness, social justice, safe food production system, and decent environmental quality. Therefore, the establishment of food security at individual, household and community levels will be the guideline for the sustainability quality of life and human security.

From the concept and situation of food security, it can be reflected that “the food security at the household level with the different conditions in each context of the area in terms of the economics, social and culture”. When considering in the food access dimension as the key issue, it appears that there are different factors in each area. In the economic factor, there is the impact to the urban people who mostly buy food. The population income and food price affects to the ability to access to food of those people. Moreover, the people in the rural area are affected by the production price and production capital, which affects their income. However, the

food access of the local community is mostly from the production for consumption. Therefore, the farmers who lack of land or have inadequate land will be mostly affected. In the social and culture factor, the local community still has friendly way of life, shares in the crisis period, has the local wisdom in finding food from the natural resources, keeping seed, food preservation and using food worthily. These can support the food access of the local community as well. Therefore, the study to evaluate the condition, factors, and local wisdom that affect the food security at the household and community levels is very necessary for determining government policy as well as the community policy in order to prevent and eliminate the problem and improve quality of life and sustainable human security.

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