

Webinar Transcript
International Food Security Assessment, 2024-34

September 12, 2024

Good afternoon, everyone and welcome to our webinar, International Food Security Assessment 2024-2034. My name is Tegan, and I will be your host today. As a reminder, this webinar is being recorded and will be posted on the ERS website next week. If at any time during the webinar you have questions, please enter them into the chat feature at the bottom left-hand corner of your screen and our speakers will address them at the end of today's presentation.

Today, our presenters are ERS Economists Lila Cardell and Yacob Zereyesus, both in our Market and Trade Economics Division.

Yacob's research interests cover a range of topics related to food security including farm production and income, the dynamics of labor allocation and employment conditions in farm households, the consumption of nutritious and safe food, and more. Prior to joining ERS, Yacob served as a research associate professor at Kansas State University where he led and coordinated the collection of population-based household survey data for tracking the progress and for the achievement of food and nutrition security programs in northern Ghana.

Lila joined ERS in early 2022 after completing her PhD in Agricultural and Applied Economics from the University of Illinois. Her research interests include food security and nutrition measurement as well as the impact of price risk on small older welfare thank you both so much for joining us today. The floor is yours.

Thank you, Tegan. Good afternoon and welcome to the webinar for the 2024 International Food Security Assessment. I'm Lila Cardell and I'm here with my colleague Yacob Abrehe Zereyesus and together we will present on the recently published report.

So, this is the plan for today's webinar. First, Yacob will provide an overview of this year's International Food Security Assessment, then I will discuss the main factors driving food security trends in the countries covered by the assessment. I will also share some regional highlights and then we'll wrap up the presentation with some key takeaways. Over to you Yacob.

Thank you, Lila. I'm going to start with the overview of 2024 International Food Security Assessment. This report estimates and projects food availability and access for the current year and 10 years out, which also follows USDA agricultural projections. The analysis helps USDA and its stakeholders access food security in 83 low- and middle-income countries

across five regions that may have recent or ongoing food deficits. Not all countries that are experiencing significant food deficits are included in the report, mainly due to lack of data on key metrics such as average caloric consumption prices or microeconomic figures.

The report includes 83 low- and middle-income countries in five regions with a total population of 4.3 billion people. Fourteen countries are in Asia, nine countries in the former Soviet Union region, 11 countries in Latin America and the Caribbean, eight countries in the Middle East and North Africa region, and the remaining 41 countries are in sub-Saharan Africa region. Both Asia and sub-Saharan Africa regions constitute 85 percent of the IFSA population. While we cover India in the report, China is not covered.

So let me start with the main findings from the report which include the following. The number of food insecure people in 2024 is estimated at 824.6 million which is 19 percent of the overall IFSA population, and this represents a reduction of 313 million people from the 2023 estimate.

This decline is associated with factors such as higher average per capita GDP in 2024 as well as easing of food price inflation in 2024 relative to 2023. Despite this progress, food insecurity remains a global challenge and significant disparities to cease across the regions. Sub-Saharan Africa continues to endure the heaviest burden with 29.3 percent of its population considered food insecure in 2024. Asia remains the region with the largest number of food insecure individuals accounting for 46.5 percent of the total IFSA food insecure population in 2024.

In spite of the short-term challenge, food security is projected to improve significantly by 2034, and this outlook is primarily driven by projected recovery in per capita income and a decline in food commodity prices which will make food more accessible. The key projections include 1) the number of food insecure people is projected to decrease by 66.7 percent to 274.6 million and 2) the share of the food insecure population is projected to fall by 71.1 percent to 5.5 percent. However, it's important to note that these projections are based on macroeconomic assumptions that were completed back in August 2023. Some factors such as conflicts, climate change, or economic instability could significantly impact some of these estimates.

Let's establish some foundational definitions before we get into the specifics. In this report when we discuss food insecurity, we're referring to the ability of all people, at all times, to access sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. This definition was initially formulated back in 1996 at the World Summit although it has undergone some refinements over the years.

When we talk about the food security there are four pillars that are important to quickly discuss.

We start with the availability pillar. It implies having sufficient quantity of appropriate food which also includes domestic production, import capacity, food stocks, and food aid. The access pillar refers to physical and economic access to food and is mainly determined by income and purchasing power of households. It's ensured when individuals and households have adequate resource to obtain appropriate food. The utilization pillar includes dietary intake and ability to use nutrients in the body. Finally, the stability pillar refers to the stability of supply and access and is ensured when there is consistent access to food, and it depends on the maintenance of the three pillars.

So why does USDA focus on food security? In general, the United States leads efforts to improve global food security which also includes through the provision of the bulk of global food aid. Elevating food global food insecurity is among the greatest challenge and opportunities of our time. Even beyond the humanitarian response and particularly for USDA, it's important to access where and how global food demand is changing in order to identify potential emerging markets for farmers as well as understanding what the potential drivers for such trends. Besides, it's also important to assess the root cause of chronic food insecurity and the occurrence of potential hotspots and specifically evaluate how both income and price affect access to food. Before we move on, I would like to remind everyone that this report focuses on the availability and access dimensions of food security.

With respect to how food security is assessed in the IFSA report, food security is defined by using a caloric threshold of 2,100 calories per capita per day, and based on this caloric threshold we develop three indicators of food insecurity. The first one is the prevalence of food insecurity which is the share of population that consumes less than the caloric threshold. The second one is the population food insecure which refers to the number of food insecure people measured by the number in millions. The third one is the food gap which measures the food needed to raise consumption at every income level to the caloric threshold, although as estimated this is not covered in this presentation. Finally, we report estimates for 2024 and then project to 2034 based on trends observed throughout the 2021 to 2023 period. With that, I will take back to you Lila.

Thank you, Yacob. I will now cover the main drivers of food security trends for 2024 and 2034.

One of the key variables in the IFSA model is income, which we measure using per capita gross domestic products, or GDP. The first three columns of this table present average per

capita GDP across all IFSA countries and within the five regions covered by the IFSA report and then the last two columns present the growth rate in per capita GDP. On average, across IFSA countries, per capita GDP is estimated to grow 3.4 percent in 2024 relative to 2023. While tighter monetary policy such as higher interest rates helps reduce inflation in 2023, these policies also somewhat slow GDP growth as higher interest rates can disincentivize investment in both the public and private sector. However, it still represents progress after pandemic era setbacks. Regionally, between 2023 and 2024, the former Soviet Union and Asia regions are estimated to have the highest per capita GDP growth with rates of 4.7 and 5.1 percent respectively. However, sub-Saharan Africa is estimated to have the lowest growth rate with only 1.4 percent growth during the same period. While per capita GDP in the Latin America and Caribbean region is projected to grow 1.8 percent in 2024, this is below the average growth during the prior three years. In the longer-term, per capita GDP growth is projected to remain high in Asia and the former Soviet Union region. However, incomes are projected to lag in sub-Saharan Africa with per capita GDP in the subs in sub-Saharan Africa to grow only 1.5 percent annually over the next 10 years which is the figure circled in the bottom right hand of the table. Average per capita GDP in sub-Saharan Africa in 2034 is projected to be \$1,610 which is even below the 2024 average for all other regions.

The other main variable in the IFSA model is food prices. This figure shows projected prices over time for key commodities including vegetable oils, rice, wheat, sorghum, and corn. The good news is that for wheat, corn, sorghum, and vegetable oils, international prices are projected to decline in 2024 relative to the past three years. The price of inputs such as fuel and fertilizer are also projected to fall relative to the prior three years. As I mentioned, tighter monetary policy is associated with the easing of price inflation. In addition, abundant supplies of these commodities are projected to contribute to lower prices. However, the price for rice was projected to remain elevated in 2024 following restrictions on the export of certain types of rice implemented by India in last July. Consumers in countries where rice is a significant part of the diet are projected to face higher domestic prices for rice. Over the next 10 years, international prices of these key commodities are projected to trend downward and remain relatively stable due to a projected food supply that will outweigh global demand.

Now moving on to the food security results for 2024 and 2034.

In 2024, 19 percent of the population of the 83 countries covered by the IFSA report are estimated to be unable to consume 2,100 calories per capita per day. The number of food insecure people in 2024 is estimated at 824.6 million, which is a reduction of 313 million people from the 2023 estimate. That improvement is associated with growth in per capita

GDP and the easing of commodity price inflation that I mentioned in the previous slides. However, as we can see in the in this figure with the column furthest to the right, this progress is uneven in 2024 sub-Saharan Africa has the highest share of food insecurity with 29.3 percent of the population estimated to be food insecure.

While sub-Saharan Africa has the highest rate of food insecurity among the five regions in 2024, almost half of the food insecure people live in Asia. This is because the Asia region accounts for 57 percent of the population of the 83 countries in 2024.

In the longer term, by 2034, the number of food insecure people is projected to decrease by nearly 67 percent globally from over 824.6 million people to 274.6 million. Regionally, Asia is projected to make the most progress due to growth in per capita gross domestic product. However, food insecurity is projected to remain high in sub-Saharan Africa due to population growth outpacing income growth. In 2034 the food insecure population of sub-Saharan Africa is projected to comprise over 70 percent of all food insecure people in the countries covered by the IFSA report.

Another key metric that's produced by the IFSA report is the Implied Additional Supply Required, or IASR. The IASR provides an estimate of the short shortfall or surplus in food availability and it's calculated as the difference between total grain demand and grain production in each country. Total grain demand has two components: food demand and other demand, which includes grain used for seed and feed as well as processing and waste. Domestic production is estimated using projections of agricultural land and yield. The difference between total demand and domestic production is the IASR. If the IASR is positive, this means that grain demand in a country is projected to exceed domestic production.

This table shows the quantity of grain demand and production in both 2024 and 2034. The last two columns show the implied additional supply required, or the IASR, which is again the difference between total demand and grain production. In 2024, in IFSA countries, the total grain demand, which is the sum of food demand and other demand, is estimated to be nearly 1.1 billion metric tons. In the next 10 years, total grain demand is projected to increase by 2.4 percent per year across all 83 countries to reach 1.4 billion metric tons by 2034. Most of the growth in total grain demand is due to food demand. Turning to grain production, grain production across the country is covered by the IFSA report is projected to grow by 1.7 percent per year between 2024 and 2034. While the growth in grain production is projected to be less than the growth in grain demand across all IFSA countries, this relationship varies by region. For example, in the former Soviet Union region, growth in grain production is projected to be higher than the growth in grain demand whereas grain

production growth is projected to be lower than food demand growth in both Asia and sub-Saharan Africa. The implied additional supply required, or IASR, which is the gap between grain production and grain demand, is projected to widen in for all regions except for the former Soviet Union in the next 10 years. The IASR between across all IFSA countries is projected to increase by 5.5 percent per year between 2024 and 2034 and that's driven by increasing shortfalls of grain in the Asia and sub-Saharan Africa regions.

Now moving on to the food security results for 2024 and 2034.

In the Asia region ,15.4 percent of the population is estimated to be food insecure in 2024. The improvement in food security is associated with strong growth in per capita GDP. However, rice is the stable grain for many consumers in the region and high rice prices can make it challenging for low-income consumers to afford sufficient food. The highest prevalence of food insecurity in Asia is in Afghanistan where 53.7 percent of the population is estimated to be unable to afford 2,100 calories per capita per day. This is due to ongoing conflict and extreme weather events. Food insecurity is also projected to rise in Bangladesh in 2024 as food supply remains low due to extreme weather events and high food prices. In Laos, high inflation due to the depreciation of its currency and reliance on imports has reduced the purchasing power of consumers leading to an increase in food insecurity relative to 2023. By 2034 per capita income growth in South Asia and Southeast Asia is projected to drive improved food security rates across the region.

In the former Soviet Union region, 6 percent of the population is estimated to be food insecure in 2024. The improvement in food security is associated with lower wheat prices for consumers. In Tajikistan high import reliance is expected to constrain food access. Food insecurities estimate to worsen in 2024 in Moldova due to decreased foreign investment lower remittances and an increase in the number of refugees to the region. By 2034 higher per capita income and Food Supplies are projected to improve food security for the region.

In the Latin America and the Caribbean region, 16.6 percent of the population is at estimated to be food insecure in 2024. In 2022 and 2023, some countries benefited from post-pandemic tourism however GDP growth is projected to slow in 2024. In some countries such as Bolivia inflation is projected to remain high in 2024. In addition, three consecutive years of La Nina followed by an El Nino season in the Central American sub region have led to the loss of some agricultural harvest and interruptions in supply chains which have then led to reduced exports and depressed income. In Colombia lower GDP growth is associated with macroeconomic instability and internal conflict. Given the importance of Colombia's economy to the region this has had an outsized effect on

regional trends. In Haiti, macroeconomic instability including conflict and fuel, and food shortages is estimated to be associated with widespread food insecurity. By 2034 per capita income is projected to improve in the largest economies in the Latin American Caribbean region leading to improved food security rates across the region.

In the Middle East and North Africa region in 2024 14.9 percent of the population is estimated to be food insecure. Some drivers include slow economic growth and a high reliance on food imports which exposes the region to Global price shocks. This is especially true in Egypt which is the world's largest importer of wheat. For three countries Egypt, Syria, and Iran, food insecurities is estimated to worsen in 2024 relative to 2023. In Egypt the removal of subsidies for wheat and other commodities will make it difficult for low-income consumers to access sufficient food. Overall, inflation remains high in Egypt. Persistent inflation and ongoing conflicts in Yemen and Syria have disrupted livelihoods and the economy and are associated with high food insecurity. By 2034, low population growth and higher per capita incomes are expected to reduce food insecurity across the region.

Lastly, in the sub-Saharan Africa region 29.3 percent of the population is estimated to be food insecure in 2034, which is the highest prevalence of the five regions covered by IFSA. While food prices decreased for some key commodities such as wheat corn, and vegetable prices and vegetable oil prices, high rice prices can strain consumers in import-reliant countries including many in the West Africa region. While inflation eased in 2024 relative to 2023 consumer prices remain high in many countries including Sudan, Zimbabwe and Ethiopia. Conflict is also a major issue in the region such as in the Democratic Republic of Congo, Sudan and Niger where conflict can increase acute food insecurity by limiting access to food aid and displacing residents. The region is also vulnerable to climate shocks such as flooding or prolonged droughts which lead to lower domestic food supplies and can depress small farmer incomes. Over the next decade population growth is projected to outpace income growth leading to sub-Saharan Africa increasing its share of the world's food insecure population. However, the East Africa sub region is expected to see the largest Improvement in sub-Saharan Africa due to income growth driven by some of the large trading economies including Kenya and Tanzania.

In conclusion, food insecurity in 2024 is estimated to improve relative to 2023 and that's associated with growth in per capita GDP and the easing of international commodity prices. However, high prices, tighter monetary policies, and protracted conflicts in some countries will make it challenging for low-income consumers to afford sufficient food. The number of food insecure people in 2024 is estimated at 824 .6 million which is 19 percent of the overall population of the 83 countries covered by the IFSA report. Food insecurity is

projected to improve by 2034 and that's mainly due to expected growth in per capita income as well as lower food commodity prices that will make food more accessible.

Thank you for attending the webinar and you can find the publication at the link below or the link that will be provided. Please feel free to reach out to us with any questions. In addition, please like, share, and follow ERS through the website or on various social media sites. Back to you, Tegan.

Thank you so much Yacob and Lila, we'll go ahead and open the floor for questions now. As a reminder our audience may submit questions located at the bottom left-hand corner of the screen. We'll go ahead and get started for our first with a first question.

This one is for Yacob. The question is "How do the estimates in the IFSA report compare to other estimates of global food insecurity?"

Thanks Tegan. The results that we provide here from the IFSA model to begin with are not directly comparable with other analysis such as you know modeling work for its report on the state of food insecurity and nutrition commonly known as the report which has a broader country coverage and also use different methodology. Because the IFSA also uses aggregate data, it cannot be directly compared with evaluations that household adult surveys, however the trends and the drivers of food insecurity that are identified in the IFSA analysis often aligned with those that are observed in other global food insecurity assessments.

Great thank you very much Yacob. We have another question here. Our next one is for Lila. Lila, would you like to share. The IFSA report uses a demand-oriented framework to model changes in prices and income in order to capture food access. The model also captures the contribution of income inequality to food insecurity. Based on this and a caloric threshold of 2,100 calories per capita per day, three indicators of food security are calculated. The prevalence of food insecurity, so the share of the population that is food insecure. The population food insecure so the total number of people that are food insecure and the food gap. For this year's report estimates for 2024 and projections for 2034 are included and more information on the model can be found in Appendix A of the IFSA report.

Great thank you. We have another question here. The question is "To project for 2034, how do you account for the variable of climate change?" The IFSA report does not directly address the impact of climate change, however the projections of income and prices that are used in the model, those projections to incorporate climate variability.

Great thank you, Lila. We have another question here. The question is, "Is there a food security report by African countries?" There's not a separate report for African countries

however, we do cover sub-Saharan Africa in the IFSA report and you can find that section within the report.

Great thank you. We have another question here. “Are you considering access to protein and other critical nutrients?” The IFSA report uses calories per capita in its measurement of food insecurity. It does not cover macronutrients or micronutrients.

Great thank you very much, Lila. We have another question here for you. “Why are only low- and middle-income countries considered in the assessment and not countries like the United States or the European Union?” The United States leads efforts to improve global food security including through the provision of the bulk of global food aid and so for USDA it's important to assess where and how global food demand is changing to be able to identify potential emerging markets for U.S. farmers as well as understand what the potential drivers are for such trends. It's important to assess the occurrence of chronic food insecurity and potential hotspots and then evaluate how income and prices affect access to food. We aim to include all low- and middle-income countries that have experienced recent or have ongoing food deficits.

Great. Thank you, Lila. We have a question here for Yacob. “How does the IFSA model address the occurrence of potential hotspots?” Thank you. While the IFSA analysis and report have obvious limitations due to the availability of data on some of the critical drivers and certain assumptions, it's a valuable tool for identifying some of the potential hotspots of food insecurity. The IFSA regular updates on domestic prices for example is updated until December of each year and this ability to track you know general trends you know offer valuable insight into some of the potential hot spots you know cross regions our countries that are at risk. For example, I'll take you back our analysis in 2020 using the IFSA data helps us to identify some of the countries that were vulnerable to food insecurity following Russia's invasion of Ukraine for example.

Great thank you so much, Yacob. We have another question here submitted. “There was a statistic that food insecurity will decline by 66 percent by 2034. Could you explain how you decided on this number?” Sure. The projections are based upon the macroeconomic assumptions and those assumptions were provided as of August 2023. However, factors such as conflict, climate change or economic instability could significantly impact those estimates, but they're based upon our understanding of the world as it is in August 2023 and those trends continuing through 2030, through the next 10 years.

Great thank you, Lila. We have another question here submitted. “Does this report investigate levels of human nutrition past caloric intake i.e. access to fruits and veggies or utilization of micronutrients?” As I mentioned, the IFSA report focuses on calories per

capita per day, and the way that it does that is by converting all foods into grain equivalent, but all foods consumed are considered. However, the IFSA report focuses on calories and not the consumption of macronutrients or micronutrients that make up those foods.

Great, thank you Lila. We have another question here from the audience, “Do you produce food security estimates for the United States?” Yes, the answer is yes there is. I think maybe this is a good time to kind of separate the report, the food security report that we produced internationally, and then there is a separate report that USDA provides on household food security in the United States as well. I think we've covered some of the content in the ERS's International Food Security Assessment that uses country coverage, but maybe it's a good way to provide a little bit more on ERS's food security in the United States which is based on household surveys that capture household's subjective evaluations of their food security. I think if you're interested there was a webinar hosted by ERS, particularly this topic on household food security in the United States and a report was also released last week you can if you're interested you can check that on the ERS website.

Great thank we have another question here. Let's see. Pardon. There was a list of questions that we received. Thank you folks. Just a reminder, you can submit your questions through the chat feature located at the bottom lefthand corner of your screen.

This is a question for the both of you. “Can you explain further about ISAR and what does the number mean of its positive or negative again?” Sure. I can go back to that slide, too. Let's see. Okay, so the IASR, or the Implied Additional Supply Required, is the difference between total demand and domestic production. Total grain demand is comprised of both food demand and then other demand, so seed, feed, processing, and other uses and then we have we project domestic production. So, what it measures is the total grain demand in each country that is not projected to be met solely through domestic production and so if the IASR is positive that means that the grain demand in the country is projected to be higher than domestic production in that year, in that country.

Great thank you. We have another question here, “Can you explain again why the price of rice will continue to increase or not be at ease by 2024?” Can you repeat that? Sure can. The question submitted is, “Can you explain again why the price of rice will continue to increase or not be at ease by 2024?” So, the price of rice that was used in the IFSA model was based upon projections as of late December 2023. If you are interested in more up to date information about rice markets and rice prices, I highly recommend looking at the outlook reports that are available on the ERS website. There are monthly updates that are provided about rice markets.

Great thank you so much, Lila. We have a question submitted here, could be either one of you, “Are the modeling tools available online anywhere?” The modeling approach is described in Appendix A of the IFSA report and there's links to some of the underlying sources and in Appendix A you'll also find a list of all the data sources that are used in the report, that are used in the modeling, if you were interested in replicating some of this work.

Great thank you so much, Lila. We have a question here from our audience. “Do any of your assumptions take into account biodiversity loss and mass extinction?” The model which is a demand driven model, used both income and prices and then based on what we have discussed in the presentation on a caloric consumption of 2,100 per capita per day. The model estimates the prevalence of food insecurity. Generally, that's captured in there. Of course you know, due to limitations in some of the details the model cannot capture additional information that's not included in both the income and the caloric aggregation of the food consumed by households in each country.

Great thank you so much, Yacob.

We have another question for you. “How does this assessment on International Food Security differ from USDA ERS research on food security in the United States?”

Thank you. So, I kind of alluded to that briefly earlier on but again as discussed in the presentation, ERS research on the International Food Security is based on, as I mentioned, the components of food access and income at the national level of each country studied and hence incomes or high food prices can be you know some of the causes of food insecurity and ERS research uses available income and food price data to assess food across the entire income spectrum of each country. On the other hand, the ERS research on food security in the United States based on a household survey that captures household subjective evaluation of their food security, and in general in all their countries such the United States or other high income countries total food supplies are more than sufficient to feed the entire population and hence you know famine, starvation, is not a threat. However, even in the United States many people are poor, and they suffer from food insecurity due to inadequate incomes or other reasons. Research on food security tries to understand the extent of such problems as well as what of the underlying causes. In the United States and as I said you know increasingly in more most the high-income countries or developing countries your availability at the national level is sufficient and so the focus becomes in access to food and food utilization, so I hope that explains the difference.

Yes, thank you so much Yacob. We have a question here submitted, “Are you mapping food assets, farms, gardens or internationally?” The IFSA report only cons only has national level estimates of food insecurity um and if you're interested in looking at those national

maps they're um the first few figures of the IFSA report but we don't have any subnational maps provided.

Great thank you so much, Lila. We have another question for you. “What was the impact of the rice export restrictions imposed by India last year?” The export restrictions imposed by India last year last July on the export of rice are associated with the rice price increasing by over 20 percent at the time and they've remained elevated. This has affected people in countries that consume rice as a large part of their diet including many countries in Asia and sub-Saharan Africa. But for the most up-to-date information on the impact of those restrictions and just ongoing changes in rice markets, ERS publishes monthly outlook reports for many commodities including rice, as well as wheat and oil seeds and other commodities and these outlook reports cover recent developments and provide the latest data on U.S. and international supply use price estimates and projection and they come from the USDA's WASDE report and as I mentioned these reports can be found on the ERS website.

Great thank you so much, Lila. We have our next question here. “What's the difference in the number of food insecure versus the prevalence of food insecurity?” This one's for Yacob.

Okay thanks. So, starting with the number of food insecure it refers to the number of people who cannot meet the caloric threshold in this case the 2,100 calories per capita per day, whereas the prevalence of food insecurity refers to the share or the proportion of the population who cannot meet the caloric threshold so simply the former is measured in millions whereas the latter is measured in person.

Great thank you so much Yacob. As a reminder folks who have any questions left for today, we have about 10 minutes or so left in the webinar. Questions may be submitted through the chat feature located at the bottom left corner of your screen.

I think that's it for questions, so that's all we have time for today. Before closing I'd like to share a few ways to stay up to date on ERS Research In addition to visiting our website, ers.usda.gov. You may receive the latest charts of note via email or on our mobile app available for download on Google Play and the App Store. ERS is also on social media you can follow us on LinkedIn and X. Thank you so much Lyla and Yacob for a great presentation and thank you to our listeners for taking time out of your day to join us.

This concludes our webinar.