To develop lasting solutions to end hunger, it is important to know not only how many people are hungry but also how hungry they are. The daily diets of the 826 million chronically hungry people in the world lack an average of 100 to 400 kilocalories, diminishing their ability to lead an active life. The greater this depth of hunger, the greater the susceptibility to nutrition-related health risks. A weak, sickly person cannot fulfil his or her individual potential. A nation of weak, sickly people cannot advance. When the food deficit is very high, people’s diets tend to be deficient in everything, including the carbohydrate-rich staple foods – maize, potatoes, rice, wheat and cassava – that provide energy. But where the deficit is more moderate, people generally get enough of these staples. What they lack is the variety of foods – legumes, dairy products, meat, fish, vegetables, fruits and oils – that add other essential nutrients to the diet. Rounding out their diets is crucial to health and food security.

While Asia and the Pacific is home to most of the world’s chronically hungry people, this graph shows that the depth of hunger is greatest in sub-Saharan Africa. In almost half the countries in this region, the undernourished lack more than 300 kilocalories per person per day, on average. By contrast, only 16 percent of countries in Asia and the Pacific suffer such extreme depth of hunger.

The state of food insecurity in the world summary

Depth of hunger

Estimates and projections of hunger

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To pinpoint the hungriest so resources can be targeted most effectively, FAO divides countries into five food deprivation groups. These are based on a calculation that combines prevalence of hunger (the proportion of the population that is undernourished) with depth of hunger (the average number of kilocalories lacking in the diets of the undernourished). Countries with the highest prevalence and greatest depth of hunger make up group 5, which includes 18 countries in Africa, as well as Afghanistan, Bangladesh, Haiti, the Democratic People’s Republic of Korea and Mongolia. These countries face the most difficult problems in feeding their people, due to instability and conflict, poor governance, erratic weather, poverty, agricultural failure, population pressure and fragile ecosystems.

Reducing the depth of people’s hunger may be a more realistic goal in these nations than eliminating it outright. At the other extreme are the countries in group 1, with both low prevalence and low depth of hunger. All 52 of these nations, which include the industrialized countries, 11 countries in transition and 15 relatively high-income developing countries, enjoy peace and economic prosperity.

Undernourishment in transition countries

FAO’s first estimates of hunger in the countries in transition show that undernourishment remains a challenge for many countries of the Commonwealth of Independent States (CIS), which were part of the former Soviet Union. In nine of the 12 CIS states, at least 5 percent of the population is undernourished. In four of them, the number is as high as 20 percent.

By contrast, the Eastern European and Baltic countries have largely escaped this problem. As of 1996-98, only five of the 12 Eastern European and three Baltic nations were experiencing undernourishment levels of more than 5 percent of the population, and in none was more than 20 percent of the population undernourished. These countries face a variety of transition-related challenges, including disruptions in trade, a breakdown in agricultural production, inflation and in several instances, outright conflict.
**Nutritional status and vulnerability**

**Spectrum of malnutrition**
Besides not getting enough carbohydrates, protein and fat to lead healthy, active lives, the chronically undernourished also generally lack key vitamins and minerals. Deficiencies in iron, iodine, vitamin A and calcium are common in developing countries and carry a range of health problems. Obesity is also increasing, and with it the threat of serious health risks including heart disease, hypertension and diabetes.

**Profiling vulnerable groups**
Vulnerable group profiling is a means of identifying who in a given population is hungry and why. One particularly useful classification is by livelihood. In Benin, for example, a profiling exercise suggested that almost half the population was vulnerable to food insecurity and a third was undernourished.

**Diets of hungry people**
Each of the world’s 826 million chronically hungry people has a unique situation and set of challenges. Some are limited to a monotonous diet of starchy staples, putting them at risk of vitamin or nutrient deficiencies. Others suffer from seasonal variations in food availability, a problem especially dangerous for growing children. Within a society, certain groups may be more vulnerable to food insecurity, such as nomadic people, or certain members of the family, such as women.

**Women and nutrition**
In households where food security is precarious, women are often more vulnerable than men to malnutrition. Women have higher vitamin and mineral requirements in proportion to total energy intake, and when pregnant or breastfeeding, their needs rise further. One way to assess nutritional status in women is through the use of the body mass index (BMI). Charting women’s BMI can provide information on their health status and an important indicator of pregnancy outcomes. Women with a low BMI are at higher risk of childbirth complications and of giving birth to underweight babies.

**Dynamics of change**

**The dividends of food security**
Hunger exacts a heavy toll, not only on the people without enough to eat but also on the societies where they live. A chronically undernourished person has diminished physical and cognitive abilities, leading to decreased productivity. A society of undernourished people cannot progress.

To defeat chronic hunger and poverty, investments will have to be made in both people and productivity. Investments will need to come in the form of education, clean water and sanitation, health and social services, as well as in production and post-production processes to aid small-scale agriculture.

**Thailand: steady reduction in poverty and malnutrition**
The strategy Thailand initiated in the 1980s to boost nutrition and improve rural development succeeded in virtually eliminating severe malnutrition in children and greatly reducing the number of people living in poverty. The programme was especially effective because it was community-based, using volunteers to monitor local families, providing supplementary feeding of undernourished children and improving nutrition education and primary health care in the community. Besides meeting the immediate needs of Thailand’s undernourished people, the programme paves the way for their permanent escape from the hunger trap.

**Thailand: progress in reducing underweight in children under five, 1982-98**

**Grey bars: 1990-92 Green bars: 1996-98**

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<td>Underweight</td>
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*Includes Taiwan Province of China*
NO ONE CAN DENY that progress towards the eradication of hunger is too slow. The number of undernourished people in the world remains essentially unchanged since the 1999 edition of *The state of food insecurity in the world*. This year’s issue moves beyond overall statistics by pinpointing the groups most vulnerable to hunger. This refining of information is an important tool for policy makers to focus action and resources where the need is greatest.

An enabling environment must be created that offers a set of choices to help food-insecure people move beyond the margin of survival. The encouraging recent initiatives by international finance institutions and donor countries in relieving poor countries from debt burden provide an opportunity to mobilize more resources for the fight against hunger.

### Cassava research

**Since about 1980**, Ghana and Nigeria have managed to slash the prevalence of undernourishment by more than 30 percentage points, to an impressive 10 percent or less of the population. Part of the credit goes to cassava. A boom in production of this nutritious root occurred during this period, thanks to research that led to the introduction of new disease-resistant, high-yielding varieties, coupled with policy measures and investment initiatives. Cassava consumption increased dramatically from 63 kg to 129 kg per person per year in Nigeria and from 126 kg to 232 kg in Ghana. Cassava is an important food for the poor since the roots are an excellent source of energy and the leaves provide vitamins A and C as well as iron and calcium. Cassava tolerates drought and poor soils, and can be left in the soil for up to three years before harvesting.

A boom in cassava production in Ghana and Nigeria helped push undernourishment down to 10 percent or less of the population.

### The way ahead

**No one can deny** that progress towards the eradication of hunger is too slow. The number of undernourished people in the world remains essentially unchanged since the 1999 edition of *The State of Food Insecurity in the World*. This year’s issue moves beyond overall statistics by pinpointing the groups most vulnerable to hunger. This refining of information is an important tool for policy makers to focus action and resources where the need is greatest.

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To chart the progress in the fight against hunger, FAO estimates the number of undernourished at regular intervals using currently available data. This was done at the time of the World Food Summit for 1969-71, 1979-81 and 1990-92, and last year for 1995-97. A 5 percent range is calculated above and below these estimates, represented in the graph by ovals. The red triangles indicate revised estimates made this year, and a new estimate for 1996-98. The dotted lines represent the projected estimates up to 2015 if additional efforts are not taken to alleviate hunger, and the trend required to reach the Summit target of cutting the number of undernourished in half by 2015.