

Overview

The Global Food Security Index (GFSI), constructed by the Economist Intelligence Unit (EIU) and sponsored by DuPont, measures the drivers of food security. The EIU defines food security as, “When people at all times have physical, social and economic access to sufficient and nutritious food that meets their dietary needs for a healthy and active life.” The purpose of the GFSI is to assess a country’s vulnerability to food insecurity.

The GFSI is a composite of three categories: affordability and financial access, availability, and food quality and safety. Category scores are calculated from 25 underlying indicators, which are scored using a benchmarking model. The overall GFSI score is a weighted mean of the three category scores. All scores are normalized on a scale of 0–100 where 100=most favorable.

Box I. GFSI Categories and Indicators

Affordability

- Food consumption as a percentage of household expenditure
- Proportion of population under global poverty line
- Gross domestic product per capita
- Agricultural import tariffs
- Presence of food safety net programs
- Access to financing for farmers

Availability

- Sufficiency of supply
 - Average food supply
 - Dependency on chronic food aid
- Public expenditure on agricultural R&D
- Agricultural infrastructure
 - Existence of adequate crop storage facilities
 - Road infrastructure
 - Port infrastructure
- Volatility of agricultural production
- Political stability risk

Quality and Safety

- Diet diversification
- Nutritional standards
 - National dietary guidelines
 - National nutrition plan or strategy
 - Nutrition monitoring and surveillance
- Micronutrient availability
 - Dietary availability of vitamin A
 - Dietary availability of animal iron
 - Dietary availability of vegetal iron
- Protein quality
- Food safety
 - Agency to ensure the safety and health of food
 - Percentage of population with access to potable water
 - Presence of formal grocery sector



A Look at Overall GFSI Scores

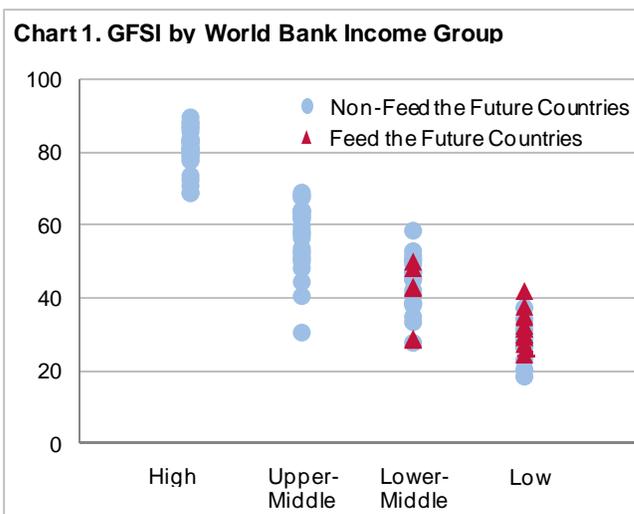
The EIU calculates the GFSI for 105 countries—27 high income, 29 upper-middle, 25 lower-middle, and 24 low income countries, based on the World Bank Income Classification. Of the 105 countries, 75 received assistance from USAID in FY2010. All USAID Feed the Future countries appear in the GFSI except Liberia.

GFSI scores range from a high of 89.5 (United States) to a low of 18.4 (Congo-Kinshasa). As expected the top ten countries are all high-income. Of the countries receiving USAID assistance, the top ten are either European (5) or Latin American (4) and Israel. Although the bottom ten countries all receive USAID assistance, only four are USAID Feed the Future countries: Malawi, Tanzania, Ethiopia, and Haiti.

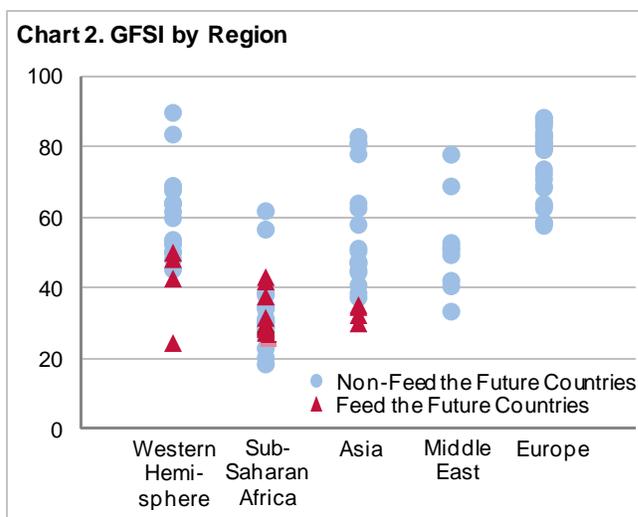
Table 1. Country Rankings

Top Ten Countries		Top Ten Countries Receiving USAID Assistance		Bottom Ten Countries Receiving USAID Assistance	
Country	GFSI Score	Country	GFSI Score	Country	GFSI Score
United States	89.5	Israel	77.7	Sudan	27.7
Denmark	88.1	Poland	72.3	Togo	27.5
Norway	88.0	Hungary	70.7	Malawi	27.3
France	86.8	Chile	68.9	Tanzania	26.8
Netherlands	86.7	Russia	68.3	Ethiopia	26.4
Austria	85.6	Mexico	67.7	Madagascar	26.3
Switzerland	83.7	Brazil	67.6	Haiti	24.5
Canada	83.4	Costa Rica	63.8	Burundi	22.9
Finland	83.1	Turkey	63.7	Chad	20.2
Germany	83.0	Serbia	63.2	Congo (Kinshasa)	18.4

The 105 countries reported are evenly distributed among the income groups. The average score for high income countries is 80.5. The average score for upper-middle income countries is more than twenty points lower at 57.5, with Algeria (40.5) and Angola (30.5) at the bottom. The average scores for lower-middle and low income countries are 43.2 and 29.8, respectively. All twenty USAID Feed the Future countries, as seen in the chart as red, are classified as lower middle or low income countries.



From a regional perspective, 21 countries are in the Western Hemisphere, 28 are in Sub-Saharan Africa, 21 are in Asia, 9 are in the Middle East, and 26 are in Europe. Europe has the highest average score (75.6) because of the presence of many high income countries. Sub-Saharan Africa has the lowest average score (32.4). The average scores in the other three regions are all in the 50s.



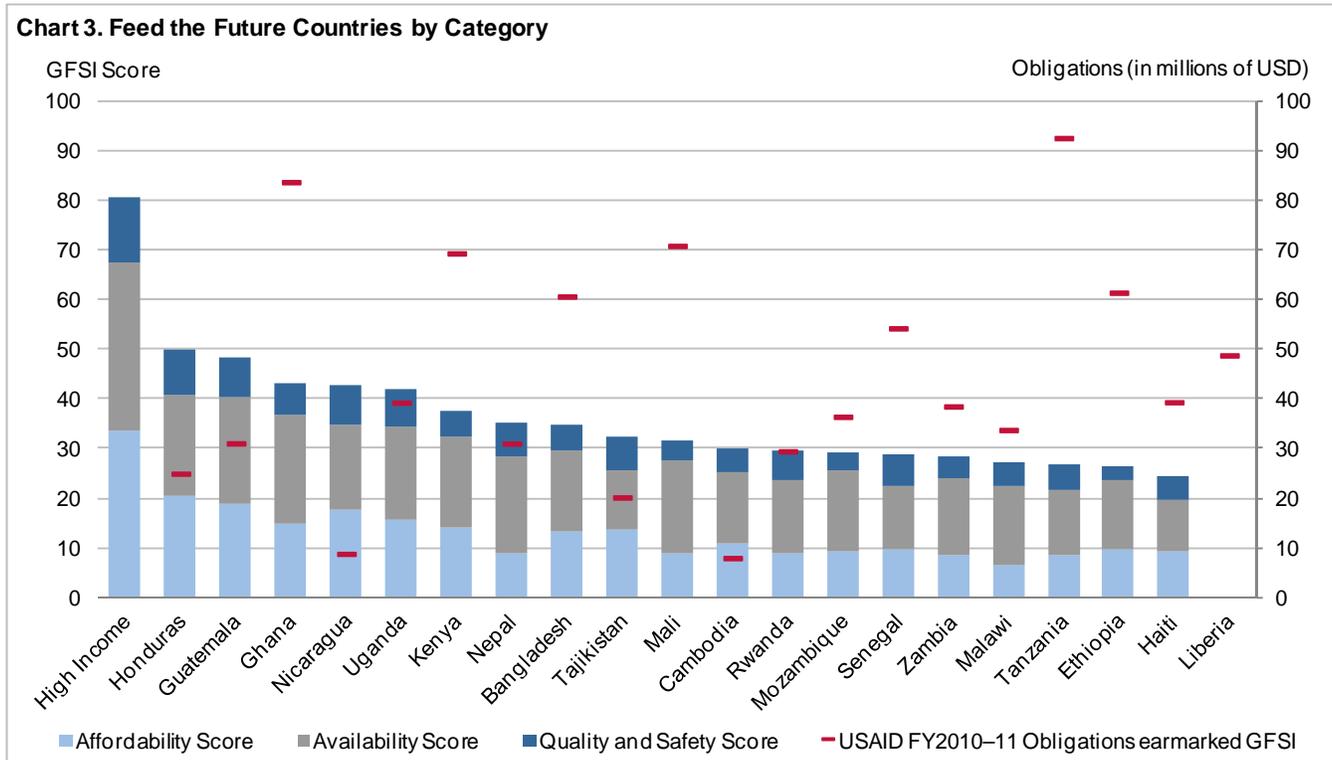
A Closer Look at GFSI Category Scores

The overall GFSI is a weighted mean of the three category scores. The categories are not weighted equally. Affordability is weighted 40 percent, Availability is 44 percent, and Quality and Safety is 16 percent. To see the implications of the weighting Table 2 below shows the weighted category values for USAID assisted countries, Feed the Future countries, and high income countries. The table shows Affordability and Availability categories are significantly more important than Quality and Safety in the overall GFSI. The Feed the Future country scores are clearly deficient.

Table 2. GFSI Category by Weighted Values

Country Group	Affordability (maximum weighted value: 40)	Availability (maximum weighted value: 44)	Quality and Safety (maximum weighted value: 16)	Overall GFSI
High Income Countries	33.57	33.93	13.03	80.53
USAID Assisted Countries	16.74	20.26	7.71	44.70
Feed the Future Countries	11.93	16.44	5.74	34.12

The chart below also strengthens the argument that Feed the Future countries are performing poorest in the affordability category. The second vertical axis (on the right hand side) shows the cumulative FY2010–11 obligations USAID has earmarked for the Global Food Security Initiative for the Feed the Future countries. There is a slight correlation between the Feed the Future country funding and their respective overall score.



Category scores are calculated from the weighted mean of the underlying indicator scores. The EIU considers any indicator score below 25 a weakness. Not surprisingly, all nineteen Feed the Future countries have weak GDP per capita scores. Only Guatemala and Honduras have scores over 5 for this indicator, which counts toward 22 percent of the Affordability category score. Seventeen of the Feed the Future countries have weak scores for Public Expenditure on Agricultural R&D, which has a weight of 12 percent of the Affordability category score. Eleven of the countries have a score of 0.

Plans for the GFSI

EIU plans to update the GFSI quarterly starting at the end of 2012. The quarterly updates will incorporate a food price adjustment factor into the Affordability category. This factor will be based on changes in global food prices, as measured by the FAO global food price index. These quarterly updates of the GFSI will be included in the Economic and Social Database.

Additional Information

For questions or more information, please contact the author, Jennifer Torres, at jtorres@devtechsys.com. To access the complete dataset for the Global Food Security Index, visit the Economic and Social Database (ESDB) at <http://esdb.eads.usaidallnet.gov/>. The ESDB website offers related datasets from World Bank, IMF, U.S. government agencies, and other sources. Through the ESDB website, you can also access standard country profiles, utilize analytical tools such as the Financial Sector Analysis Tool, and generate customized tables and graphs.