

Agriculture and Food Security

Every person needs food for nutrition, energy and survival. During the past 40 years, as the global population doubled from 3 billion to 6.2 billion, some countries and regions have had difficulty meeting their people's basic food requirements.

The Green Revolution has helped ensure sufficient food to feed everyone. But today's distribution of food is uneven, and growing it has significant environmental costs. The eating habits of developed countries, such as high reliance on beef, often require more resource investment and cause more environmental damage than the diet of poorer areas. Wealthier nations' demand for coffee, sugar and other cash crops may induce developing countries to divert land, reducing the area available to produce their own basic foods.

In coming decades, global food security will be a major challenge because of population growth, changing consumption patterns and environmental degradation. In the next 50 years, the poorest 50 countries on Earth will triple in size, and the planet will have more than 9 billion people. Most of that growth will occur in places where hunger and malnutrition are prevalent and basic sustenance is already a daily concern.

Food Security in Today's World

- Some 800 million people are chronically malnourished. Fully 2 billion lack access to the sufficient, safe and nutritious food needed for a healthy life.

- More than half the world's population lives in low-income, food-deficit countries that are unable to produce or import enough food to feed their people.
- In 64 of 105 developing countries, food productivity increased at a slower rate than population growth during the 1985-1995 period.
- Soil degradation, chronic water shortages, inappropriate agricultural policies and rapid population growth threaten food production in many poor countries.
- The world grain harvest increased about 1 percent annually between 1990 and 1997, less than the average population growth rate of 1.6 percent.¹
- The ocean's fisheries, long a major source of protein, are also threatened. Nearly seventy percent of commercial fish stocks are fully exploited, overfished, or depleted.
- Food production often has a high environmental cost. The amount of topsoil lost to erosion in the 20th century equaled the total lost in the previous 1,000 years.²

Food Security and the Future

- Food security in 2025, when Earth will have 8 billion people, will require a doubling of food production, equalizing distribution and protecting the environment.
- Research suggests that the world's farmers will have to produce 40 per cent more grain by 2020 to meet rising demand.

- Between 1950 and 1996, the average amount of grain land per person dropped by almost half. It is expected to decrease further as population increases.
- Higher food production will have to come from yield increases rather than the cultivation of new land. But new, high-yielding crop varieties require specialized fertilizers and pesticides, which may disturb the ecological balance and create new disease and pest problems.
- Continuing soil erosion threatens increasing production and productivity. Slash-and-burn agriculture, water shortages, and improper agricultural practices all contribute to degradation of soils.

Solutions for the Future

At the UN Millennium Summit in 2000, world leaders agreed to halve by 2015 the proportion of people who suffer from hunger. This will require unprecedented cooperation within and among countries.

- Low-till agriculture and the transfer of modern agricultural technologies and knowledge can help to protect soils. Research and development will have to continue on new, high-yield crops.
- Distribution of existing supplies of food will have to be improved.
- Women, responsible in most countries for family health and for raising children, must be empowered to better manage food resources.
- Women, who gather the water and wood for cooking, grow household crops and tend to livestock, are among the most affected by environmental change.

- Deforestation and depletion of water supplies from inefficient irrigation cause women to journey further and further in search of these basic requirements.
- When women are provided with the rights they deserve and the education and economic opportunities they need, they can contribute to conservation, efficient production of goods and the fostering of healthy families.

UNFPA Efforts

- UNFPA works with the Economic Commission for Africa (ECA) for integrated, population-environment-development planning. Using the Population, Development, Environment and Agriculture (PEDA) model, experts show how changes in population, environment and forms of agriculture affect food security.
- In Cambodia, UNFPA and other UN agencies advance the goals of the World Food Summit. UNFPA supports the Food Insecurity and Vulnerability Mapping System (FIVIMS) to raise officials' awareness of key food challenges.
- UNFPA supports FAO and other agency efforts in Honduras to link the goals of the World Food Summit, the ICPD and UNCED.

—August 2002

Source: United Nations Population Fund, *The State of World Population 2001—Footprints and Milestones: Population and Environmental Change*, UNFPA, New York, 2001, except as noted below.

¹ Department of Economic and Social Affairs Population Division, *World Population Monitoring 2001 – Population, environment and development*, United Nations, New York, 2001, p. 46

<http://www.un.org/esa/population/publications/wpm/wpm2001.pdf>

² *Ibid.*, p. 46