Status of Food security and nutrition in Zambia: What are the indicators?

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Presentation Flow

Introduction

FAO State of Food Insecurity Report

Global Hunger Index

Self Reported hunger surveys

Malnutrition and Dietary diversity

Conclusion
Introduction

- Hunger - Inability to acquire enough food
- Hunger synonymous with chronic undernourishment
- Food Insecurity – Issues of Availability, Accessibility, utilization and sustainability
- Malnutrition – not having right amount of nutrients needed to maintain a healthy body
1. State of Undernourishment

Source: FAO, IFAD & WFP, 2014
Insufficient food to meet dietary energy requirement

Undernourishment = proportion of individuals in a population with DEC below the individuals’ respective DER

Consumption data collected in national consumption/expenditure surveys

In Zambia DEC is measured using food balance sheets compared to population

Zambia moved from 45.8% (2000-02) to 48% (2013-14)!
Shortcomings with the FAO method

Data Issues

- Ignores other energy sources such as forest foods

Static Method – Consumption patterns are changing

- Ignores variations across population and regions
## 2. Global Hunger Index

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Indicator</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate food supply (FAO)</td>
<td>Undernourishment</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Stunting</td>
<td>1/3</td>
</tr>
<tr>
<td>Child mortality (Inter-agency Group for Child Mortality Estimation (IGME))</td>
<td>Under-five mortality rate</td>
<td>1/3</td>
</tr>
</tbody>
</table>
Global Hunger Index by Country in Africa

Source: IFPRI, Welthungerhilfe & Concern Worldwide, 2015
Measuring severity

<table>
<thead>
<tr>
<th>&lt;= 9.9</th>
<th>10 to 19.9</th>
<th>20.0 – 34.9</th>
<th>35.0 – 49.9</th>
<th>&gt;= 50.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Moderate</td>
<td>Serious</td>
<td>Alarming</td>
<td>Extremely Alarming</td>
</tr>
</tbody>
</table>

Source: IFPRI, Welthungerhilfe & Concern Worldwide, 2015
3. Self reported hunger: Evidence from IAPRI/CSO/MAL Survey

- RALS 2012 and 2015
  - 8839 rural agricultural households in 2012
  - 7934 rural agricultural households in 2015
  - Nationally representative
Households Reporting inadequate Food Provisions

- 2012: 46.7%
- 2015: 46.0%

Source: IAPRI/MAL/CSO 2015
Households Reporting inadequate Food Provisions

Source: IAPRI/MAL/CSO 2015

Indaba Agricultural Policy Research Institute
Months of Inadequate Food Provisions

Source: IAPRI/MAL/CSO 2015
## 4. Nutrition and Dietary Diversity Status

### Nutrition status and Malabo declaration targets

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1990</th>
<th>2001/2</th>
<th>2007</th>
<th>2014</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of underweight children</td>
<td>25</td>
<td>23</td>
<td>15</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Percentage of stunted children</td>
<td>40</td>
<td>53</td>
<td>45</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>Percentage of wasted children</td>
<td>5.1</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>-</td>
</tr>
</tbody>
</table>

## Indicator Severity of malnutrition by prevalence ranges (%)

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Underweight</strong></td>
<td>&lt;10</td>
<td>10-19</td>
<td>20-29</td>
<td>&gt;=30</td>
</tr>
<tr>
<td><strong>Stunting</strong></td>
<td>&lt;20</td>
<td>20-29</td>
<td>30-39</td>
<td>&gt;=40</td>
</tr>
<tr>
<td><strong>Wasting</strong></td>
<td>&lt; 5</td>
<td>5-9</td>
<td>10-14</td>
<td>&gt;=15</td>
</tr>
</tbody>
</table>

Source: WHO 1995
## Protein-source consumption vs recommended

<table>
<thead>
<tr>
<th>Food item</th>
<th>Per capita annual consumption</th>
<th>Per capita annual recommended</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>24 litres</td>
<td>200 litres</td>
<td>(Pandy, 2010)</td>
</tr>
<tr>
<td>Beef meat</td>
<td>3 kg</td>
<td>33 kg</td>
<td>(World Bank, 2011)</td>
</tr>
<tr>
<td>Fish</td>
<td>12 kg</td>
<td>45 kg</td>
<td>(FAO, 2014)</td>
</tr>
<tr>
<td>Eggs</td>
<td>2.3 kg</td>
<td>60 kg</td>
<td>(FAO, 2014)</td>
</tr>
<tr>
<td>Poultry meat</td>
<td>9.2 kg</td>
<td>33 kg</td>
<td>(PAZ, 2014, FAO, 2014)</td>
</tr>
</tbody>
</table>
Percent of Households consumption of selected products in the last 24 hours

- Cereals
- Dark Green Leafy Vegetables
- Vegetables - Any tomatoes, onions?
- Oils and Fats
- Roots and Tubers -
- Legumes, Nuts and Seeds
- Sweets - sugar, honey?
- Fish
- Spices, Condiments, Beverages
- Vitamin A Rich Vegetables and Tubers
- Other Fruits
- Flesh Meat
- Milk and Milk Products
- Eggs
- Offals
- Vitamin A Rich Fruits

Source: IAPRI/MAL/CSO 2015
Household Dietary Diversity Score (HDDS)

<table>
<thead>
<tr>
<th>HDDS</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 4</td>
<td>32.5</td>
<td></td>
</tr>
<tr>
<td>5 to 8</td>
<td>58.1</td>
<td></td>
</tr>
<tr>
<td>9 to 12</td>
<td>9.4</td>
<td></td>
</tr>
</tbody>
</table>

Source: IAPRI/MAL/CSO 2015
### HDDS by Gender and Landholding size

<table>
<thead>
<tr>
<th>Gender</th>
<th>Landholding Size (Ha)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>&lt;0.5 Ha</td>
<td>5</td>
</tr>
<tr>
<td>Female</td>
<td>0.5-1 Ha</td>
<td>5</td>
</tr>
<tr>
<td>Male</td>
<td>1-2 Ha</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2-5 Ha</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>5-10 Ha</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>10-20 Ha</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: IAPRI/MAL/CSO 2015
Conclusion and Policy Recommendations

- Hunger incidences and malnutrition remain high in Zambia
- Despite flaws, the undernourishment indicator is a useful guide
  - to measure the availability of dietary energy at a population level
  - to look at changes over time
Way forward...

- Improving food security to ensure sufficient calories in the diet
  - Increasing agricultural productivity
  - Reduce post-harvest losses
  - Promote on-farm processing
  - Promote on-farm storage
  - Crop diversification to mitigate crop failure risk
  - Increase access to more land for smallholder households
Way forward…

- Sustained political commitment at the highest level
  - food security and nutrition at the top of the political agenda
  - creating an enabling environment for improving food security and nutrition
- Data availability for accurate measurement
  - food consumption data
Thank you for your Attention
Food Balance sheets and undernourishment

Food Balance Sheet (Maize)

Source: Ministry of Agriculture, several years
In other words, the average height of the individuals in each sex-age group is the only country specific information taken into account in specifying the range of DER by sex-age groups for a population.