Africa South of the Sahara
Food Security Portal

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The European Commission represents the interests of the European Union by proposing new legislation to the European Parliament and the Council of the European Union and ensuring that EU law is correctly applied by member countries.
Multiple Objectives

- Timely information on prices, media coverage related to food security
- Policy research to provide relevant research on Food Security
- Network of inclusive network of food security policy
- Influence relevant policy processes to be more effective at addressing food insecurity issues.
Regional Food Security Portals

Central America and Caribbean

Africa south of the Sahara

India
Features
Main Features

Volatility & Early warning systems
Volatility of local prices and of relevant commodities

Themes and discussion
Thematic topics (food access, food availability, input markets, risk and resilience, food consumption and nutrition)

Crop and Yield mapping
Crop calendar application collaborated with GeoGlam initiatives and yield mapping.

Policy network
Policy research networks associated with AGRODEP in Africa south of Sahara

Media analysis tools
Covering regional major crops including maize

Soil profiles
Soil grid map application collaborated with SoilGrids.org

Agricultural R & D indicators
On institutional, investment, and capacity trends in agricultural R&D.
Prices

Monthly and weekly commodity prices of hard wheat, soft wheat, maize, rice and soybeans and daily futures prices.

Early warning system

Global information and early warning system (GIEWS) and Famine Early Warning Systems Network covering east, west, and south Africa.

Volatility warning

Visual representation of historical periods of excessive global price volatility from 2000-present, as well as a daily volatility status.
Measuring Excessive Price Volatility

• A Nonparametric Extreme Quantile Model is used to identify periods of excessive volatility using daily data.

• First, we estimate a dynamic model of the daily evolution of returns using historic information of prices.

• Second, we combine the model with the extreme value theory to estimate quantiles of higher order of the series of returns allowing us to classify each return as extremely high or not.

• Finally, the periods of excessive volatility are identified using a binomial statistic test that is applied to the frequency in which the extreme values occur within a 60 days window.
Excessive Volatility

Note: This figure shows the results of a model of the dynamic evolution of daily returns based on historical data going back to 1954. A period of time characterized by extreme price variation (volatility) is a period of time in which we observe a large number of extreme positive returns. An extreme positive return is defined to be a return that exceeds a certain pre-established threshold. This threshold is taken to be a high order (95%) conditional quantile, (i.e. a value of return that is exceeded with low probability: 5%). Periods of excessive volatility are identified based a statistical test applied to the number of times the extreme value occurs in a window of consecutive 60 days.

Impacts on Producers

- High price volatility increases expected producer losses

- High price volatility increases misallocation of resources

- Increased price volatility generates the possibility of larger net returns but only in the short term
Tracking Volatility in Maize Prices
Effects on Consumers

Is there empirical evidence of a link between volatility of major agricultural commodities and consumer welfare?

Problems:

• Consumer welfare is notoriously difficult to measure due to income effects associated with price changes.
• It is not uncommon in developing countries for consumers to be producers of agricultural commodities.
• Models for the dynamic evolution of conditional volatility are often based on restrictive stochastic models.
Themes and Discussion

Food Availability
New Atlas Puts Together Pieces of Africa’s Agricultural Puzzle

Input Markets
Gender, Assets, and Agricultural Development

Food Access
What Is Driving Agricultural Productivity in Ethiopia?

Risk and Resilience
Promoting Agricultural Trade to Enhance Resilience in Africa

Food Consumption
Together for Nutrition 2015 Conference Focuses on Improving Ethiopian Nutrition

External Shocks
Changing Climate, Changing World: How African Agriculture Will Respond
### Virtual Dialogues

**How we can improve access to fertilizers in Africa South of the Sahara**

<table>
<thead>
<tr>
<th>Topic / Topic Starter</th>
<th>Replies</th>
<th>Last post</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the market structure? How much is the global market structure affecting Africa (which imports most of its fertilizer)? new by Soonho.Kim » Thu, 08/27/2015 - 16:54</td>
<td>0</td>
<td>by Soonho.Kim Thu, 08/27/2015 - 16:54</td>
</tr>
<tr>
<td>What opportunities exist and what are some examples of successful interventions? new by Soonho.Kim » Thu, 08/27/2015 - 16:54</td>
<td>0</td>
<td>by Soonho.Kim Thu, 08/27/2015 - 16:54</td>
</tr>
<tr>
<td>What are constraining factors (e.g., infrastructure, production, information, economic) new by Soonho.Kim » Thu, 08/27/2015 - 16:52</td>
<td>0</td>
<td>by Soonho.Kim Thu, 08/27/2015 - 16:52</td>
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</tbody>
</table>
SoilProfile

SoilGrids1km is a collection of updatable soil property and class maps of the world at a relatively coarse resolution of 1 km produced using state-of-the-art model-based statistics.
Input Prices

UEA PRICE COMPARISON IN SELECTED COUNTRIES(USD/TON)

Source: AMITSA
IFPRI's Agricultural Science and Technology Indicators (ASTI) program compiles, analyzes, and publicizes indicators on institutional, investment, and capacity trends in agricultural R&D.
Agricultural Policy Tool Kit
Global Nutrition Report

### Eastern
- Burundi (Français)
- Comoros (Français)
- Djibouti (Français)
- Eritrea
- Ethiopia
- Kenya
- Madagascar (Français)
- Malawi
- Mauritius
- Mozambique
- Rwanda
- Seychelles
- Somalia
- South Sudan
- Uganda
- United Republic of Tanzania
- Zambia
- Zimbabwe

### Northern
- Algeria
- Egypt
- Libya
- Morocco
- Sudan
- Tunisia

### Southern
- Botswana
- Lesotho
- Namibia
- South Africa
- Swaziland

### Western
- Benin (Français)
- Burkina Faso
- Cabo Verde
- Cote d'Ivoire (Français)
- Gambia
- Ghana
- Guinea (Français)
- Guinea-Bissau
- Liberia
- Mali (Français)
- Mauritania (Français)
- Niger (Français)
- Nigeria
- Senegal
- Sierra Leone
- Togo

This Global Nutrition Report tracks worldwide progress in improving nutrition status, identifies bottlenecks to change, highlights opportunities for action, and contributes to strengthened nutrition accountability. The report series was created through a commitment of the signatories of the Nutrition for Growth Summit in 2013.
Each day, the global food- and commodity-related news articles located on the News section of the Food Security Portal are loaded into the Food Security Media Analysis System. Then the system updates the news article database and mines the complete corpus to generate up-to-date media daily analysis to produce valuable information that may influence global commodity price volatility and food security.
Partnerships and Network
Network of Experts
Partnership Assessment Studies

Two country-level assessment studies completed on the potential of different partnerships to enhance the role of information for informed decision making, with particular reference to information systems.

ZAMBIA

ETHIOPIA
Selected Highlight
A Food and Nutrition Security Dashboard (FSND)
<table>
<thead>
<tr>
<th>Food Economy</th>
<th>Household - level Livelihood</th>
<th>Health Status</th>
</tr>
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<tbody>
<tr>
<td><strong>Availability</strong></td>
<td>% HHs with Household Dietary Diversity Score (HDDS) above 5.0.</td>
<td>% children (&lt; 2 years) stunting is reduced from 45% to 30% by 2015</td>
</tr>
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<td><strong>Access</strong></td>
<td>Travel time to rural markets</td>
<td>% children with a weight-for-height of less than minus 2 Standard Deviations (wasting)</td>
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<td></td>
<td>Basic Needs Basket (BNB) &amp; Rural Basket (RB) of JCTR</td>
<td>% of children with a low weight for height index (underweight)</td>
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<td></td>
<td>% variation in real household income</td>
<td>% women in child bearing age with Body Mass Index &lt; 18.5</td>
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<tr>
<td><strong>Stability</strong></td>
<td>Percentage of households with energy food reserves in critical months</td>
<td>% HHs treating and storing water safely</td>
</tr>
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<td></td>
<td>Land brought under irrigation</td>
<td>% HH practicing safe sanitation practices</td>
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<tr>
<td></td>
<td>Land under irrigation in smallholder sector</td>
<td>% HHs using safe food hygiene and handling techniques</td>
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<td></td>
<td>Average monthly retail price for selected commodities in selected markets</td>
<td>% children 6-24 months with low serum retinol levels i.e. &lt;0.70 μmol/L or &lt;20g/dl.</td>
</tr>
<tr>
<td></td>
<td>Food production per capita</td>
<td>% women with low serum retinol levels</td>
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<td>% of farming HHs practicing sustainable intensification (SI) technologies (e.g. CA)</td>
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**Household Utilisation**

- % HHs treating and storing water safely
- % HH practicing safe sanitation practices
- % HHs using safe food hygiene and handling techniques
- % children 6-24 months with low serum retinol levels i.e. <0.70 μmol/L or <20g/dl.
- % women with low serum retinol levels

**Stability**

- Land brought under irrigation
- Land under irrigation in smallholder sector
- Average monthly retail price for selected commodities in selected markets
- Food production per capita
- % of farming HHs practicing sustainable intensification (SI) technologies (e.g. CA)
- # of SI technologies developed

**Health Status**

- % children (< 2 years) stunting is reduced from 45% to 30% by 2015
- % children with a weight-for-height of less than minus 2 Standard Deviations (wasting)
- % of children with a low weight for height index (underweight)
- % women in child bearing age with Body Mass Index < 18.5
Connecting the Dots South-South Learning

- Zambia
- Tanzania
- Mozambique
- Ethiopia
- Senegal
- Burkina Faso

Local partners include

- Indaba Agricultural Policy Research Institute (IAPRI)
- REPOA
- MINAG
- Ethiopian Economics Association (EEA)

Pan-African Food Security Information Group
Pan-African Food Security Information Group

Role
Advise FSP on issues related to food security information systems and best practices to reduce gaps.

Objectives
• Encourage collaboration
• Exploit synergies when possible
• Enhance South-South learning
Steps forwards