

# Regional Issues for Integrated Censuses and Surveys

## Food Security



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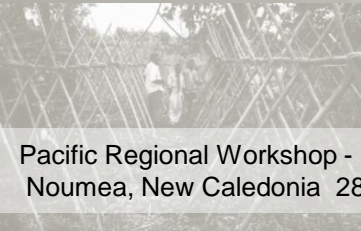
# Food Security Concepts

- “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit, 1996)



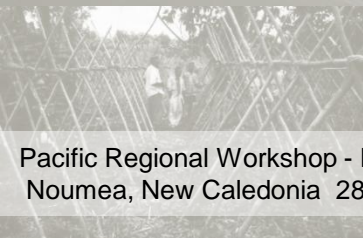
# Definitions

- Hunger – lack of calories
- Malnutrition – undernutrition, obesity and overweight, and micronutrient deficiency



# Four Dimensions

- Food availability
- Food access
- Utilization
- Stability



# Food Availability

- *The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports*
- Addresses “supply side” of food security
- Determined by level of food production, processing by food industry stock levels and net trade.
- Measured using Food Balance Sheets



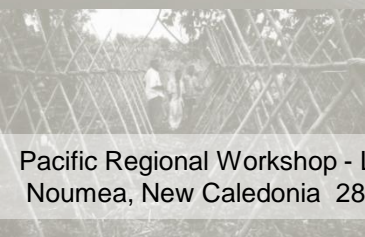
# Food Access

- *Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet*
- Entitlements: commodity bundles a person can access given the legal, political, economic and social arrangements of their community (including traditional rights such as access to common resources)
- Defined by financial but also legal, political, and social rights and restrictions
- Covers own consumption, commercial, public distribution schemes and food aid



# Utilization

- *Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met*
- Important non-food inputs in food security
- Related to health, body's uptake of food and nutrients etc





# Stability

- *To be food secure, a population, household or individual must have access to adequate food at all times*
- Access to food stable under sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity)
- Refer to both availability and access dimensions



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# Key Questions for Analysis

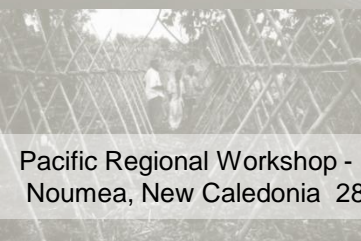
## Food insecurity

- Who are the nutrition insecure?
- Who are the food insecure?
- How many?
- Where do they live?
- What are the causes of their food and nutrition insecurity?

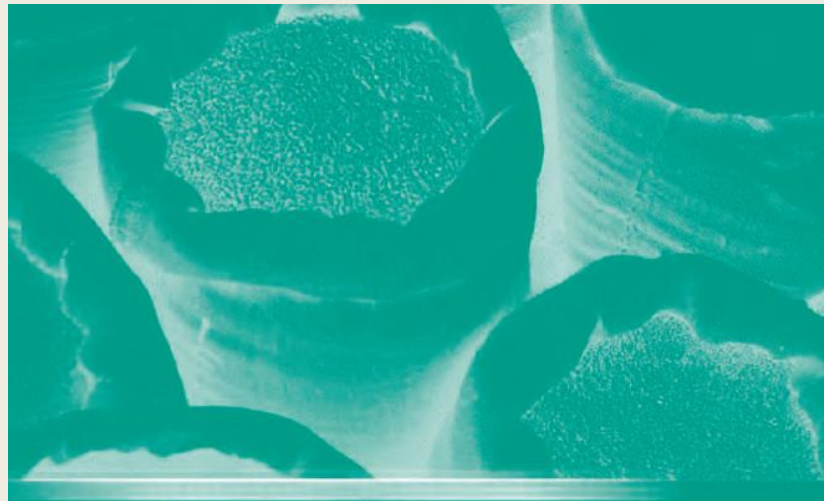
Duration  
and  
Severity

## Vulnerability

- Who is vulnerable and where they are located?
- What are the major risks they face?
- What risk management strategies are used and how effective are they? COPING STRATEGIES



# Food Security Analysis



## Integrating Food Security Information in National Statistical Systems

Experiences, Achievements, Challenges



# Food Security Summary

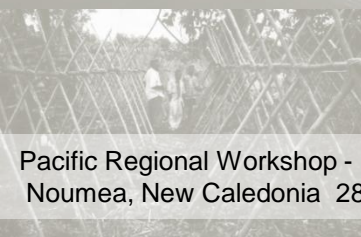
Example of some selected indicators of food security by sub group of population:

<i>Selective food consumption statistics</i>						
Region: XXXXX Country: XXXXX Year: XXXX						
Categories and Groupings	Number of sampled households	Average number of people in household	Average food consumption in dietary energy value (kcal/person/day)	Average food consumption in monetary value (LC\$/person/day)	Average dietary energy unit value (LC\$/1000kcal)	Average total consumption (LC\$/person/day)
Nationwide	15439	6.8	1910	20.82	10.92	38.34
Income level						
Quintile 1	3087	8.4	1590	13.41	8.42	17.83
Quintile 2	3088	7.5	1830	17.31	9.47	25.53
Quintile 3	3088	6.8	1960	20.21	10.29	32.86
Quintile 4	3091	6.2	2050	23.66	11.57	44.15
Quintile 5	3085	5.4	2250	34.47	15.34	88.00
Area						
urban	6235	6.7	1760	23.10	13.10	52.80
rural	9204	6.9	1980	19.66	9.94	31.02
Household size						
1-4 persons	3240	3.1	2320	29.98	12.90	59.00
5-6 persons	4160	5.5	2030	23.56	11.59	46.33
7 - 9 persons	5056	7.8	1850	19.29	10.41	34.58
10 and more	2983	12.5	1730	17.35	10.05	29.57
Gender of head of household						
male	14313	7.0	1890	20.64	10.91	37.78
female	1126	4.9	2110	23.47	11.14	46.62
Age of head of household						
under 35 years	3208	5.7	1890	20.51	10.88	36.51
35 - 45 years	5181	6.9	1840	19.83	10.76	37.18
46 - 60 years	4793	7.4	1950	21.49	11.02	40.19
more than 60 years	2257	7.3	1970	21.86	11.11	39.02
Economic activity of head of household						
self employed- e	2866	7.0	1840	21.44	11.64	45.34
paid employee	6395	6.5	1790	19.70	11.00	38.26
Own cultivator	2034	7.3	2180	22.94	10.50	32.74
Other workers	1417	7.4	2000	19.24	9.64	26.72
Not working	2727	6.7	1920	21.56	11.25	42.95
Region						
Region1	6678	6.5	1980	21.57	10.91	39.43
Region2	3769	7.0	1700	20.02	11.75	39.71
Region3	2948	8.0	2030	20.05	9.86	35.23
Region4	2044	7.5	1730	18.47	10.66	28.25
Area-Income						
urban - Quintile 1	1247	8.5	1460	13.65	9.35	23.00
urban - Quintile 2	1245	7.7	1640	17.71	10.83	32.99
urban - Quintile 3	1247	6.7	1780	21.40	12.05	43.55
urban - Quintile 4	1249	5.9	1920	27.04	14.12	60.65
urban - Quintile 5	1247	4.9	2200	42.85	19.49	131.34
rural - Quintile 1	1840	8.6	1580	12.92	8.20	16.44
rural - Quintile 2	1839	7.4	1850	16.65	9.01	22.58
rural - Quintile 3	1845	7.1	2020	19.33	9.57	28.15
rural - Quintile 4	1839	6.8	2160	22.67	10.50	35.83
rural - Quintile 5	1841	5.6	2430	29.66	12.19	59.62

# Micronutrient Consumption

Daily average micronutrient consumption by gender of head of households and selected population groupings (2005/06 UNHS) (Uganda)

Populations groupings	Average food protein consumption (g/person/day)		Average food carbohydrates consumption (g/person/day)		Average food fat consumption (g/person/day)	
	MHH	FHH	MHH	FHH	MHH	FHH
<b>Uganda</b>	47.9	47.2	366.8	358.2	25.7	25.1
<b>Income level</b>						
Quintile 1	33.2	32.1	239.3	228.9	13.2	13.6
Quintile 2	41.4	41.6	326.6	328.8	18.5	17.3
Quintile 3	50.2	49.5	401.2	387.6	24.7	24.1
Quintile 4	57.4	56.8	442.1	434.0	33.1	31.5
Quintile 5	65.4	64.1	481.9	473.4	48.0	46.7
<b>Area</b>						
Urban	52.1	49.7	365.5	355.1	38.6	34.7
Rural	47.2	46.7	367.0	358.9	23.4	23.0
<b>Household size</b>						
One member	81.4	80.6	594.7	566.4	55.0	53.9
Two members	69.1	60.0	502.1	444.3	44.4	35.2
Three to five	51.4	50.7	370.3	366.7	28.8	26.7



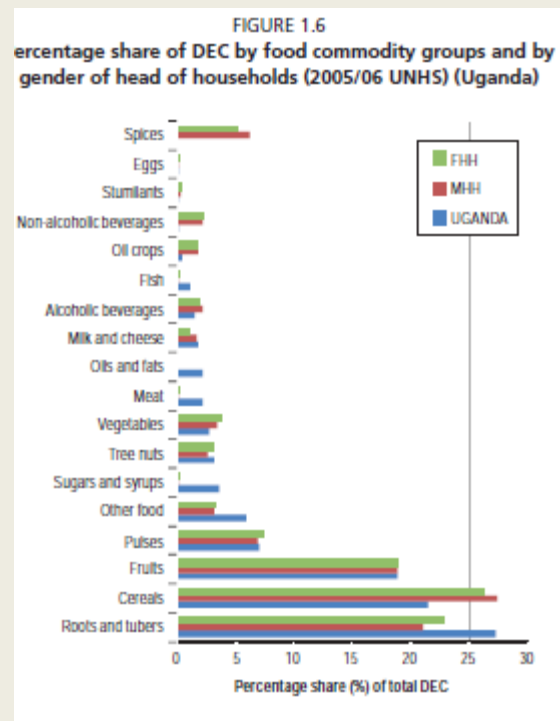
# Food Quantity

Food quantity and DEC by main food items (2005/06 UNHS) (Uganda)

Food Item	Quantity consumed (g/person/day)	Dietary energy consumption (kcal/person/day)	Share of total dietary energy consumption (%)
Matooke	279.60	350	18
Maize flour	69.10	247	12
Sweet potatoes, fresh	264.60	188	9
Cassava, fresh	145.40	171	9
Cassava, dry/flour	43.20	136	7
Beans, dry	45.90	128	6
Sugar	18.10	72	4
Millet	16.70	53	3
Rice	13.20	46	2
Cooking oil	4.90	44	2
Sorghum	11.50	41	2
Milk, fresh	57.30	35	2
Ground nuts, pounded	5.40	32	2
Sweet potatoes, dry	8.60	32	2
Beef	13.30	29	1
Maize grains	6.70	25	1
Alcoholic drinks	9.90	25	1
Ground nuts, shelled	3.80	23	1



# Food Diet Composition



# Food Security Items

## FOOD INSECURITY SITUATION

- Food Consumption module of HIES
  - Range of indicators
- Proxy – dietary diversity
- Proxy – perceptions of food sufficiency and security
  - Uncertainty or anxiety over food supply or food shortage
  - Perception of inadequate quality or quantity
  - Adults reducing food intake
  - children reducing food intake
- Proxy – Number of meals per day



# Food Security Items

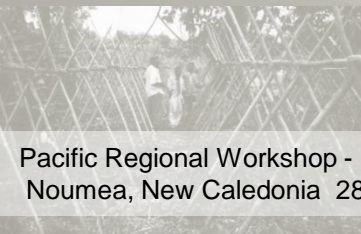
## VULNERABILITY,

- Diversity of income sources
  - No of different household income
  - No of different crops grown
- Food self sufficiency
  - No of months of year with food shortage

## COPING STRATEGY, CAUSES,

### Reasons for food shortage

- How the household's eating patterns were affected by food shortage
- Steps taken to alleviate food shortage
- Frequency of normally eating selected food products
- Effects of natural disasters
- Extent of loss of agricultural output due to natural disasters



# Food Security Survey of Georgia 2005

## 2. Dietary profile<sup>f</sup>

How many meals normally does your household take daily?

What did you/ your household eat during last 24 hours?

Food categories	Yes /No	Leading Source (use codes)	Usual share of the leading source in total consumption (Report %)
1. Cereals			
2. Roots and tubers			
3. Vegetables			
4. Fruits			
5. Meat, poultry, offal			
6. Eggs			
7. Fish and sea foods			
8. Pulses/legumes/nuts			
9. Milk/ milk products			
10. Oil/ Fats			
11. Sugar/ honey			
12. Soft drinks			
13. Beverages			
14. Alcohol			
15. Others			

**Codes for the Leading Source:**

1: Home grown; 2: Purchases; 3: Others

Note: It is better to ask this question to the lady the house and ask about the household as a whole.

## 3. Vulnerability to hunger and coping strategy<sup>g</sup>

3a. In the last 12 months, was there a time when you feared that you would not have enough food for members your household?

(Please check out the box next to the response below)

1. Yes often      2. Yes sometimes      3. No

3b. When your household feared that you would not have enough food, on what did you rely mostly to get the food you needed?

(To be asked if answer to question 3a is "yes")

(Rank three most important actions in the next column)

Postponed other pressing needs to buy food	1
Took additional work locally to get money	2
Earning member(s) migrated for work	3
Sent children to relatives	4
Accepted help from friends and relatives	5
Borrowed food	6
Borrowed money at unaffordable interest rates	7
Mortgaged an asset	8
Distress sale of asset (s)	9
Accepted gifts (charitable)	10
Whole household migrated	11
Did some thing which one would not do normally	12
Could not do any thing	13

ensuses



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# Food Security Survey of Georgia 2005

4. Food Insecurity situation (To be asked if answer to question 3a is "yes")			
<b>4a. During the last 12 months was there any occasion that your household not provided with of the food they normally eat?</b>			
1. Yes		2. No	
<b>4b. How was food availability in your household during the last 12 months. Please indicate the level for each month. (Assign suitable code to each month)</b>			
1. January		2. February	
3. March		4. April	
5. May		6. June	
7. July		8. August	
9. September		10. October	
11. November		12. December	
<b>Codes:</b> 1: Sufficient; 2: Some shortage; 3: Extreme shortage			
<b>4c. Do you usually<sup>h</sup> experience the food shortage in these months or about the same time of the year?</b> (Not to be asked if responses to all the months in the question 4b is "Sufficient (code1)")			
Yes		No	
<b>4d. What did your household do in months of food shortage? (Use Codes)</b>			
<b>Codes:</b> 1: Ate less of normal food; 2: Ate same quantity of cheaper foods; 3: Ate less of cheaper food.			



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# Food Security Survey of Georgia 2005

## 5. Causes<sup>i</sup> of Food Insecurity

(To be asked if answers to questions 3a and 3b are "yes")

5a. What were the main causes of food shortage experienced by your household?

(No restriction on number of responses)

	Last year	Recurrent <sup>j</sup>
<i>Agriculture related causes</i>		
1. Loss of productive asset (animal/ land)		
2. Milk animal becoming dry		
3. Shortage of money to buy agricultural inputs		
4. Absence of timely availability of agricultural inputs		
a. Seeds		
b. Fertilizer and pesticides		
c. Petrol/diesel		
d. Electricity		
e. Agricultural machinery		
g. Agricultural credit		
h. Water for irrigation		
i. Shortage of fodder		
5. Crop losses due to bad weather		
6. Crop losses due to pest attack		
7. Lower income due to sudden fall of prices of agricultural out		

put		
8. Inability to cultivate/harvest land due to lack of labour		
9. Absence of buyer for produce		
10. post harvest losses		
10. Poor quality of crop land		
11. Lack of access to animal health care services		
12. Lack of pasture land		
<i>Aquaculture related causes<sup>k</sup></i> (to check)		
<i>Causes related to rural industries</i> (to check)		
<i>Shocks</i>		
13. Loss of wage employment		
14. Death/prolonged sickness of an income earner		
15. Un-affordable food prices		
16. Market disruption		



# WCA 2010

## Coping strategy , Causes, Duration and Severity – Malawi HIES

<b>H01</b> In the past 7 days, did you worry that your household would not have enough food?  YES...1 NO...2	<b>H02</b> In the past 7 days, how many days have you or someone in your household had to: IF NO DAYS, RECORD ZERO.					<b>H03</b> How many meals, including breakfast are taken per day in your household?		<b>H04</b> In the last 12 months, have you been faced with a situation when you did not have enough food to feed the household?  YES..1 NO..2 >>NEXT MODULE
	a. Rely on less preferred and/or less expensive foods? DAYS	b. Limit portion size at meal-times? DAYS	c. Reduce number of meals eaten in a day? DAYS	d. Restrict consumption by adults in order for small children to eat? DAYS	e. Borrow food, or rely on help from a friend or relative? DAYS	a. Adults NUMBER	b. Children (6-59 months) LEAVE BLANK IF NO CHILDREN NUMBER	

**CODES FOR H06:**

Inadequate household stocks due to drought/ poor rains.....1

Inadequate household food stocks due to crop pest damage....2

Inadequate household food stocks due to small land size.....3

Inadequate household food stocks due to lack of farm inputs..4

Food in the market was very expensive.....5

Unable to reach the market due to high transportation costs.....6

No food in the market.....7

Floods/water logging.....8

Other (Specify).....9

<b>H05</b> When did you experience this incident in the last 12 months? MARK X IN EACH MONTH OF 2009 AND 2010 THE HOUSEHOLD DID NOT HAVE ENOUGH FOOD LEAVE CELL BLANK FOR FUTURE MONTHS FROM INTERVIEW DATE OR MORE THAN 12 MONTHS AGO FROM INTERVIEW DATE.												<b>H06</b> What was the cause of this situation?  LIST UP TO 3 IN ORDER OF IMPORTANCE; USE CODES ON THE RIGHT.			
2009										2010					
Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb				
2010										2011		a. 1ST	b. 2ND	c. 3RD	
Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			

# Food Security Indicators to understand food security situation

- [Availability](#)
- [Access](#)
- [Utilization](#)
- [Stability](#)

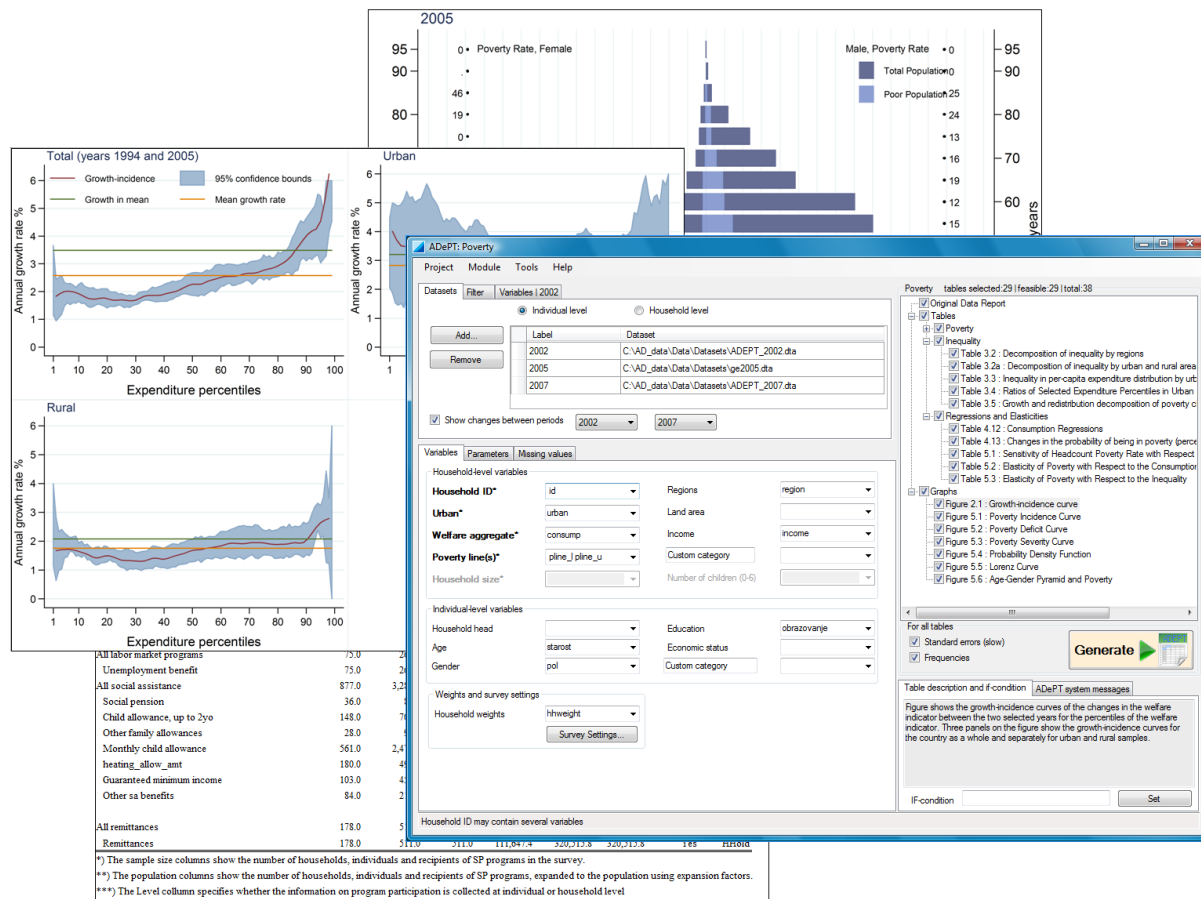


# Indicators from Household Consumption Surveys

- Derived from the FAO Food Security Statistics Module (FSSM)
- Software for development of the MDG indicator : prevalence of undernourished
- Other indicators are a byproduct
- Using food consumption data from household surveys
- Needs additional nutrient conversion tables, food composition to calorie tables and household data – sex, age etc for each item



# ADePT Software



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# Levels of Indicators

- Data Processing - Direct HIES, conversion to energy and nutrients
- L1 Quantities and values of food for household consumption in relation to total expenditure
- L2 Estimation of Dietary Energy Consumption – conversion of L1 quantities (or estimates of quantities) to kilocalories
  - Breakdown into DEC from protein, fat and carbohydrate and alcohol; unit costs and elasticity of energy
- L3 Estimation of Essential Amino Acids – conversion of quantities to EAA (vitamins and minerals)



# Indicators: Availability

## L1

- Average food consumption in monetary value (LC\$/person/day)
- Average total consumption expenditures (LC\$/person/day)
- Average total income (LC\$/person/day)

## L2

- Average food consumption in dietary energy value (kcal/person/day)
- Average dietary energy unit value (LC\$/1000kcal)
- 



## Indicators: Availability (2)

### L1

- Share of food expenditures to total consumption expenditure (%)
- Share of food expenditures from purchased to total food consumption expenditures (%)
- Share of food expenditures from own production to total food consumption expenditures (%)
- Share of expenditures of food eaten away from home to total food consumption expenditures (%)
- Share of food expenditures from other sources to total food consumption expenditures (%)



## Indicators: Availability (3)

### L2

- Share of food dietary energy from purchased to total food dietary energy consumption (%)
- Share of food dietary energy consumption from own production to total food dietary energy consumption (%)
- Share of food dietary energy consumption eaten away from home to total food dietary energy consumption (%)
- Share of food dietary energy from other sources to total food dietary energy consumption (%)



# Utilization: Quality of Diet

## L2

- Average food protein consumption (g/person/day)
- Average food carbohydrates consumption (g/person/day)
- Average food fat consumption (g/person/day)
- Cost of 100g of proteins (LC\$/100g)
- Cost of 100g of carbohydrates (LC\$/100g)
- Cost of 100g of fats (LC\$/100g)
- Share of calories from proteins in total calories (%)
- Share of calories from fats in total calories (%)
- Share of calories from carbohydrates (incl. fiber) in total calories (%)
- Share of animal protein in total protein consumption (%)



# Food Access: Inequality of food Consumption

## L2

- CV of dietary energy consumption (%)
- CV of food consumption expenditures (%)
- GINI of Income (%)
- GINI of dietary energy consumption (%)
- Dispersion ratio of dietary energy consumption (80/20)
- Dispersion ratio of food consumption expenditures (80/20)
- Dispersion ratio of total consumption expenditures (80/20)
- Dispersion ratio of income (80/20)
- Income elasticity of dietary energy consumption (%)
- Income elasticity of food consumption expenditures (%)



# Designing a food consumption module suitable for food security

- FAO, IHSN, World Bank project (HBS/HIES)
- Assess suitability of HIES for food security data and indicators
- Publically available surveys and data from WB and IHSN portal
- No standard guidelines: inconsistent methodologies in countries, scope, coverage, frequency and timing
- Lack of relevance and poor reliability of data
- Poor comparability over time and across countries



# Designing a food consumption module for food security (2)

- HIES main objective: consumer price index basket of goods
- Other objectives
  - Repurposed food fortification programs
  - Assessing food security and food diversity availability of macro and micronutrients
  - Purchasing power parities
  - Spatial price differences
- CONSULTATION WITH STAKEHOLDERS: Balance with need for CPI



# Food Consumption Module Form

DATA ENTRY LINE NUMBER	Over the past one week (7 days), did you or others in your household consume any [ . . ]?  INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	G01  YES...1 NO...2>> NEXT ITEM	G02  ITEM CODE	G03 How much in total did your household consume in the past week?		G04 How much came from purchases?		G05 How much did you spend?	G06 How much came from own-production?		G07 How much came from gifts and other sources?	
				QUANTITY	UNIT	QUANTITY	UNIT	MR	QUANTITY	UNIT	QUANTITY	UNIT
1	Cereals, Grains and Cereal Products											
2	Maize <i>ufa mgaiwa</i> (normal flour)		101									
3	Maize <i>ufa</i> refined (fine flour)		102									
4	Maize <i>ufa madeya</i> (bran flour)		103									
5	Maize grain (not as <i>ufa</i> )		104									
6	Green maize		105									
7	Rice		106									
8	Finger millet ( <i>mawere</i> )		107									
9	Sorghum ( <i>mapira</i> )		108									
10	Pearl millet ( <i>mchewere</i> )		109									
11	Wheat flour		110									
12	Bread		111									
13	Buns, scones		112									
14	Biscuits		113									
15	Spaghetti, macaroni, pasta		114									
16	Breakfast cereal		115									
17	Infant feeding cereals		116									
18	Other (specify)		117									

**CODES FOR UNIT:**

KILOGRAMME . . . . 1  
 50 KG. BAG . . . . 2  
 90 KG. BAG . . . . 3  
 PAIL (SMALL) . . . 4  
 PAIL (LARGE) . . . 5  
 No. 10 PLATE . . . 6  
 No. 12 PLATE . . . 7  
 BUNCH. . . . . 8  
 PIECE. . . . . 9  
 HEAP . . . . . 10  
 BALE . . . . . 11  
 BASKET (DENGU)  
 (SHELLED) . . . . 12  
 BASKET (DENGU)  
 (UNSHELLED) . . . 13  
 OX-CART  
 (UNSHELLED) . . . 14  
 LITRE. . . . . 15  
 CUP. . . . . 16  
 TIN. . . . . 17  
 GRAM . . . . . 18  
 MILLILITRE . . . 19  
 TEASPOON. . . . 20  
 BASIN. . . . . 21  
 SATCHET/TUBE. . 22  
 OTHER (SPECIFY) . 23

# What to collect:

## Acquisition or Consumption Survey

- Acquisition – food brought into the household over the time period
  - For own production reporting is on food actually consumed by household members not that harvested and not consumed
- Consumption – food actually consumed by the household
- Includes food from sources purchased, production and gifts
- Consumption better indicator of food access
  - More difficult to collect: recall is more difficult
  - Requires trained enumerators, daily diaries, frequent visits from enumerators
- But Food acquired is more often collected



# Stocks

- Food acquired during one period is not all consumed during the same period
- For food acquired important to collect information on beginning stocks and ending stocks
- Taking food acquired and including stock variation allows calculation of food consumed over the period



# What to collect: Quantities or Expenditures

- Ideally both food quantities and food expenditures should be collected
  - At least one is essential
  - Necessary for indicator per capita daily dietary consumption
- Record unit of measurement and conversion factors
  - Needed for conversion of quantities to kilocalories
- Expenditure – lowest cost and burden for respondent and enumerator
  - But needs converting to quantities
  - Requires estimation for conversion to quantities
- Prices for conversion to quantities
  - Prices should be at sub national level
  - Prices should be available for all the food items included in the food consumption module e.g. average price of rice vs price of different varieties of rice
  - Prices should be from same survey period as HIES survey



# What to collect:

## Quantities or Expenditures Enumeration Issues

### Quantities

- Quantities harder to enumerate than expenditure
- Requires more skilled enumerators and greater support to respondents

### Expenditures

- Difficult to estimate expenditure when most food is from own production
- Supplementary data on market prices is needed to convert to quantities



# Unit of Measurement of Food quantities

- Can be collected in local units or standard units
- Collection of metric units rarely feasible
- Local unit of measurement give better recall of quantities
- Requires additional metric weight for conversion of each food in each unit of measure reported
- Can be collected as part of the household survey
  - Local units may vary from village to village. May require collection for several areas

## CODES FOR UNIT:

KILOGRAMME	. . . . .1
50 KG. BAG	. . . . .2
90 KG. BAG	. . . . .3
PAIL (SMALL)	. . . . .4
PAIL (LARGE)	. . . . .5
No. 10 PLATE	. . . . .6
No. 12 PLATE	. . . . .7
BUNCH.	. . . . .8
PIECE.	. . . . .9
HEAP	. . . . .10
BALE	. . . . .11
BASKET (DENGU)	
(SHELLED)	. . . . .12
BASKET (DENGU)	
(UNSHELLED)	. . . . .13
OX-CART	
(UNSHELLED)	. . . . .14
LITRE.	. . . . .15
CUP.	. . . . .16
TIN.	. . . . .17
GRAM	. . . . .18
MILLILITRE	. . . . .19
TEASPOON.	. . . . .20
BASIN.	. . . . .21
SATCHET/TUBE.	. . . . .22
OTHER (SPECIFY)	. . . . .23



# Food Sources

- Purchase, own production, gifts, food eaten away from home
- Allows assessment of sustainability of food security and vulnerability to shocks
- Should collect for each food item
- Own production – only record what was consumed during the recall period not total harvest



# Foods Eaten Away From Home

- Food away from home - difficult to estimate quantities and food items
- Recommended: Respondents identify dishes consumed
  - Additional information from vendors on ingredients and prices
- Simple method: total expenditure on food away from home
- Calories of FEAH estimated by expenditure / price per calorie of food acquired for consumption at home
- Problems with the simple method:
  - Food consumed outside not same as that eaten at home
  - Food outside more expensive due to preparation costs
  - Food outside has a wider variety of food groups than that at home



# What to collect diary or food list

- Diary or questionnaire
- Diary: some similar issues
  - Consumption or acquisition; quantities or expenditure; units of measurement etc.
- Diary can allow for detailed recording of items produced
- Major issue for data quality – highly dependent on quality of enumeration
- Diary requires a literate household member or frequent visits,
- May not be complete for reference period
- Requires supervision to ensure completion for entire reference period
- May not be completed daily – compromises the advantages of a short recall period



Over the past one week (7 days), did you or others in your household consume any [ . . ]?	Over the past one week (7 days), did you or others in your household consume any [ . . ]?	Over the past one week (7 days), did you or others in your household consume any [ . . ]?	Over the past one week (7 days), did you or others in your household consume any [ . . ]?	Over the past one week (7 days), did you or others in your household consume any [ . . ]?
INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.	INCLUDE FOOD BOTH EATEN COMMUNALLY IN THE HOUSEHOLD AND THAT EATEN SEPARATELY BY INDIVIDUAL HOUSEHOLD MEMBERS.
<b>Cereals, Grains and Cereal Products</b>	<b>Nuts and Pulses</b>	<b>Meat, Fish and Animal products</b>	<b>Cooked Foods from Vendors</b>	<b>Beverages</b>
Maize <i>ufa mgaiwa</i> (normal flour)	Bean, white	Eggs	Maize - boiled or roasted (vendor)	Tea
Maize <i>ufa</i> refined (fine flour)	Bean, brown	Dried fish	Chips (vendor)	Coffee
Maize <i>ufa madeya</i> (bran flour)	Pigeonpea ( <i>nandolo</i> )	Fresh fish	Cassava - boiled (vendor)	Cocoa, millo
Maize grain (not as <i>ufa</i> )	Groundnut	Beef	Eggs - boiled (vendor)	Squash (Sobo drink concentrate)
Green maize	Groundnut flour	Goat	Chicken (vendor)	Fruit juice
Rice	Soyabean flour	Pork	Meat (vendor)	Freezes (flavoured ice)
Finger millet ( <i>mawere</i> )	Ground bean ( <i>nzama</i> )	Mutton	Fish (vendor)	Soft drinks (Coca-cola, Fanta, Sprite, etc.)
Sorghum ( <i>mapira</i> )	Cowpea ( <i>khobwe</i> )	Chicken	<i>Mandazi</i> , doughnut (vendor)	Chibuku (commercial traditional-style beer)
Pearl millet ( <i>mchewere</i> )	Macademia nuts	Other poultry - guinea fowl, doves, etc.	Samosa (vendor)	Bottled water
Wheat flour	Other (specify)	Small animal - rabbit, mice, etc.	Meal eaten at restaurant	Maheu
Bread	<b>Vegetables</b>	Termites, other insects (eg Ngumbi, caterpillar)	Other (specify)	Bottled / canned beer (Carlsberg, etc.)
Buns, scones	Onion	Tinned meat or fish	<b>Milk and Milk Products</b>	Thobwa
Biscuits	Cabbage	Smoked fish	Fresh milk	Traditional beer ( <i>masese</i> )
Spaghetti, macaroni, pasta	<i>Tanaposi/Rape</i>	Fish Soup/Sauce	Powdered milk	Wine or commercial liquor
Breakfast cereal	<i>Nkhwani</i>	Other (specify)	Margarine - Blue band	Locally brewed liquor ( <i>kachasu</i> )
Infant feeding cereals	Chinese cabbage	<b>Fruits</b>	Butter	Other (specify)
Other (specify)	Other cultivated green leafy vegetables	Mango	<i>Chambiko</i> - soured milk	<b>Spices &amp; Miscellaneous</b>
<b>Roots, Tubers, and Plantains</b>	Gathered wild green leaves	Banana	Yoghurt	Salt
Cassava tubers	Tomato	Citrus - naartje, orange, etc.	Cheese	Spices
Cassava flour	Cucumber	Pineapple	Infant feeding formula (for bottle)	Yeast, baking powder, bicarbonate of soda
White sweet potato	Pumpkin	Papaya	Other (specify)	Tomato sauce (bottle)
Orange sweet potato	Okra / <i>Therere</i>	Guava	<b>Sugar, Fats, and Oil</b>	Hot sauce (Nali, etc.)
Irish potato	Tinned vegetables (specify:	Avocado	Sugar	Jam, jelly
Potato crisps	Mushroom	Wild fruit ( <i>masau, malambe, etc.</i> )	Sugar Cane	Sweets, candy, chocolates
Plantain, cooking banana	Other vegetables (specify:	Apple	Cooking oil	Honey
Cocoyam ( <i>masimbi</i> )	Other fruits (specify)		Other (specify)	Other (specify)
Other (specify)				

## What to collect: Food list

- Should reflect the consumption pattern of the population
- Short lists with only food groups tends to reduce quantities and expenditure reported
  - Also don't allow clear attribution of kilocalories and macronutrient quantities
  - Length of list of food items balanced by respondent fatigue
- Similar foods with different calorie contents should be listed as distinct items – enable conversion to calories
- If collecting expenditures separate listing of different versions of the same food with different prices
  - Allows conversion to metric quantities
- Separate food and non food items
- Avoid residual categories which don't allow food identification
  - All other foods etc.

# Enumeration

- Long recall period – difficulty in remembering food acquired
  - Downward bias to estimates
- Short recall period – more reliable but biased by special events, telescoping, particular conditions
- Usually 1-2 weeks
  - Some findings suggest 7 days similar results to diary
- Usual food consumption – requires several visits over time, either panel or splitting the sample
  - Collection during “normal” period of the year

