



FCRN **foodsource**

A free and evolving resource to empower informed discussion on sustainable food systems



Building Block

What is food security?

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Written by

Walter Fraanje, Food Climate Research Network, University of Oxford

Samuel Lee-Gammage, Food Climate Research Network, University of Oxford

Edited by

Tara Garnett, Food Climate Research Network, University of Oxford

Reviewed by

Simon Maxwell, Overseas Development Institute, London

John Ingram, Environmental Change Institute, University of Oxford

Mark Gibson, Institute for Tourism Studies, Colina de Mong-Há Macau, China

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Food Climate Research Network,
Environmental Change Institute,
University of Oxford
Tel: +44 (0)20 7686 2687

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Why should you read this building block?

Being able to reliably obtain, consume and metabolise sufficient quantities of safe and nutritious and foods, is essential to human well-being.

This building block explains the meaning of the food security concept.

Definitions

Food security. The FAO provides this well-accepted definition of a state of food security: “Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.”¹

Availability of food. Availability is one of the four components of food security and it addresses the supply side. The phrase refers to the physical inflow and presence of safe and nutritious food at a given time and in a given place (e.g. at a local market or in a country).

Access to food. Access, one of the four components of food security, concerns itself with whether or not an individual or household is able to gain access to (and therefore eat) available food. It addresses the ability to purchase or exchange goods for foods, as well as foods that are given and other social mechanisms that affect access (e.g. unequal distribution of food among the members of a household).

Utilisation of food. Utilisation is one of the four components of food security. It addresses the body’s ability to make the most out of the nutrients in food that is consumed. Utilisation of food can be affected by factors such as poor storage, spoilage, cooking practices, food safety, and diseases (such as worms, or HIV/Aids) that might affect sufficient consumption and digestion of food.

Stability. Stability is one of the four components of food security. It cuts across and affects all the other components. Food may be available and accessible to people who are able to utilise it effectively, but this state of affairs needs to be enduring and so stable over time, rather than being a temporary state that is subject to fluctuations.

Malnutrition. Malnutrition undermines a person’s ability to lead a healthy life and occurs when a person is not able to obtain the right variety of nutrients in the right amounts from their diet. It is an umbrella term that includes overnutrition (an excess of food energy), undernutrition (a lack of food energy and macronutrients such as protein), and micronutrient deficiencies (insufficient micronutrients such as iron, vitamin A or iodine).

1. Introduction

Malnutrition, or the risk of it, is a universal human problem: while some people’s diets lack sufficient nutrients for an active and healthy life (e.g. **undernutrition** and **micronutrient deficiencies**), others consume excess food energy (**overnutrition**), and this also leads to negative health consequences. A person may consume energy excess to requirements and so be overweight, while also suffering from micronutrient deficiencies.

Effective action to address **malnutrition** in all its forms requires an understanding of the various mechanisms that can affect it. It is this nuanced understanding, developed over decades of research, which is captured in the concept of **food security**.

2. What is food security?

Food security is a concept that is used to think systemically about how and why malnutrition arises, and what can be done to address and prevent it. Underlying it is a moral ideology that can be linked to realising the international goal of food as a human right.^{2,3}

Up to the mid-1970's, discussions about food security primarily focussed on the need to produce more food and to distribute it better. Discussions prioritised the total availability of food calories at the national and global level as the primary means to address malnutrition (primarily undernutrition).⁴

Over time, the food security concept has been broadened considerably to encompass a wide range of factors that can have an influence on malnutrition (of all forms) ranging across the whole food system and - in some applications - including recognition of the important social and cultural role that food plays.⁴

Today, the concept of food security is generally understood to incorporate four main components: availability, access, utilisation, and stability; although some see stability as a separate cross cutting factor. For a state of food security to exist, all of these components must be sufficiently present (see Figure 1).⁵⁻⁸

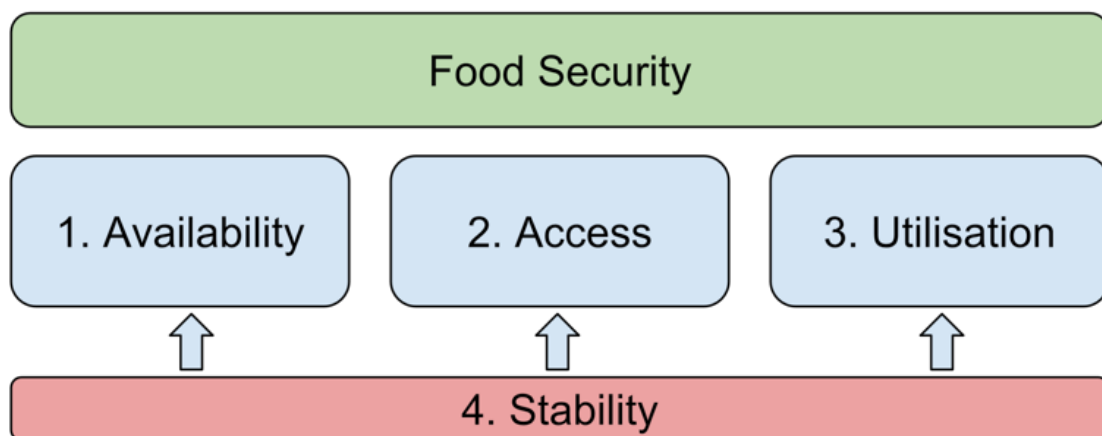


Figure 1: The four components of food security.⁹

2.1 The four components of food security and supporting elements^{5,6,8}

1. Food availability. Enough nutritious food of sufficient quality needs to be available to people for their consumption. Availability can be affected by:

- Production: how much and what types of food are available through food that is produced and stored locally.
- Distribution: how is food made available (physically moved), in what form, when, and to whom.
- Exchange: how much of food that is available can be obtained through exchange mechanisms such as barter, trade, purchase, or loans.

2. Food access. Individuals and households must be able to acquire sufficient food to be able to eat

a healthy, nutritious diet, or have access to sufficient resources needed to grow their own food (e.g. land). Access can be affected by:

- **Affordability:** the ability of individuals, households or communities to afford the price of food or land for producing food, relative to their incomes.
- **Allocation:** the economic, social and political mechanisms governing when, where, and how food can be accessed by consumers and on what terms. For example, food may be unequally allocated according to age and gender within households.
- **Preference:** social, religious, and cultural norms and values that influence consumer demand for certain types of food (e.g. religious prohibitions or the desire to follow a specific dietary pattern such as vegetarianism).

3. Food utilisation. People must have access to a sufficient quantity and diversity of foods to meet their nutritional needs but must also be able to eat and properly metabolise such food. Utilisation can be affected by:

- **Nutritional value:** the nutritional value provided by the foods that are consumed, as measured in calories, vitamins, protein, and various **micronutrients** (e.g. iron, iodine, vitamin A).
- **Health status:** the effect of disease (e.g. HIV/AIDS or diarrhoea) on the ability to consume the food and absorb and metabolise its nutrients.
- **Food safety:** access to food free from food spoilage or from toxic contamination introduction during the producing, processing, packaging, distribution or marketing of food; and from food-borne diseases such as salmonella.
- **Preparation and consumption:** the resources (e.g. cooking tools and fuel), knowledge and ability to prepare and consume food in a healthy and hygienic way.

4. Stability. Food may be available and accessible to people who are able to utilise it effectively, but to avoid increases in malnutrition and in order for people not to feel insecure, this state of affairs needs to be enduring rather than temporary or subject to fluctuations.

2.2 Cultural acceptability

Some stakeholders also see cultural acceptability as an important aspect to incorporate within the food security concept.

This recognises that the way in which food contributes to the basic needs and well-being of individuals, households and communities, goes far beyond its nutritional adequacy alone, and encompasses enjoyment, as well as the various social, religious, and cultural functions that food plays in peoples' lives.¹⁰

Other stakeholders, however, argue that this broadens the food security concept so far as to make it impractical.

2.3 Definition

Together, the importance of the four food security components, and of cultural acceptability is reflected in the widely-accepted definition of an aspirational state of food security, put forward by the United Nations Food and Agriculture Organisation:

*"Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life."*¹¹

3. How can food security be assessed?

3.1 What are levels and types of food (in)security?

The state of food security varies over a range of scales, ranging from the individual to global (Figure 2). Even where food security is present at a particular individual or household level, it may not be so on a regional level. Conversely, while a nation or region may be generally considered to be food secure, certain (groups of) individuals may still suffer from food insecurity.

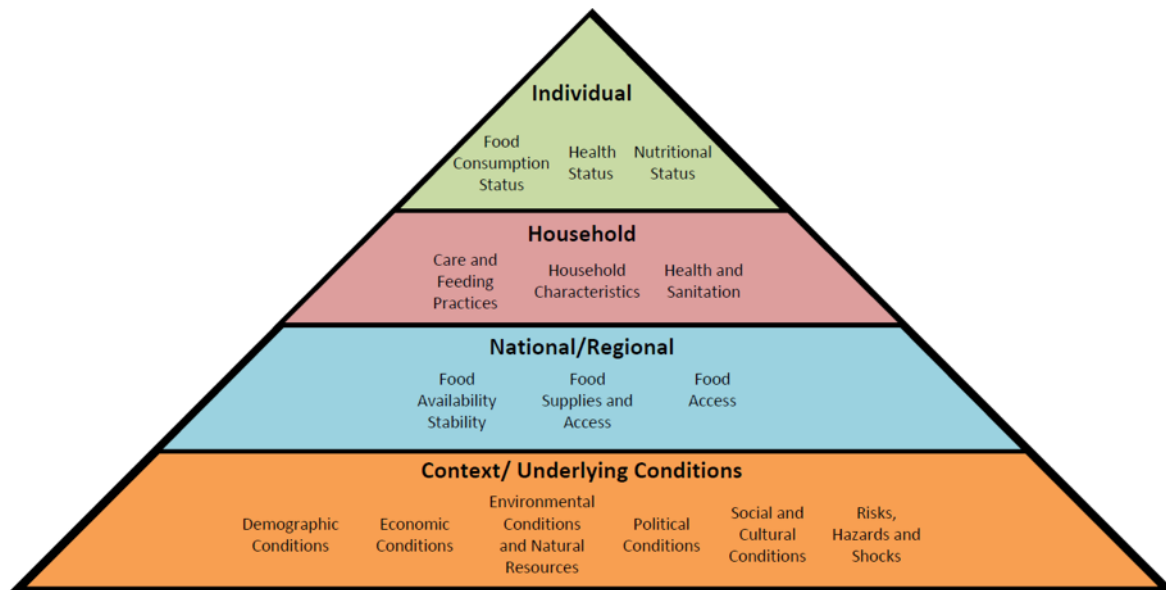


Figure 2: Levels of Food Security. Reproduced from Gibson, 2012.⁶

Types of food insecurity can also be distinguished by their frequency or duration:^{5,11}

- **Chronic food insecurity.** A long-term and persistent condition of food insecurity. A population suffers from chronic food insecurity when it is unable to meet minimum food consumption requirements for extended periods of time (approximately six months of the year or longer).
- **Transitory food insecurity.** A short-term and temporary condition of food insecurity. A population suffers from transitory food insecurity when there is a sudden drop in the ability to produce or access sufficient food for a healthy nutritional status (e.g. after a period of drought or as a result of conflict).
- **Seasonal food insecurity.** A condition of food insecurity that reoccurs predictably, following the cyclical pattern of seasons.

3.2 Measuring food (in)security

No single tool can account for all dimensions of food security. However one useful method for measuring food insecurity on an individual level is the FAO’s Food Insecurity Experience Scale, which is based around the following eight questions.¹²

During the last 12 months, was there a time when, because of lack of money or other resources:

1. You were worried you would not have enough food to eat?
2. You were unable to eat healthy and nutritious food?
3. You ate only a few kinds of foods?
4. You had to skip a meal?
5. You ate less than you thought you should?
6. Your household ran out of food?
7. You were hungry but did not eat?
8. You went without eating for a whole day?

These questions compose a scale that covers a range of severity of food insecurity from mild to severe (Figure 3).

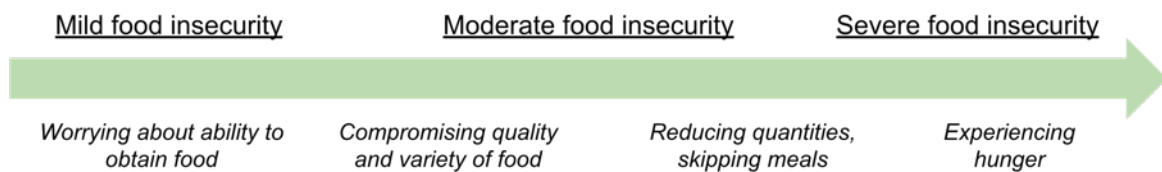


Figure 3: A scale to measure food insecurity based on the Food Insecurity Experience Scale. Adapted from FAO, n.d.¹²

Note that the Food Insecurity Experience Scale measures food insecurity as it is experienced by individuals. To estimate and predict the presence and severity of food insecurity on a national level, the FAO uses a range of factors including Gross National Products, volume of food production and consumption, poverty levels, and the risk at food emergencies (e.g. resulting from droughts or war).¹³

Recommended resources

To learn more about this topic we recommend:

- Book (paywall): [The Feeding of Nations – Redefining Food Security for the 21st Century](#)
- Article (open access): [Food Security—A Commentary: What Is It and Why Is It So Complicated?](#)
- FAO report (open access): [The State of Food Security and Nutrition in the World 2017](#)
- Article (paywall): [Conceptualizing food systems for global environmental change research](#)
- Review article (open access): [Food System Sustainability and Food Security](#)
- MOOC (open access): [Food Security and Sustainability](#)

Glossary

Food security

Food security is an idealised state or goal where all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Malnutrition

Deficiencies, excesses or imbalances in the energy, macronutrients or micronutrients that a person obtains, either because their diet is lacking or because their body is not able to fully absorb the nutrients from the foods eaten, e.g. due to illness. Malnutrition is an umbrella term that includes overnutrition (an excess of food energy), undernutrition (a lack of food energy and macronutrients such as protein), and micronutrient deficiencies (insufficient micronutrients such as iron, vitamin A or iodine).

Micronutrients

Micronutrients are minerals (e.g. iron) and organic compounds (e.g. vitamin A) found in food, which the body requires in very small amounts to produce substances such as enzymes and hormones. They are essential for proper growth, development and bodily functioning. Essential micronutrients are those that cannot be synthesised by the body and so must be obtained through diet.

Micronutrient deficiencies

Micronutrient deficiencies result from a diet lacking the essential vitamins and minerals that humans require in small amounts for proper growth, development, and bodily functioning. These include iodine, calcium, iron, zinc, and vitamins A, B, and C, among others. Micronutrient deficiencies are the cause of a range of diseases affecting physical and mental development, and can increase susceptibility to infectious diseases.

Overnutrition

Excesses of energy or a particular nutrient. Overnutrition generally refers to excessive intake of energy, but it can sometimes be used to refer to excessive intake of one or more other dietary components such as specific macronutrients or micronutrients. Overnutrition in terms of energy often results in being overweight or obese.

Undernutrition

Deficiencies of a particular component of food, usually due to insufficient intake and/or absorption of that component. This usually refers to energy (often measured in calories) or macronutrients (such as protein, carbohydrates, or fat), but can also refer to micronutrients (vitamins or minerals).

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