



## International Workshop on Compilation of Grain Balance Sheets

Xi'an, China, 16 - 17 April 2018

### *Country Experience on the Compilation of Food Balance Sheet (FBS) in Myanmar*

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# **Outline of Presentation**

- Concept of Food Balance Sheet
- *Food Balance Sheet (FBS) of Myanmar & FAO Collaboration*
- *STEP1: Technical Working Group Identify in Compiling FBS*
- *STEP2 : Conducting of 4-day National Training Workshop (NTW) on FBS*
- *STEP3: Work by participants on data entry*
- *STEP4: Holding of FBS validation workshop*
- *STEP 5: Way forward for Writing of Report on Nation Food Security and Dissemination*
- *Progress so far*
- *Identify in Compiling FBS*
- Conclusion

## *Definition of Food Balance Sheets*

- *A food balance sheet is a sum result of validated, aggregated agricultural statistics , demonstrating the actual food availability situation of a defined area in a given timeframe.*
- *A food balance sheet presents a comprehensive picture of the pattern of a country's food supply during a specified reference period.*

# Food Balance Sheet (FBS) of Myanmar & FAO Collaboration

- *Central Statistical Organization Under Ministry of Planning and Finance compile the FBS Through the Technical Cooperation Programme of FAO Myanmar*
- *FAO project MTF/RAS/372/Mul provide technical assistance, training in 2016(August) and data validation workshop in 2017 (December) for the preparation of FBS*



# STEP1: Technical Working Group

*Focal Agency : Central Statistical Organization*

*Respective Department :*

*:Department of Agricultural Land Management Statistics,*

*:Planning Department (MALI),*

*:Department of Fisheries,*

*:Department of Livestock Breeding and Veterinary*

*:Nutrition Department*

*:Rural Department*

*:Commercial Department*

## *Step 2: Conducting of 4-day Training Workshop (NTW) on FBS*

*The workshop involved lectures and hands-on exercises on software to be provided by FAO under the guidance of FAO resource persons. the Central Statistical Organization makes sure the availability of following data to be used in the workshop:*

**Supply Side Variables**

**Utilization Variables**

**Other Variables**

# **Supply Utilization Account (SUA) and Food Balance Sheet (FBS) Workshop (30-8-2016) to (2-9-2016)**



## *Aim of the Training Workshop...*

- *To enable mostly participants from the Central Statistical Organization and relevant departments who are directly involved in the data collection and management for food balance sheet*
- *To understand what SUA and FBS and how it works , together with analysis tool for basic understanding of the preparation them how it could visualize the food security and nutrition situation*
- *To produce quality and timely food security , nutrition statistics for the assessment , monitoring progress toward achieving food , nutrition security*

# **Activity : Preparation of Food Balance Sheet**

- ✓ Supply Utilization Accounts (SUA)**
- ✓ Food Balance Sheet (FBS)**



**Dietary Energy Supply :DES**

# The Supply Utilization Account equation

## Food Supply

**Supply = Production + imports + changes in stock**

## Food Utilization

**Utilization = Export + feed + seed + waste + processing  
+ food + other utilization + closing stocks**

# Methods and Procedure

## Preparation of Supply Utilization Account

### Input : Supply Side Variables

- ✓ Crop production data (DALMS)
- ✓ Livestock production data ( LBVD )
- ✓ Fishery production data ( DF )
- ✓ Export data (CSO)
- ✓ Stock (estimate)

## Preparation of Supply Utilization Account

### **Input : Utilization Side Variables**

- ✓ Import data (CSO)
- ✓ food, feed, waste, seed, processing food, other utilization  
(Commodity Tree , Technical Conversion Factors)

### **Input : Other Variables**

- ✓ Population Department (Population)
- ✓ Food Composition Table (World Standard Nutritional Values )

### **Input : Activity Variables**

- ✓ Input : Crops - area sown(ha) , harvest (ha); Livestock- number of animals

### **Tools : FAO's software**

### **Output: Dietary Energy Supply ;DES**

# FBS Components

- 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

# *Per Capita Food Supply*

- Final element of FBS
  - Information required
    - Population
    - Food composition table
      - Calories – kcals/day
      - Protein – grams/day
      - Fat – grams/day

Calculated from the quantities of total supplies available for human consumption(kg per year/grams per day)

- ❖ Availability for human consumption ≠ consumption

## ***STEP3:work by participants on data entry***

- ***Responsible Unit*** - *Central Statistical organization (Agriculture , Livestock & Fishery Section)*
- ***Level of Disaggregation- Union***
- ***Classification Variable - 65 commodities under FAO commodity List***
- ***Time Coverage*** - *2011-2016*
- ***Type of data collection – Administrative record***

## **Step 4: Holding of FBS validation workshop (3days)**

- *Time ; 27 – 29, December 2017*
- *Within Workshop Started the Central Statistical Organization and relevant department with data validation on SUA/FBS (2011-2016) collaboration with FAO*
- *Currently; Agricultural, Livestock and Fishery Section under Central Statistical Organization has been undertaking FBS preparation*
- *Publication of MYANMAR AGRICULTUAL STATISTICS (2007-2008 to 2016-2017)*

# **Supply Utilization Account (SUA) and Food Balance Sheet data Validation Workshop (FBS) (27-12-2017) to (29-12-2017)**





## MYANMAR AGRICULTURAL STATISTICS (2007-2008 to 2016-2017)



Central Statistical Organization  
Ministry of Planning and Finance  
in Collaboration with  
Ministry of Agriculture, Livestock and Irrigation,  
Ministry of Natural Resources and Environmental Conservation

Nay Pyi Taw, Myanmar  
2018

# *MYANMAR AGRICULTURAL STATISTICS CONTENTS*

- *1 to 7 Chapters*
- ***FOOD BALANCE SHEET (2011 to 2016) {Chapter 7}***
- *Methodology and Table*
  - *Table 7.01 Food Availability / Supply (person/day) in Dietary Energy and Macronutrients, 2011-2016*
  - *Table 7.02 Per Capita Food Availability / Supply (person/day) in Dietary Energy and Macronutrients of Food Commodities, 2011-2016*
  - ***Table 7.03 FOOD BALANCE SHEET (2011 to 2016)***

# **Results FBS Myanmar**

## **2011-2016**

**Table 7.01 Food Availability / Supply (person/day) in Dietary Energy and Macronutrients, 2011-2016**

| Dietary Energy and Macro-nutrients<br>(per person/day) | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|------|------|------|------|------|------|
| Dietary energy supply (kcal)                           | 2634 | 2669 | 2674 | 2719 | 2793 | 2692 |
| Protein (gram)   | 84   | 84   | 82   | 83   | 90   | 78   |
| Fats (gram)  | 54   | 59   | 64   | 66   | 64   | 54   |

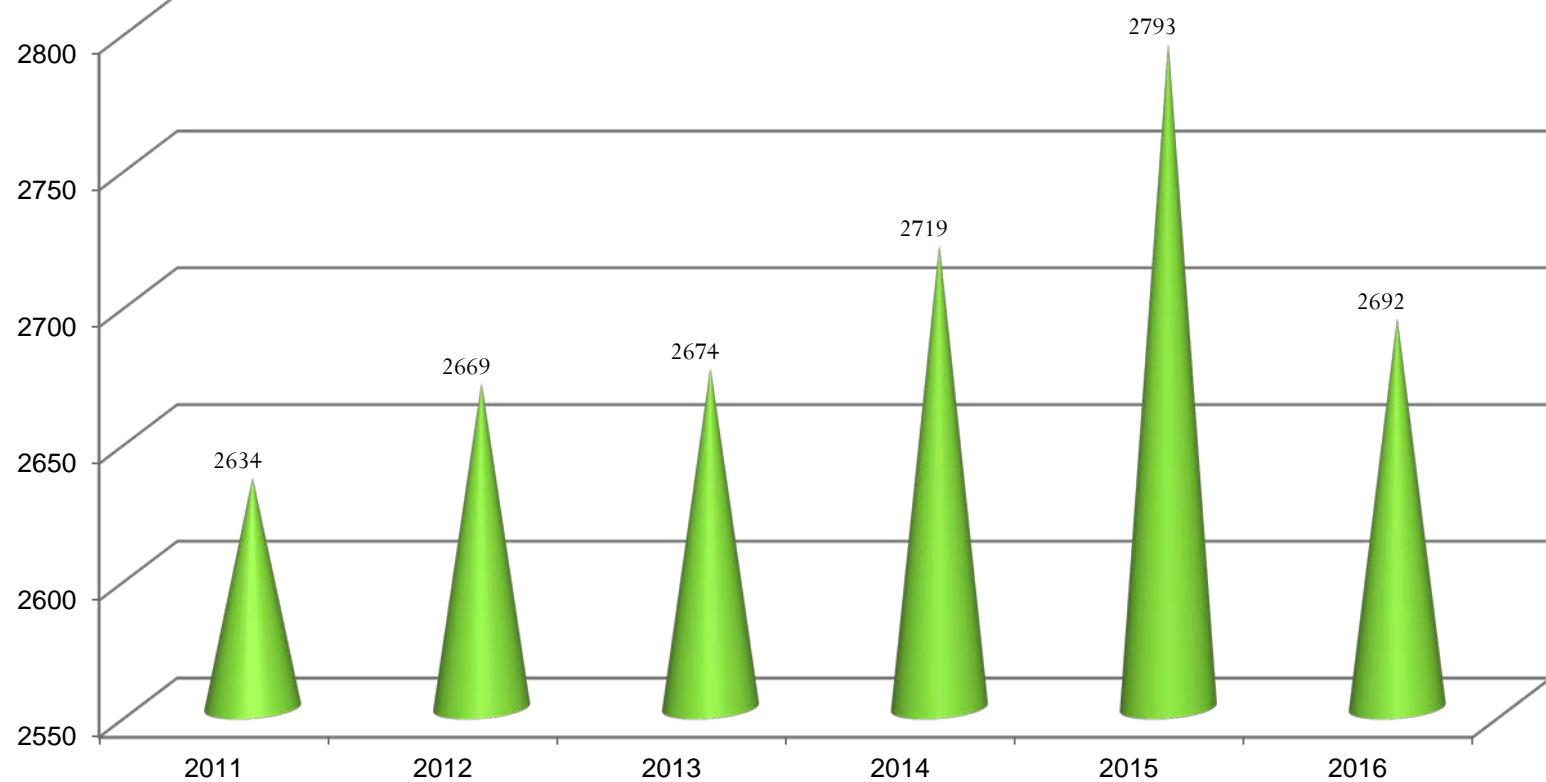
**Table 7.02 Per Capita Food Availability / Supply (person/day) in Dietary Energy and Macronutrients of Food Commodities, 2011-2016**

| Products                | PER CAPITA SUPPLY (Kg/person/day) |          |      |          |          |      |          |          |      |          |          |      |          |          |      |          |          |      |
|-------------------------|-----------------------------------|----------|------|----------|----------|------|----------|----------|------|----------|----------|------|----------|----------|------|----------|----------|------|
|                         | 2011                              |          |      | 2012     |          |      | 2013     |          |      | 2014     |          |      | 2015     |          |      | 2016     |          |      |
|                         | Calories                          | Proteins | Fats | Calories | Proteins | Fats | Calories | Proteins | Fats | Calories | Proteins | Fats | Calories | Proteins | Fats | Calories | Proteins | Fats |
| Cereals (excl. beer)    | 1422                              | 27       | 2    | 1615     | 31       | 3    | 1434     | 27       | 3    | 1463     | 28       | 3    | 1492     | 28       | 3    | 1523     | 29       | 3    |
| Starchy roots           | 52                                | 1        | 0    | 25       | 0        | 0    | 39       | 0        | 0    | 27       | 0        | 0    | 38       | 1        | 0    | 38       | 1        | 0    |
| Sugar crops             | 0                                 | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 9        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    |
| Sugar & Sweeteners      | 87                                | 0        | 0    | 118      | 0        | 0    | 100      | 0        | 0    | 99       | 0        | 0    | 122      | 0        | 0    | 123      | 0        | 0    |
| Pulses                  | 268                               | 15       | 2    | 66       | 4        | 0    | 187      | 9        | 2    | 156      | 8        | 2    | 203      | 10       | 2    | 180      | 9        | 2    |
| Treenuts                | 24                                | 0        | 1    | 24       | 0        | 1    | 27       | 1        | 1    | 22       | 0        | 1    | 23       | 0        | 1    | 23       | 0        | 1    |
| Oilcrops                | 134                               | 3        | 12   | 78       | 3        | 7    | 121      | 2        | 11   | 102      | 3        | 9    | 70       | 2        | 6    | 77       | 2        | 7    |
| Vegetable oils          | 132                               | 0        | 15   | 219      | 0        | 25   | 142      | 0        | 16   | 226      | 0        | 26   | 153      | 0        | 17   | 151      | 0        | 17   |
| Vegetables              | 23                                | 2        | 0    | 45       | 2        | 0    | 83       | 5        | 1    | 84       | 5        | 1    | 83       | 5        | 1    | 86       | 5        | 1    |
| Fruits                  | 117                               | 1        | 1    | 60       | 1        | 0    | 65       | 1        | 0.3  | 65       | 1        | 0    | 70       | 1        | 0    | 71       | 1        | 0    |
| Stimulants              | 2                                 | 0        | 0    | 2        | 0        | 0    | 3        | 0        | 0    | 4        | 0        | 0    | 4        | 0        | 0    | 2        | 0        | 0    |
| Spices                  | 0                                 | 0        | 0    | 0        | 0        | 0    | 7        | 0        | 0    | 14       | 0        | 0    | 14       | 0        | 0    | 15       | 0        | 0    |
| Alcoholic beverages     | 0                                 | 0        | 0    | 0        | 0        | 0    | 1        | 0        | 0    | 2        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    |
| Meat                    | 128                               | 8        | 9    | 179      | 18       | 11   | 241      | 16       | 19   | 273      | 20       | 17   | 348      | 26       | 24   | 174      | 10       | 13   |
| Offals                  | 0                                 | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    |
| Animal fats             | 20                                | 0        | 2    | 27       | 0        | 3    | 28       | 0        | 3    | 28       | 0        | 3    | 27       | 0        | 3    | 14       | 0        | 2    |
| Milk (excluding butter) | 3                                 | 0        | 0    | 32       | 2        | 2    | 37       | 2        | 2    | 6        | 0        | 0    | 6        | 0        | 0    | 10       | 1        | 1    |
| Eggs                    | 32                                | 3        | 2    | 23       | 2        | 2    | 36       | 3        | 3    | 46       | 4        | 4    | 45       | 4        | 3    | 52       | 4        | 4    |
| Fish & sea food         | 186                               | 24       | 7    | 157      | 21       | 6    | 129      | 17       | 5    | 135      | 18       | 5    | 95       | 12       | 3    | 95       | 12       | 3    |
| Miscellaneous           | 2                                 | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 0        | 0        | 0    | 4        | 0        | 0    |

**Table 7.03 FOOD BALANCE SHEET (2016)**

| Products               | DOMESTIC SUPPLY (1000 MT) |        |                 |         |               |       |      |            |       |          |       |                              | DOMESTIC UTILIZATION (1000 MT) |                   |               | PER CAPITA SUPPLY |  |  |
|------------------------|---------------------------|--------|-----------------|---------|---------------|-------|------|------------|-------|----------|-------|------------------------------|--------------------------------|-------------------|---------------|-------------------|--|--|
|                        | Prod.                     | Import | Stock<br>change | Exports | Total<br>D.S. | Feed  | Seed | Proc<br>ed | Waste | Oth.Util | Food  | PER<br>YEAR<br>FOOD<br>(Kg.) | Calories<br>units              | Proteins<br>grams | Fats<br>grams |                   |  |  |
|                        | (1000 Metric Tons)        |        |                 |         |               |       |      |            |       |          |       |                              |                                |                   |               |                   |  |  |
| <b>Grand total</b>     |                           |        |                 |         |               |       |      |            |       |          |       |                              | 2692                           | 78                | 54            |                   |  |  |
| <b>Vegetable prod.</b> |                           |        |                 |         |               |       |      |            |       |          |       |                              | 2347                           | 51                | 31            |                   |  |  |
| <b>Animal prod.</b>    |                           |        |                 |         |               |       |      |            |       |          |       |                              | 345                            | 27                | 23            |                   |  |  |
| Cereals (excl. bee     | 19699                     | 512    | 0               | 3007    | 17203         | 48477 | 278  | 30896      | 2703  | 47       | 10442 | 197                          | 1523                           | 29                | 3             |                   |  |  |
| Starchy roots          | 996                       | 0      | 0               | 0       | 997           | 0     | 75   | 577        | 75    | 0        | 777   | 15                           | 38                             | 1                 | 0             |                   |  |  |
| Sugar crops            | 10604                     | 0      | 0               | 2       | 10602         | 0     | 550  | 8277       | 1253  | 522      | 0     | 0                            | 0                              | 0                 | 0             |                   |  |  |
| Sugar & Sweetene       | 4                         | 21     | 0               | 2       | 24            | 0     | 0    | 358        | 96    | 21       | 661   | 12                           | 123                            | 0                 | 0             |                   |  |  |
| Pulses                 | 5791                      | 0      | 0               | 1032    | 4759          | 32    | 287  | 3307       | 201   | 100      | 985   | 19                           | 180                            | 9                 | 2             |                   |  |  |
| Treenuts               | 288                       | 0      | 0               | 1       | 288           | 0     | 0    | 0          | 5     | 367      | 218   | 4                            | 23                             | 0                 | 1             |                   |  |  |
| Oilcrops               | 2917                      | 131    | 0               | 20      | 3028          | 0     | 168  | 3531       | 139   | 344      | 606   | 11                           | 77                             | 2                 | 7             |                   |  |  |
| Vegetable oils         | 363                       | 2694   | 0               | 0       | 3056          | 0     | 0    | 0          | 159   | 3342     | 250   | 5                            | 151                            | 0                 | 17            |                   |  |  |
| Vegetables             | 4375                      | 2003   | 0               | 8       | 6371          | 0     | 47   | 244        | 420   | 1        | 5691  | 108                          | 86                             | 5                 | 1             |                   |  |  |
| Fruits                 | 2865                      | 136    | 0               | 1       | 3000          | 0     | 0    | 467        | 214   | 0        | 2176  | 41                           | 71                             | 1                 | 0             |                   |  |  |
| Stimulants             | 113                       | 38     | 0               | 0       | 151           | 0     | 0    | 109        | 2     | 0        | 47    | 1                            | 2                              | 0                 | 0             |                   |  |  |
| Spices                 | 79                        | 6      | 0               | 1       | 84            | 0     | 0    | 0          | 0     | 2        | 81    | 2                            | 15                             | 0                 | 0             |                   |  |  |
| Alcoholic beverages    | 0                         | 10     | 0               | 0       | 10            | 0     | 0    | 0          | 0     | 10       | 1     | 0                            | 0                              | 0                 | 0             |                   |  |  |
| Meat                   | 3129                      | 1      | 0               | 0       | 3129          | 0     | 0    | 1539       | 0     | 0        | 1590  | 30                           | 174                            | 10                | 13            |                   |  |  |
| Offals                 | 542                       | 0      | 0               | 0       | 542           | 0     | 0    | 0          | 0     | 2113     | 0     | 0                            | 0                              | 0                 | 0             |                   |  |  |
| Animal fats            | 54                        | 27     | 0               | 0       | 81            | 0     | 0    | 0          | 0     | 1512     | 39    | 1                            | 14                             | 0                 | 2             |                   |  |  |
| Milk (excluding but    | 0                         | 250    | 0               | 0       | 250           | 0     | 0    | 97         | 12    | 0        | 315   | 6                            | 10                             | 1                 | 1             |                   |  |  |
| Eggs                   | 591                       | 0      | 0               | 0       | 591           | 0     | 1    | 0          | 3     | 0        | 587   | 11                           | 52                             | 4                 | 4             |                   |  |  |
| Fish & sea food        | 5592                      | 36     | 0               | 121     | 5507          | 0     | 0    | 3085       | 204   | 0        | 2218  | 42                           | 95                             | 12                | 3             |                   |  |  |
| Mellaneous             | 0                         | 110    | 0               | 0       | 110           | 0     | 0    | 6          | 0     | 84       | 21    | 0                            | 4                              | 0                 | 0             |                   |  |  |

## FOOD AVAILABILITY / SUPPLY (PERSON/DAY) IN DIETARY ENERGY SUPPLY PER CAPITA CALORIE, 2011–2016



## *Step 5: Way forward for Writing of Report on Nation Food Security and Dissemination*

- *Report writing based on FBS*
- *MLCS 2016 data analysis; proposed on June/july, 2018*
- *Final Report on food security, writing with comparison*

## *Progress so far*

- *Technical working Group*
  - *Training Workshop conducted in 2016*
  - *2'nd Validation Workshop conducted in 27–29, December 2017*
  - *Third will be agreed in June' 2018*
- *FBS 2011-2016; Results Prepared and completed*

## *Identify in Compiling FBS*

### Data gaps –

- get 65 commodities data out of 1596 FAOSTAT list
- get only 44 trade data (import/export)
- less identify seed rate, feed, waste (Myanmar)
- no stock data

## Challenges –

- **to collect perfect data**
- **to promote trade data (import/export)**
- **to identify standard rate for seed, feed, waste (Myanmar)**
- **to prepare food composition table (Myanmar)**
- **to collect stock data**



## *Conclusion*

- Currently; Agricultural, Livestock and Fishery Section under Central Statistical Organization has been undertaking FBS prepared
- Report Writing will be continued.....(CSO and related department)
- A comprehensive picture of the pattern of Myanmar's food Supply during 2011-2016(FBS)



**THANK YOU**