Food Security In The Arab Region: Towards a Common Monitoring Framework
Food Security?
or Food and Nutrition Security?
or Food security and Nutrition?

• All people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”

• Applicable at all levels or scales (individual, household, national, regional and global levels),

• Four main dimensions: availability, access, utilization and stability over time.

• Requires a multidimensional assessment.

• SDG2...and others.
Food security policy analysis framework

UN Sustainable Development Goals

- Availability
  - National-Community levels
- Access
  - Household level
- Utilization
  - Individual level
- Stability
  - Permanence over time

Custodianship and Governance

Policies and Legislations

Pillars of Food Security

Policy

- Levers
  - Domestic Production
  - Imports
  - Offshore Production
- Price Control
- Entitlements/Liveelihoods
- Subsidies
- Physical Infrastructure
- Diets and Nutrition
- Food safety
- Water
- Sanitation
- Emergencies and Crises
- Strategic Stockpiles

Program

Enablers

- Agricultural Development
- International Cooperation and Trade
- Social Safety Nets
- Subsidies
- Food Aid
- Dietary Habits
- Capacity Building in Food Security
- Over Seas investments
- Public/Private Investment Programs
- Infrastructure
- Food Safety
- Water and Sanitation
- Early Warning System Markets and Droughts
The Need for Monitoring

Review the monitoring data? Why bother? We're going fine.

REMEMBER MORE INFORMATION IS USEFUL ONLY IF IT IS USED!
Important questions related to monitoring food security

• Why are we monitoring? “The validity of a measurement tool is inseparable from the purpose for which it is intended”.
• Individual or national?
• Chronic or acute?
• Ex-post or ex-ante?
• Hunger or malnutrition (incl. obesity)?
• Past vs Future (policy makers)?
• Targeting vulnerable population for policies and action?
• Proxy measures, depending on objective
• Availability? Neglects wastes and unequal distribution (Sen’s thesis).
• Trend: cross-nationally comparable, longitudinal monitoring and analysis at the household and individual levels (Barret, 2010)
Availability and Food Security do not always go together

- Household and individual data: better estimates, correlates well with poverty data
(New) Food-Related Problems in the Arab World

• Triple burden: Undernutrition, Malnutrition, Overnutrition
• Child stunting remains prevalent
• Obesity is rampant in adults (esp women) and children
• Micronutrient deficiency: Anemia in particular
• Food Losses and Wastes

• Do we need to monitor these as part of food security monitoring?
What is the status of the FS policies?

• Our mapping of 9 countries (Yemen, Sudan, Egypt, Palestine, Jordan, Iraq, Lebanon, Morocco, Tunisia) showed that the bulk of the policies affecting food security are still directed towards national production, thereby affecting the “availability” dimension of food security.
• The “Utilization” dimension remains the least addressed in terms of policies and programs.
• The stability dimension is mostly aimed at stabilizing the availability dimension.
• Monitoring is quasi-inexistent.
• Monitoring food security, when existing, is not integrated and remains separate from the SDG context, a situation that hinders positive synergies.
Types of FS measurements

- National-level compound data
- Perception data FAO’s Prevalence of food Insecurity
- Household data
- Individual data
National Level Estimates
Prevalence of Undernourishment (FAO)

Widely adopted State of the World Food Insecurity reports. Basis is food balance sheets developed by FAO which draws on nationally combined data of food supply and utilization. First-tier indicator of SDG2. Relied upon by governmental and non-governmental agencies. Composite outcome indicator and as such does not provide information on the drivers of undernourishment and food insecurity. The FAO also publishes a set of 26 food security indicators representing drivers associated with each of the four pillars of food security.
The Global Hunger Index (GHI)

The Global Hunger Index (GHI) is a tool designed to comprehensively measure and track hunger at the global, regional, and country levels.

The GHI combines 4 component indicators

• The proportion of the undernourished as a percentage of the population;
• The proportion of children under the age of five suffering from wasting;
• The proportion of children under the age of five suffering from stunting;
• The mortality rate of children under the age of five.
Global Food Security Index (EIU)

- 30 indicators in 3 domains: affordability, availability, quality and safety. Weighted.
- Includes food prices, poverty, household expenditures.
- Assesses country performance
- Limitations (and strength?): reliance on experts for weights and scoring
- The Food Insecurity Multidimensional Index (FIMI) will synthetize the four dimensions of food security (availability, access, utilization and stability of food).

FIMI Classification:
- 30 < FIMI < 39.99 MODERATE FOOD INSECURITY
- 40 < FIMI < 49.99 SERIOUS FOOD INSECURITY
- 50 < FIMI < 59.99 ALARMING FOOD INSECURITY
- FIMI > 60 EXTREMELY ALARMING FOOD INSECURITY
Household level
(Access)

- Household Consumption and Expenditure Survey
- HCEI: Poverty, consumer price index, expenditures
- Assumes that food acquisition = food consumption (wastes, gifts)
Food Consumption Score

• IFPRI
• Linkage between dietary diversity and household food access
• Positive association between per capita kcal consumption
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Household Dietary Diversity Score

- HDDS (USAID)
- Dietary diversity as a proxy for household food access
- Response data on 12 food groups
- Positively associated with food security
- Good correlation with FCS
Antropometry

• Measures utilization
• Intra household distribution may be inadequate
• Bioavailability of food nutrients
• Strong links to mortality outcomes
• Height, weight, mid-upper arm circumference, skinfold
## FAO-CFS suite of indicators

<table>
<thead>
<tr>
<th>Type of Indicator</th>
<th>Source</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability</strong></td>
<td></td>
<td></td>
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<tr>
<td>Average dietary energy supply adequacy</td>
<td>FAO</td>
<td>1990-2016</td>
</tr>
<tr>
<td>Average value of food production</td>
<td>FAO</td>
<td>1990-2013</td>
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<tr>
<td>Share of dietary energy supply derived from cereals, roots and tubers</td>
<td>FAO</td>
<td>1990-2011</td>
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<tr>
<td>Average protein supply</td>
<td>FAO</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Average supply of protein of animal origin</td>
<td>FAO</td>
<td>1990-2011</td>
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<tr>
<td><strong>Access</strong></td>
<td></td>
<td></td>
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<tr>
<td>Percent of paved roads over total roads</td>
<td>WB</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Road density</td>
<td>International Road Federation, World Bank Statistics and electronic</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Rail lines density</td>
<td>WB</td>
<td>1990-2012</td>
</tr>
<tr>
<td>Gross domestic product per capita (in purchasing power equivalent)</td>
<td>WB</td>
<td>1990-2013</td>
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<tr>
<td>Domestic food price index</td>
<td>FAO/WHO/WB</td>
<td>2000-2014</td>
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<tr>
<td>Prevalence of undernourishment</td>
<td>FAO</td>
<td>partial</td>
</tr>
<tr>
<td>Share of food expenditure of the poor</td>
<td>FAO</td>
<td>partial</td>
</tr>
<tr>
<td>Depth of the food deficit</td>
<td>FAO</td>
<td>1990-2016</td>
</tr>
<tr>
<td><strong>Stability</strong></td>
<td></td>
<td></td>
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<tr>
<td>Cereal import dependency ratio</td>
<td>FAO</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Percent of arable land equipped for irrigation</td>
<td>FAO</td>
<td>1990-2012</td>
</tr>
<tr>
<td>Value of food imports over total merchandise exports</td>
<td>FAO</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Political stability and absence of violence/terrorism</td>
<td>WB/WHO</td>
<td>1990-2013</td>
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<tr>
<td>Domestic food price volatility</td>
<td>FAO/WHO/WB</td>
<td>2000-2014</td>
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<tr>
<td>Per capita food production variability</td>
<td>FAO</td>
<td>1990-2013</td>
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<tr>
<td>Per capita food supply variability</td>
<td>FAO</td>
<td>1990-2011</td>
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<tr>
<td><strong>Utilization</strong></td>
<td></td>
<td></td>
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<tr>
<td>Access to improved water sources</td>
<td>WHO/UNICEF</td>
<td>1990-2012</td>
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<tr>
<td>Percentage of children under 5 years of age affected by wasting</td>
<td>WHO/UNICEF</td>
<td>1990-2014</td>
</tr>
<tr>
<td>Percentage of children under 5 years of age who are stunted</td>
<td>WHO/UNICEF</td>
<td>1990-2014</td>
</tr>
<tr>
<td>Percentage of children under 5 years of age who are underweight</td>
<td>WHO/UNICEF</td>
<td>1990-2014</td>
</tr>
<tr>
<td>Percentage of adults who are underweight</td>
<td>WHO</td>
<td>partial</td>
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<tr>
<td>Prevalence of anaemia among pregnant women</td>
<td>WHO/WHO</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Prevalence of anaemia among children under 5 years of age</td>
<td>WHO/WHO</td>
<td>1990-2011</td>
</tr>
<tr>
<td>Prevalence of vitamin A deficiency in the population</td>
<td>WHO</td>
<td>partial</td>
</tr>
<tr>
<td>Prevalence of school-age children (6-12 years) with insufficient iodine intake</td>
<td>WHO</td>
<td>partial</td>
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