“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 1996)

**Food Security**

In order for a population to be considered food secure, they have to have access to nutritious, yet affordable food. They also have to be protected against future disruptions to the access of adequate food. This definition of food security can also be broken up into four main components: availability, access, utilization, and stability.


- **Food availability:** amount, type, and quality of food a community, household, or individual has available to consume.

- **Food access:** ability of a unit to obtain access to the type, quality, and quantity of food it requires. The subcomponents of access are affordability, allocation and preference.

- **Food utilization:** individual or household capacity to consume and benefit from food. The three subcomponents are nutritional value, food safety and social value.

- **Food system stability:** to be food secure, an individual, household or population must have access to adequate food at all times. They should not risk losing food as a consequence of sudden shocks or cyclical events. Leverages both availability and access dimensions of food security.

![Figure 1: Three components of food security.](image)

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1 Food and Agriculture Organization, World Food Summit, 1996
2 [http://ccafs.cgiar.org/sites/default/files/assets/docs/ccafsreport5-climate_hotspots_final.pdf](http://ccafs.cgiar.org/sites/default/files/assets/docs/ccafsreport5-climate_hotspots_final.pdf)
The relationship between the food availability, access and utilization components is dynamic. However “food availability is necessary but not sufficient for access, and access is necessary but not sufficient for utilization” (Webb et al., 2006). Thus there may be food in the markets, but if it’s too expensive, then people are food insecure.

**The Food Supply**
Climate is a particularly important driver of food system performance at the agriculture end of the food chain. It can affect the quantities and types of food produced as well as production-related income. Agriculture provides the primary source of livelihood for 36 percent of the world’s total workforce. In the heavily populated countries of Asia and the Pacific, this share ranges from 40 to 50 percent, and in sub-Saharan Africa, two-thirds of the working population still make their living from agriculture (ILO, 2007). If agricultural production in the low-income developing countries of Asia and Africa is adversely affected by climate change, the livelihoods of large numbers of the rural poor will be put at risk and their vulnerability to food insecurity increased.4

The food security implications of changes in agricultural production patterns and performance are of two kinds:

- Impacts on the production of food will affect food supply at the global and local levels. Globally, higher yields in temperate regions could offset lower yields in tropical regions. However, in many low-income countries with limited financial capacity to trade and high dependence on their own production to cover food requirements, it may not be possible to offset declines in local supply without increasing reliance on food aid.

- Impacts on all forms of agricultural production will affect livelihoods and access to food. Producer groups that are less able to deal with climate change, such as the rural poor in developing countries, risk having their safety and welfare compromised. Other food system processes, such as food processing, distribution, acquisition, preparation and consumption, are as important for food security as food and agricultural production are. Technological advances and the development of long-distance marketing chains that move produce and packaged foods throughout the world at high speed and relatively low cost have made overall food system performance far less dependent on climate than it was 200 years ago.

However, as the frequency and intensity of severe weather increase, there is a growing risk of storm damage to transport and distribution infrastructure, with consequent disruption of food supply chains. The rising cost of energy and the need to reduce fossil fuel usage along the food chain have led to a new calculus – “food miles”, which should be kept as low as possible to reduce emissions. These factors could result in more local responsibility for food security, which needs to be considered in the formulation of adaptation strategies for people who are currently vulnerable or who could become so within the foreseeable future.

Malnutrition and undernourishment: Who is most at risk of hunger?
Three main groups are most at risk of hunger: the rural poor, the urban poor, and victims of catastrophes (FAO-Hunger).

The rural poor
The majority of the people who don’t have enough to eat live in poor, rural communities in developing countries. Many have no electricity and no safe drinking water. Public health, education and sanitation services are often of low quality.

The world’s most food-insecure and hungry people are often directly involved in producing food. They cultivate crops on small plots of land. They raise animals. They catch fish. They do what they can to provide food for their families or earn money at the local produce market.

Many have no land of their own and work as hired hands to earn enough money to get by. Often the work is seasonal, and the family must move or split up to earn a living.

It is hard work and it is difficult to set anything aside in case of an emergency. Even when there is enough food, the threat of hunger is always present.

The urban poor
The urban poor constitute another group that is at risk of hunger. They produce little or no food and frequently lack the means to buy food. Cities are expanding constantly. In the year 2000, nearly two billion people lived in cities; by 2030, this figure will have more than doubled. As the cities expand, and as more people will migrate from rural to urban areas, the number of the urban poor will rise. Urban hunger and access to affordable food in cities will therefore be increasingly important issues.

Victims of catastrophes
Every year floods, droughts, earthquakes and other natural disasters as well as armed conflicts cause widespread destruction and force families to abandon their homes and farms. Victims of catastrophes are often faced with the threat not just of hunger but of outright starvation.

Other Resources
Article: “Food Supply Under Strain on a Warming Planet”
http://www.nytimes.com/2011/06/05/science/earth/05harvest.html?pagewanted=all


World Food Program: Test your hunger IQ: http://quiz.wfp.org/