

# **FAO Methodology on Supply Utilization Accounts (SUAs) and Food Balance Sheet (FBS)**



# Background



- Food Balance Sheet 1<sup>st</sup> attempt.
- FAO encourage countries to develop their own FBS.
- Published regularly.



## **Supply and Utilization Accounts (SUAs)**

- Statistical framework for food and agricultural commodities.
- Also provide data for the supply and utilization. These two elements are part of FBS.

# What are SUAs?

- Time series data on;
  - ✓ supply (production, imports, stocks)
  - ✓ utilization (exports, feed, seed, food and other use)  
which are kept together to allow the matching of food availability for human consumption.
  
- Basis of statistics for food and agricultural commodities - traced from production, utilization to consumption.
  
- Constructed for primary crops, livestock and fish commodities.
  - ✓ Crops - data up to 1<sup>st</sup> stage
  - ✓ Livestock & fish – 2<sup>nd</sup> stage

## Preparation of SUAs

- ❑ Draw up a list of relevant food and agricultural commodities
  - ❑ [http://www.fao.org/DOCREP/003/X9892E/X9892e02.htm#P117\\_27534](http://www.fao.org/DOCREP/003/X9892E/X9892e02.htm#P117_27534)
- ❑ Search for data.
- ❑ Choose a suitable reporting units – use metric system.

## Sources of Data

- Basic data should be obtained from one authority
  - Comprehensive statistical system
  - Concepts should be for FBS
  - Consistent information

## Sources of data...cont'

- Production – National statistics office, Ministry of Agriculture.
- Trade – National statistics office
- Stock changes – Marketing authorities, factories or farmer stock surveys.
- Feed & Seeds – Production surveys or estimates by govt.
- Waste – Manufacturing surveys.
- Industrial use – Manufacturing surveys
  
- ❖ Estimation of missing data necessary

# Standard SUAs for Crops

<b>Supply</b>	<b>Utilization</b>
<b>01. Production</b>	<b>04. Addition to stocks</b>
<b>02. Imports</b>	<b>05. Exports</b>
<b>03. Withdrawal from stocks</b>	<b>06. Feed</b>
	<b>07. Seed</b>
	<b>08. Waste</b>
	<b>09. Processing for food</b>
	<b>10. Food availability</b>
	<b>11. Other utilization</b>

**Note:**

**Only the basic or essential elements of an account are used in the equation for SUAs.**



# SUAs Equation

## □ Supply = Utilization

Inter-related in a balancing equation

Possibilities for defining Supply:

1. Production+Imports+From stocks =  
Exports+feed+seed+waste+processing for  
food+food+other use.
  2. Production+Imports =  
Exports+feed+seed+waste+processing for  
food+food+other use+to stocks.
  3. ***Production+Imports-Exports+change in stocks  
=supply for domestic utilization.***
- ❖ FAO adopted no.3 for FBS



# Worksheet – Supply & Utilization

Thousand metric tons

Commodity	Supply					Domestic Utilization					
	Production	Change in stock	Imports	Exports	Available supply	Feed	Seed	Food Manufacturers	Other uses	Waste	Food
	1	2	3	4	5	6	7	8	9	10	11
Wheat	3790	-140		359	3291	250	224	2652		165	
Wheat flour	1989		44	73	1960					59	1901
Rice paddy	629				629		25	585		19	
Rice milled	392	+35		77	350					11	339

# Advantage of SUAs

- Internally consistent – provide a check on data supplied by various sources.
- Tool to choose between alternative sources of data & logical framework to estimate missing data.

# Use of SUAs

- Production index numbers, trade & supply – indicator for reviewing agricultural progress.
  
- Self-sufficiency ratio and import dependency ratio.
  
- Food balance sheets.

# What is FBS?

- Measure of food supply in the population
- Shows quantities and types of food available for human consumption
- Sources of supply and utilization
- Show trends in the food supply over time
- Pattern of the diet
- Nutritional requirements
- Food dependency

# FBS Components

- FBS made up of 3 sets of data
  - **Supply**
    - ✓ Production, imports and change in stocks
  - **Utilization**
    - ✓ Exports, feed, seed, food and other use
  - **Per capita food supply**
    - ✓ Population and nutrient content – calories, protein and fat

# Remarks

- Food balance sheets provide data on **food supplies**.
- The accuracy of food balance sheets, which are in essence **derived statistics**, is of course dependent on the reliability of the underlying statistics of supply and utilization of food and of population.
- Production statistics may not be available for **all commodities needed**.
- Import and export data may be reasonably accurate in the majority of countries, but in some countries significant amounts of trade across national boundaries go unrecorded.

## Remarks (continuation)

- A number of **adjustments on the basic data** as well as imputations/estimations of the missing data have to be carried out in the preparation of the Food Balance Sheet.
- Once estimates of the other components have been made, **the estimate of food available for human consumption** is usually derived as a residual according to the following equation:

Food available for human consumption =

Total food supply - Feed - Seed - Industrial uses -  
Waste.



# Limitations

- Coverage/representativeness of the basic data
- Gaps in statistics of utilization of non-food use
- Incompleteness and inaccuracy of the basic data
- Under-reporting
- Population data
- Data from different sources
- No indication of differences exist in the diet by different population group



## **FBS is an instrument for policy analysis and decision-making.**

- ❑ FBS are useful for:
  - Appraisal of food and agricultural situation in a country.
  - Estimating overall shortages and surpluses based on normative food needs expressed in terms of energy as well as proteins, carbohydrates and fats.
  - Developing projections of future food supply needs.
  - Establishing relationships between national food supplies & malnutrition.
  - Evaluating food and nutrition policies.
  - Basis for the policy analysis to ensure food security.

- Food balance sheets provide data on the national average of food supplies.
- In the absence of data from household surveys, food balance sheet data provide a good proxy for food consumption levels of the population as a whole.
- The FBS provides keys message of the production, trade, consumption of the commodities groups selected in the country.

Metadata of Food Balance Sheet is considered as the high importance for the users and producers of this important tool in the Food Security area.

- A few country examples where the Food Balance Sheet is used for policy makers:  
One of them in EUROSTAT is  
– Austria

[http://www.statistik.at/web\\_en/statistics/agriculture\\_and\\_forestry/prices\\_balances/supply\\_balance\\_sheets/index.html](http://www.statistik.at/web_en/statistics/agriculture_and_forestry/prices_balances/supply_balance_sheets/index.html)

- <http://faostat.fao.org/default.aspx>
- <http://faostat.fao.org/site/368/default.aspx#anchor>



THANKS FOR YOUR ATTENTION