International Scientific Symposium on Food and Nutrition Security Information: 
Update and Implications for Future Work

Terri Ballard and Janice Meerman
With a contribution by Anna Herforth

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Tufts University Workshop for the Global Nutrition CRSP
ISS 2002

1. Prevalence of Undernourishment
2. Household expenditure surveys
3. Food intake surveys
4. Anthropometry
5. Qualitative measures of food insecurity and hunger
2012 ISS Focus

- Recent advances in measuring food and nutrition security
- Strengthening the link between information generation and decision-making
Plenary Panels

- Panel 1 – Measures of global hunger and food insecurity

- Panel 2 – Building the evidence base for policy and program: innovative approaches to analysis

- Panel 3 – Food and nutrition security information: evidence generation is not enough
Parallel Sessions

Sixteen sessions covering wide range of topics, including:

• Innovations in analytic techniques
• Institutionalizing evaluation processes
• Conceptualizing food and nutrition security through different lenses: how does this affect measurement?
• Indicators for measuring food and nutrition security: diversify or unify?
• Converting knowledge into sound policy: lessons from far and wide
Emerging Themes

• Improving data quality, credibility and usefulness

• Better collection and use of individual level information

• Searching for validated, universal indicators of food and nutrition security

• Bringing evidence to bear on decision making
Theme 1: Improving data quality, credibility and usefulness
At ISS 2002 and 2012:

**Improving measurement of the prevalence of undernourishment Update**

- Improving the statistical methodology, such as use of national HH survey data to calculate the distribution of food in the country
- Improving the food balance sheet data.
- Creating a suite of indicators to provide more comprehensive information (and not to rely only on the PoU for global and also national monitoring)

SOFI now includes a comprehensive list of food security indicators
At ISS 2002 and 2012:

Use of Household (expenditure) surveys for measuring food security Update
Coordinate or Perish!
Using Household Surveys for the Measurement and Monitoring of Food Security

Gero Carletto
Living Standards Measurement Study
Development Research Group
The World Bank
Current state of household survey data collection efforts to measure and monitor global FNS

“No single indicator can properly capture FNS”

“No single survey can collect all needed indicators at right periodicity”

“No single institution has mandate/capacity/willingness to collect all needed indicators of FNS …”
Current state of household survey data collection efforts to measure and monitor global FNS

“Most countries do not have capacity/resources to collect all needed indicators …”

We need multiple (just a few!) indicators from multiple surveys carried out by multiple institutions
But, is it possible, given different agendas, coordination failures, resource constraints?

Does a (lowest) common denominator we can all agree on exist?
Strengthening Household Consumption and Expenditures Surveys to Enable More Evidence-Based Nutrition Policies

Seminar Moderator:
Jack Fiedler (HarvestPlus)
Since ISS:
Growth in the use of HCES as a diagnostic, program design or monitoring tool

- World Bank, IHSN, FAO and the EU have commissioned “Assessing food consumption surveys: A review of survey questionnaires from 100 countries”

- World Bank and FAO have released a software, ADePT-Food Security Module, which uses HCES to estimate food and nutrient availability and aims to improve the quality, consistency and availability of food security statistics derived from HCES.
Use of HCES data to identify food vehicles for fortification

USAID SPRING/ HarvestPlus feasibility of fortifying maize meal in Kenya, Uganda and Zambia

SPRING Project HCES-based analyses of the coverage and impact of:

(1) oil fortification in Bangladesh;
(2) wheat and maize flour fortification in Uganda;
(3) identification of key food sources of iron, zinc & vitamin A in Bangladesh, Uganda and Nigeria.
Theme 2: Better collection and use of individual level information
Generating evidence on individuals’ experience of food insecurity and vulnerability

AGNES QUISUMBING
Household vs. individual indicators?

• Hunger and deprivation are experienced by *individuals*, yet most indicators of food security are reported at the household level

• Identify how differences among individuals within the household—whether due to gender, age, or status within the household—affect individual food security and vulnerability (for policy use)

• Lack of attention to individual-level indicators and using proxies such as sex of the household head could be misleading
Progress in generating gender disaggregated food security statistics FAO

Promoting the collection of gender disaggregated data on land management, land ownership, ownership of productive assets, control over the resources generated by the farming activities and access to extension services and credit

Developing a database to disseminate gender disaggregated food security statistics in FAOSTAT along with the sub-national data from National Household Surveys
Theme 3:
Searching for validated, universal indicators of food and nutrition security
REACHING FOR THE STARS?:
IDENTIFYING UNIVERSAL MEASURES OF
FOOD INSECURITY

Jennifer Coates, PhD and Daniel Maxwell, PhD

Tufts Friedman School of Nutrition Science and Policy
FAO International Scientific Symposium
January 17-19, 2012
The Old Challenge

“The most problematic aspect [of determining indicators of ‘food, health, and care’] was identifying indicators of household food security.” -- Pelletier, et al. 1995

“An important constraint in evaluating the food-security impacts of food availability and access interventions is the lack of meaningful and informative indicators” -- Bonnard et al 2002.

“We do not yet have good, direct measures of food security of the third generation sort” -- Barrett 2002
A ‘4th Generation’ Question: Can We Identify Universal Food Security Measures?

What is the purpose and use of universal food security measures?

What are the criteria for a universal measure of food insecurity?

To what extent do these food security measures demonstrate cross-cultural equivalence?
Experience-based food security scales – searching for a universal measure

Eileen Kennedy - Qualitative measures of food insecurity and hunger. ISS 2002.  
(Introducing the use of the US Household Food security Survey Module in other cultures)

Advances in these types of tools used in many different settings:  
US HFSSM, HFIAS, HHS, ELCSA, CSI
Food security measurement through public opinion polls: The case of ELCSA - Mexico

Based on this study and overall ELCSA-POP experiences in Mexico, we recommend for this innovative measurement approach to be considered by all countries of the region and beyond for inclusion in POPs addressing social, health and nutrition indicators.
VOICES of the HUNGRY

AN EXPERIENCE-BASED FOOD SECURITY INDICATOR

Carlo Cafiero and Terri Ballard
FAO Statistics Division
25 March, 2013
OBJECTIVE; Develop a valid and standardized cross-culturally comparable (universal) food security tool
✓ to be used both across and within countries.

PREMISE: Food insecurity is experienced in similar ways by all people

VEHICLE:
✓ To include a Food Insecurity Experience Scale, based on the ELCSA, in the Gallup World Poll

• Covering 140+ countries annually,
• Severity of food insecurity experience measured at individual level
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2013 is a pilot year to:

1. Identify the best set of questions that work in similar ways across cultures
2. To test methods for linguistic adaptation and translation in local languages
3. To test analytic methods to ensure **scalar comparability**

(e.g. “severe” food insecurity experience means the same in Indonesia as it does in Guyana, as measured by the tool).
Women’s Dietary Diversity universal tool

Women’s Dietary Diversity Project being updated with more data sets.

Objective: To identify the optimal number of food groups and a cut point for micronutrient adequacy which can be applied universally.

Collaboration between HarvestPlus, IRD, UC Davis, FANTA, FAO.

Appropriate impact indicator for nutrition sensitive agricultural interventions along with the IYCF minimum DD indicator.

Funded by the EU-FAO Improved Global Governance for Hunger Reduction Programme (2012-2015)
Theme 4: Bringing evidence to bear on decision making
Primary objective:

To assess the effectiveness of **food based** agricultural interventions in improving the nutritional status of children in developing countries.
QUALITY OF THE STUDIES

- Selection bias issues often neglected when comparing participants with non-participants

  Power calculations rarely performed and small sample sizes

  No study analysed the heterogeneity of impact across groups or the cost-effectiveness of the intervention
CONCLUSIONS OF THE REVIEW

Food-based agricultural interventions increase the production and consumption of the food promoted

Some evidence that higher vitamin A intake from the promoted foods have a positive effect on Vitamin A status.

No impact on nutritional status of children, but studies had poor statistical power

We need to establish standards and guidelines for the impact evaluation of agricultural interventions
What is the impact of a policy brief?
Results of an experiment in research dissemination.
_Edoardo Masset, Marie Gaarder, Penelope Beynon a & Christelle Chapoy_

We collected data on opinions and knowledge regarding the impact of agricultural interventions before and after reading a brief disseminating the conclusions of a systematic review.

The brief helped some readers to form an opinion, but we found no evidence of a change in prior beliefs.
Linking information to decision making: collecting the right data

Demonstrating impact is essential....
Questions based on current theory

Key principles:
Incorporate explicit nutrition objectives and indicators into their design
Empower women
Maintain or improve the natural resource base
Facilitate production diversification, and increase production of nutritious foods
Incorporate nutrition promotion and education to enhance the impact of production and income
Expand markets and market access for vulnerable groups
Collaborate and coordinate with other sectors

Pathways

Adapted by J. Harris and A. Herforth from: Stuart Gillespie, Jody Harris, and Suneetha Kadiyala, 2012
The Agriculture-Nutrition Disconnect in India, What Do We Know? IFPRI Discussion Paper 01187
Preliminary Results: Response

75 project PIs contacted
65 responded (87%)
4 of these excluded
6 intend to complete
→ As of now, 74% completed
~10-20 more possible (referred, not in original sample)
## Preliminary Results: Indicators

<table>
<thead>
<tr>
<th>Type of measure</th>
<th>% measuring</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Food consumption or diet</td>
<td>most</td>
<td>Many measuring HDDS, WDDS, and IDDS for kids; intake of specific foods</td>
</tr>
<tr>
<td>of these, specific varieties?</td>
<td></td>
<td>Biofortified varieties; others too</td>
</tr>
<tr>
<td>Food security</td>
<td>most</td>
<td>HFIAS, HHS, seasonality, coping strategies</td>
</tr>
<tr>
<td>Knowledge or behaviors</td>
<td>most</td>
<td>Specific to project</td>
</tr>
<tr>
<td>Women’s empowerment or labor</td>
<td>some</td>
<td>Indicators somewhat unclear; a couple using/testing WEAI</td>
</tr>
<tr>
<td>Economic outcomes</td>
<td>many</td>
<td>of these, 2/3 disaggregating by gender</td>
</tr>
<tr>
<td>Nutritional status</td>
<td>most</td>
<td>stunting, underweight, BMI, anemia, indicators of VAS</td>
</tr>
<tr>
<td>Link with water, health, or sanitation</td>
<td>*</td>
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Preliminary Results: Design

Most are measuring in a comparison population
Most are collecting qualitative data
Sample sizes range from 120 to 4000
Early conclusions and questions

Focus is on nutrition impact among producers
Total shift from previous generation of research regarding measurement of diet quality
Newly developed indicators get used
High number of studies measure nutritional status, but available sample sizes may not be adequately powered
Seem to be attention to program impact pathways
Indicators chosen mostly because important to project goals, or evaluates a specific aspect of project
Interest in support for: “Adapting indicators to fit your particular study activities and aims”

- What does this sample represent?
- What about evidence of ag impact on population nutrition?