

International Food Security Assessment, 2021–31

Felix Baquedano, Yacob Abrehe Zereyesus,
Constanza Valdes, and Kayode Ajewole

What Is the issue?

Millions of people around the world are food insecure and do not consume sufficient calories to sustain an active and healthy life. What factors affect the present and future prevalence of international food security? Agricultural production and market conditions affect the supply of food available in a given country. And, income, food prices, and economic inequality are major factors determining the ability of people to access food. Widespread food availability, rising income, and low food prices improve a country's food security by increasing access, although the extent of these gains are dependent on the distribution of income within countries. On the other hand, adverse income, prices, or food supply shocks can increase food insecurity, as these factors collectively impact low- and middle-income consumers' access to food. Measuring the shifts in consumer demand in response to these factors can help measure progress in food security. Even if demand may be fully met, a person could remain food insecure—as they might not be able to purchase enough calories to sustain an active and healthy life for their level of income. This report uses a demand-driven model that integrates income, price, and food supply shocks to assess current-year levels of food security and projected changes over the next decade for 76 low- and middle-income countries in Sub-Saharan Africa, North Africa, Latin America, the Caribbean, and Asia. The report helps USDA and its stakeholders estimate medium-term projections of food security in the selected countries. The 2021 report also analyzes the combined impact of lower incomes and price shocks associated with the lingering effects of the Coronavirus (COVID-19) pandemic on present and future food security.

What did the study find?

The report's results reflect the country and global level estimates of economic shocks from the COVID-19 pandemic at the time of estimation. The results are based on macroeconomic trends up to August 2020, consumption and production data up to January 2021, and price trends from January 2018 to December 2020. The report's projections do not consider the impacts of certain types of possible unknown events in the future, such as climate change, armed conflict, and political and economic instability.



ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

The main findings for the 76 countries covered by this report are:

- Despite the anticipated overall rebound in per capita gross domestic product (GDP) growth in 2021, income is projected to remain below pre-pandemic levels for most countries in the assessment. This projected lower per capita GDP level in 2021 is the main underlying factor for the continued decline in food security.
- Due to the persistent effects of COVID-19 on income levels, the number of food insecure people in 2021 is estimated at 1.2 billion, an increase of almost 32 percent (291 million people) from the 2020 estimate. This suggests 30.8 percent of the estimated population of the 76 countries is unable to consume 2,100 kilocalories (kcal) a day, an average caloric level necessary to sustain a healthy and active lifestyle.
- Most of the additional 291 million people estimated to be food insecure are in Asia (72 percent of the total)—particularly in Bangladesh, India, Pakistan, and Indonesia—and in Sub-Saharan Africa (21 percent of the total).
- Despite the COVID-19-induced income shocks, food security is projected to improve in all 76 countries over the next 10 years. By 2031, the share of the population that is food insecure in the 76 countries studied is projected to fall to 14 percent (637.7 million people), a 47.4 percent drop in the number of food insecure people from 2021.
- The anticipated improvement in food security over the coming decade is driven by a projected steady income growth, relatively stable prices for major grains, and lower population growth, particularly in Asia, Latin America, and the Caribbean.

How was the study conducted?

The USDA, Economic Research Service (ERS) demand-oriented International Food Security Assessment (IFSA) model (described in the appendix) projects food demand and food gaps in 76 low- and middle-income countries through 2031. Food security is evaluated for each country by estimating the share of the population unable to reach a caloric target of 2,100 kilocalories per person per day. The intensity of food insecurity is measured by determining the gap between projected food demand for those falling below the threshold and the caloric target. Food demand is expressed in grain equivalents, based on caloric content to allow aggregation across four separate food groups: the major grain consumed in the country, other grains, roots and tubers, and all other food. Average per capita food consumption data are from the United Nations' Food and Agriculture Organization (FAO) Food Balance Sheets and FAO's Global Information Early Warning System's (GIEWS) Country Cereal Balance Sheet. Observed domestic prices are from FAO-GIEWS Food Price Monitoring and Analysis Tool. Tariff data are from the World Bank's World Integrated Trade Solution (WITS). Incomes, exchange rates, and Consumer Price Indexes (CPI) are from the ERS International Macroeconomic Dataset. World prices are from USDA's Agricultural Projections to 2030.