



The United Republic of Tanzania



National Food Balance Sheets Report 2014 – 2017

NATIONAL BUREAU OF STATISTICS
and Office of the Chief Government Statistician - Zanzibar

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Table of Contents

List of Tables	iv
List of Figures	v
List of Acronyms	vi
List of Units used	vii
Acknowledgement	viii
Preface	1
Executive Summary	2
Chapter 1: Introduction, Concepts and Definitions	4
1.1 Introduction and Justification of Technical Assistance Needs	4
1.2 Concepts and Definitions	5
1.2.1 Definition of SUA Components	5
1.2.2 Additional Variables	9
1.3 Self-Sufficiency Ratio and Import Dependency Ratio	10
Chapter 2: Methodology and Data Sources	11
2.1 Methodology Used	11
2.2 Activities Undertaken	15
2.3 Data Sources	17
Chapter 3: Presentation of FBS Results	18
3.1 Overview	18
3.2 Nutritional Requirements	18
3.2.1 Calorific Supply	19
3.2.2 Per Capita Proteins	22
3.2.3 Per Capita Fats	23
3.3 Self-Sufficiency Ratio and Import Dependency Ratio	25
3.3.1 Self-Sufficiency Ratio	25
3.3.2 Import Dependency Ratio	26
3.3.3 Analysis of IDR and SSR	26
3.3.3.1 Self-Sufficiency Ratio for Major Staple Food	26
3.3.3.2 Import Dependency Ratio	28
3.4 Comparison with FAOSTAT Results	30
Chapter 4: Constraints, Limitations and Lessons Learnt	31
Conclusion:	32
ANNEX	33
Annex 1: Nutrients Convention Factor	33
Annex 2: Tables of Detailed FBS Results, 2014-2017	45
Annex 3: References	61
Annex 4: List of Participants	62

List of Tables

Table 0.1: Key results	2
Table 3.1: Percentage Contribution of Vegetal Products to Per Capita Energy for Vegetable Products, Tanzania, 2014-2017	20
Table 3.2: Percentage Distribution of Protein from Vegetal Food Groups, Tanzania, 2014-2017	23
Table 3.3: Percentage Contribution of Vegetables to Daily Per Capita Fats, Tanzania, 2014-2017	24
Table 3.4: Comparison of key results between 2013 results from FAOSTAT and 2014 Country Results	30
Table 3.5: Comparison of major commodities DES between 2013 results from FAOSTAT and 2014 Country Results.....	30

List of Figures

Figure 01:	Contribution (%) of commodity groups to the total DES	3
Figure 02:	Contribution of commodities to the total DES of cereals	3
Figure 3.1:	Daily per Capita Supply of Calories, Tanzania, 2014 - 2017	19
Figure 3.2:	Contribution of Cereal Products to Daily Per Capita Energy (Kilo calories) from Vegetal Food Groups, Tanzania, 2014 - 2017 (%)	20
Figure 3.3:	Contribution of Animal Products to the Daily per Capita Dietary Energy Supply, Tanzania, 2014 - 2017 (%)	21
Figure 3.4:	Contribution of the Different Types of Meat to Daily per Capita Energy from Meat Products, Tanzania, 2014-2017 (%).....	22
Figure 3.5:	Per Capita Daily Supply of Protein, Tanzania, 2014-2017.....	22
Figure 3.6:	Contribution of Protein by Animal Food Groups, Tanzania, 2014-2017 (%)	23
Figure 3.7:	Daily per Capita Supply of Fats, Tanzania, 2014-2017.....	24
Figure 3.8:	Contribution of Animal Food to Daily per Capita Fats, Tanzania, 2014-2017 (%)	25
Figure 3.9:	Self-Sufficiency Ratio for Major Staple Foods, Tanzania, 2014-2017	26
Figure 3.10:	Self-Sufficiency Ratio for Other Food Groups, Tanzania, 2014-2017	27
Figure 3.11:	Self-Sufficiency Ratio for Selected Food Crops, Tanzania, 2014-2017.....	27
Figure 3.12:	Import Dependency Ratio, Tanzania, 2014-2017	28
Figure 3.13:	Overall Self-Sufficiency and Import Dependency Ratios, Tanzania, 2014-2017	28
Figure 3.14:	Self-Sufficiency Ratio for Vegetables, Animal & Fish Products, Tanzania, 2014-2017.	29
Figure 3.15:	Import Dependency Ratio for Vegetables, Animal and Fish Products, Tanzania, 2014-2017.	29

Definition of Acronyms

AfDB	African Development Bank
AFRISTAT	Economic and Statistical Observatory for sub-Saharan Africa
BMGF	Bill and Melinda Gates Foundation
BOT	Bank of Tanzania
DfID	Department for International Development
EAC	East African Community
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organisation
FBS	Food Balance Sheet
GSARS	Global Strategy to improve Agricultural and Rural Statistics
IDR	Import Dependency Ratio
MLF	Ministry of Livestock and Fisheries
MoA	Ministry of Agriculture
NBS	National Bureau of Statistics
n.e.c	Not Elsewhere Classified
n.e.s	Not Elsewhere Specified
OCGS	Office of the Chief Government Statistician
SUA	Supply Utilisation Accounts
SSR	Self-Sufficiency Ratio
TFNC	Tanzania Food and Nutrition Centre
TA	Technical Assistance
TRA	Tanzania Revenue Authority
UNPD	United Nations Population Division

List of Units used

Hectare (Ha)	= 2.47 acres
Metric tonne (MT)	= 1,000 kilograms
Kilogram (Kg)	= 1,000 grams
Kilocalorie (Kcal)	= 1,000 Cal

Acknowledgement

This Food Balance sheets (FBS) report for Tanzania gives a comprehensive picture of food availability in relation to food supply and utilisation in the country. At the beginning of its preparation, the African Development Bank (AfDB) carried out an appraisal of the compilation practices of Agriculture Statistics and FBS. This was followed by a one-week *Regional Training Workshop on the Compilation of Food Balance Sheets*, organised by AfDB in Arusha. Tanzania benefited. The third step entailed a national workshop, which took on board many participants from institutions dealing with the compilation of food balance sheets data in the country. The FBS for Tanzania is therefore a product of a broad-based collaborative process involving key national stakeholders.

The production of this report would not have been possible without the financial support and technical assistance by AfDB within the framework of the implementation of the Action Plan for Improving Agricultural and Rural Statistics in Africa. In fact, the work benefited from a Global Trust Fund support, which ended in 2018 (with contributions from the Department for International Development (DfID), Bill and Melinda Gates Foundation (BMGF) and European Union (EU)), and was achieved in 2019, thanks to AfDB's own resources. The National Bureau of Statistics (NBS) is therefore greatly indebted to **Mr Charles L. Lufumpa** (Director of Statistics Department) and **Mr Ben Paul Mungyereza** (Manager of the Statistical Capacity Building Division) for having granted the country the needed resources, including making available the two knowledgeable subject-experts who backstopped the project implementation. They were **Mr Vincent Ngendakumana** (Principal Agricultural Statistician), who supervised the entire work, and **Mr Salou Bande** (AfDB International Consultant), who visited the country three times to provide the much needed technical assistance. Other staff of the AfDB, including those in Dar es Salaam Office, who in one way or another facilitated this process, are highly acknowledged.

My sincere thanks are also extended to the members of the FBS core team from NBS, OCGS, Ministry of Agriculture, Ministry of Livestock and Fisheries, Ministry of Industries, Trade and Investment, TRA, BOT, TFNC and other staff who participated in providing data, conducting the FBS analysis and data validation, and in preparing this report. The team was led by **Mr Titus Mwisomba** (Agriculture Statistics Manager) and **Mr Mlemba Abassy** (National Consultant) of NBS.

Last but not the least, I also thank the Government of Tanzania through the senior authorities of the Ministry of Finance and Planning, Ministry of Agriculture, Ministry of Livestock and Fisheries, Ministry of Industry, Trade and Investment, Ministry of Agriculture, Natural Resources, Livestock and Fisheries in Zanzibar, and the Office of Chief Government Statistician for their support to the production of this report, which will be used for planning and decision-making at various levels.



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Preface

To address the challenges faced by users of agricultural statistics in Africa, an Action Plan for Improving Agricultural and Rural Statistics was developed by the AfDB, Food and Agriculture Organisation (FAO), and United Nations Economic Commission for Africa (UNECA) in collaboration with the African Union Commission (AUC), in early 2011. One of the objectives of this Action Plan was to provide a framework and methodology that would help to improve the availability and quality of data on food and agriculture statistics at national and international levels. The Technical Assistance component of the Action Plan was implemented by AfDB, and it is within this framework that assistance was provided to Tanzania to establish its Food Balance Sheet system.

The system on food balance shows the supply source of each type of food described in this report, and also how it was used. Food supply during the reference period is the total quantity of foodstuffs produced in the country plus the total quantity imported and adjusted to any change in stock that may have occurred since the beginning of the reference period. Food utilisation refers to the quantities processed for food use and non-food uses, fed to livestock, used for seed, lost during storage and transportation, used for other purposes, and for food supplies available for human consumption at the retail level. Official data obtained from recognised institutions in the country were used to compile Food Balance Sheets, complying with international definitions, methodology and standards. Also, the availability of quality data on food supply and utilisation in the country is important in stimulating production and in strengthening marketing and distribution strategies. The availability of FBS will help in monitoring and knowing in advance the condition of food insecurity in the country at any reference period.

Having food and agricultural basic data in place helps in producing a country's FBS, which portrays a clear picture of food supply and utilisation. The FBS gives a detailed analysis and assessment of food and the trend of agricultural practices in the country. The Import Dependency Ratio presents the contrast between quantities of food available in the country and those imported. The amount obtained shows to what extent a country depends on importation to feed its people. On the other hand, when you want to see the country's degree of self-sufficiency (Self-Sufficiency Ratio), then you need to check the amount of food commodities produced locally in relation to the total food available.

As pointed out earlier, the quality data for compilation of FBS is crucial for better and precise analysis on food supply and utilisation in the country. This was ensured through the compilation of consistent Supply Utilisation Accounts of each food commodity. We therefore commend this important outcome, which for the first time in the history of the country, sets a strong and sustainable foundation for a regular production of FBS information. We encourage interested persons and institutions to make good use of it.

The Government of Tanzania is committed to provide the needed support for the sustainability of the national FBS system.

Executive Summary

What FBS is all about

Food Balance Sheets (FBS) can be defined as an aggregated and analytical data set that presents a comprehensive picture of the pattern of a country's food supply and utilisation during a specified reference period.

The statistics on FBS are very important. In fact, they help to understand the situation of supply and use of each product within a given country, track progress against established development goals and inform decision makers.

One of the major outputs of FBS statistics is the estimation of Dietary Energy Supply (DES), measured by the number of kilocalories per person per day. The DES is an essential indicator of the food security situation in a country. Indeed, when it is compared to Dietary Energy Requirements (DER) - the average number of kcal/day required by a person to be in a healthy and active condition - DES can be used to estimate the number of persons undernourished. This food security indicator is one of the SDGs countries have committed to in order to regularly monitor the food security situation. In addition to the DES, the data from FBS can also be used to construct nutritional indicators, such as the quantities of fat or protein per person and per day, to assess the quality of the nutrition in a country and the evolution of diets overtime.

Methodology

The approach followed for the compilation of the Tanzania FBS for the period of 2014-2017 was inclusive and participatory. It involved statistics offices of both Tanzania mainland and Zanzibar; Ministry of Agriculture; Ministry of Livestock and Fisheries; and Ministry of Industries, Trade and Investment. Other key stakeholders were the Bank of Tanzania, Tanzania Revenue Authority and Tanzania Food and Nutrition Centre. These institutions provided and validated the needed basic data that was compiled using the new FBS Compilation Tool. The steps leading to the development of Food Balance Sheets were:

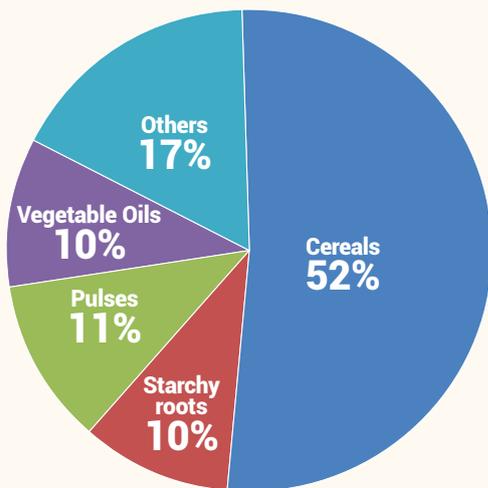
- Development of the roadmap;
- Regional workshop;
- National training workshop;
- Data compilation;
- National validation workshop; and
- Elaboration of FBS analysis report.

Table 01: Key results

	2014	2015	2016	2017
Total DES	2285	2289	2290	2259
Vegetable products	2117	2116	2128	2084
Animal products	140	146	136	147
Fishery products	28	27	26	28

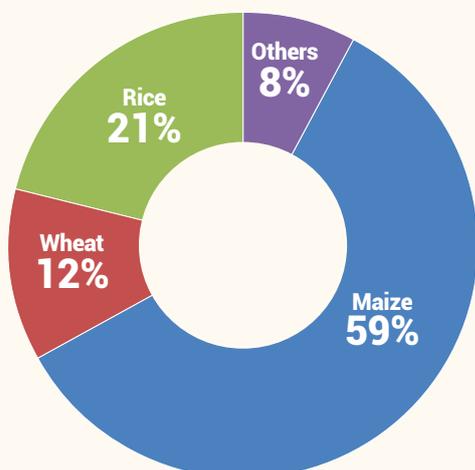
The first Tanzania FBS revealed that, the national per capita Dietary Energy Supply per day has been over 2,000 calories with no significant change over time. The most part of the DES is brought by the vegetable products (93%). The contribution of fishery products represents only 1% to the total DES. A slight decrease in the national DES was observed in 2017 (with 2,259 kilocalories), due to a decrease in the supply of vegetable products and mainly the decrease of the production of maize.

Figure 01:
Contribution (%) of commodity groups to the total DES



Cereals excluding beer form the most important vegetable products group in Tanzania. In fact, the cereals contributed to 52% of all calorific supply from vegetable products during the period of 2014-2017. Starchy roots, vegetable oils, pulses are also important sources of energy after cereals. Maize is one of the main staple food crops in Tanzania. In fact, the contribution of maize to caloric supply for cereals commodity group was consistently the highest (59%) in all years under review, followed by rice (21%) and wheat (12%).

Figure 02:
Contribution of commodities to the total DES of cereals



Constraints and limitations

Production data of most food crops were obtained from surveys and routine data from the Ministry of Agriculture. However, data from these two sources were largely inconsistent and not comparable. Therefore, after consultations among the team members, data, especially on staple food crops like maize and other crops such as groundnuts and cereals, were estimated to ensure Supply Utilisation Accounts (SUA) consistency.

It should also be noted that at the beginning of the process, the country team faced challenges due to technical issues related to the FBS Compilation Tool. This affected the timely production of FBS results.

Lessons learnt

The inclusive and participatory approach enhanced the quality of the data used in the production of the report. The experts from different institutions had time to meet and discuss under one roof, and agreed on the results produced.

The timely availability of funds to facilitate different activities as outlined in the FBS Roadmap was one of the fuelling factors towards the completion of the report. Therefore, commitment to raising funds from the Government to sustain the compilation of the FBS is vital.

The regional training workshop was attended by experts from international, regional and national institutions. As such, it was a good platform to share and exchange knowledge and best practices on FBS compilation. This contributed to enhancement of this report.

Perspective

The Government of Tanzania is committed to sustain the production of FBS information on a regular basis, ensuring their timely availability to users.

Chapter 1

Introduction, Concepts and Definitions

1.1 Introduction and justification of Technical Assistance needs

Food Balance Sheets present a comprehensive picture of the pattern of a country's food supply and utilisation during a specified reference period. It tabulates the country's entire food supply and utilisation. The supply side documents the productive volume data in metric tonnes and reports the same within the period under consideration and the food stock available from the previous year:

$$\text{Total Supply (Ts)} = \text{Production} + \text{Imports} - \text{Stock variation}$$

Utilisation balance side depicts the depleting of the supply of food commodities in the form of exports, feed, seed, waste, food and other uses.

$$\text{Total Utilisation (Tu)} = \text{Export} + \text{Feed} + \text{Seed} + \text{Loss} + \text{Food processing} + \text{Food} + \text{Tourist consumption} + \text{Industrial use} + \text{Residual use}$$

The balancing of supply and utilisation of food consumption is known as Supply Utilisation Account (SUA).

$$\text{Supply} = \text{Utilisation over a given period of time}$$

Food Balance Sheets are compiled using data from various sources. They could be official, semi-official and even estimates.

Tanzania has already gathered some experience in the compilation of commodity balance sheets. The Ministry of Agriculture (MoA) compiles information on supply and utilisation for the major staple commodities grown in the country, except livestock and fish products. These commodity balance sheets differ from FBS because they do not fully account for the consumption of processed commodities, and therefore fail to provide a complete picture of the food supply in the country. Indeed, energy and nutritional contents vary depending on whether they apply to primary commodities (e.g. maize grains) or to processed products (e.g. maize flour).

For all these reasons, there was a need for technical assistance to upgrade the existing supply and utilisation accounts (SUAs) in two directions: i) Inclusion of processed food items for each commodity group (e.g. maize flour for maize), and; ii) expansion of the scope to products from the livestock and fisheries sub-sectors, given their importance in energy intake and food diets.

1.2 Concepts and Definitions

This section describes and defines the concepts and variables used in compiling Tanzania's FBS for the period of 2014 to 2017.

1.2.1 Definition of SUA components

Here, we summarise definitions of the concepts used in the compilation of the FBS. They are the variables that make up the Supply = Utilisation identity.

PRODUCTION

This refers to all production quantities of a given commodity within a country. The concept comprises production of primary as well as processed goods. It is noted that:

- The primary products are reported at the farm gate level;
- The quantity of processed products for a given commodity refers to the volumes of output obtained after the transformation of that commodity.



IMPORTS & EXPORTS

The general definition of imports and exports cover goods and services. However, in the framework of Food Balance Sheets, this coverage is restricted to goods.

An import refers to a product brought into a given country from an external source.

Exports can be understood as trans-boundary flow of goods from a given country of origin.

It is important to underline that re-export, which refers to goods that enter and exit a given country without any type of transformation, should be added to exports.



STOCKS

Stocks are defined as the aggregate total of products allocated to storage for later use. In the case of Food Balance Sheets, the stocks variation is considered and not the quantities of stocks themselves.

In our case, the stock variation is defined as closing stocks minus opening stocks



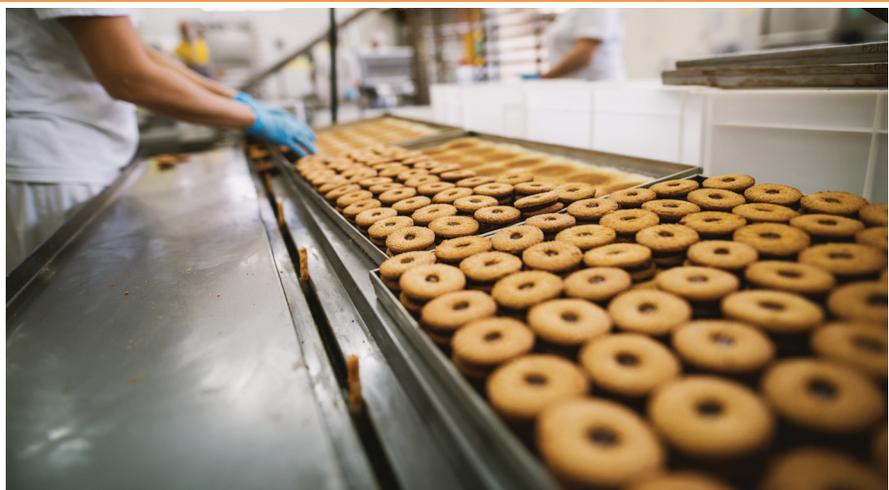
FOOD AVAILABILITY

The concept of "Food availability" in respect of FBS represents the amount of food available for human consumption at the retail level. For this reason, any waste (and/or loss) that occurs at the retail or consumer levels is included in this quantity, since that food was technically available for human consumption.



FOOD PROCESSING

Food processing refers to quantities of a food product that are directed toward a manufacturing process, and are then transformed into a different edible commodity with a separate entry in the FBS.



FEED

Feed is defined as all quantities of commodities—both domestically produced and imported—that are available for feeding livestock or poultry.

**SEED**

Seed is defined as any quantity of a commodity set-aside for reproductive purposes.

This can include seed for sowing, plants for transplanting, eggs for hatching, and fish used as bait.

**LOSS**

The quantities of a product that leave the supply chain and are not diverted to other uses are considered as loss. Loss results from an involuntary activity and can occur at any node of the supply chain after the harvest and up to (but excluding) the retail/consumption stage.



TOURIST FOOD

Tourist food refers to food that is available for consumption by non-resident visitors in a given country during the course of their stay. This variable is expressed in net terms in the Food Balance Sheet (as food available for consumption by incoming visitors minus food that would have been consumed by residents who have travelled to other countries).



INDUSTRIAL USE

Industrial use is defined as any quantity of a given food product used in some non-food transformation or manufacturing process, including products used in biofuels, cosmetics, detergents, or paints.



RESIDUAL & OTHER USES

Residual and other uses can, in most cases, be defined as the combined imbalance and accumulated error in the supply equals utilisation equation. As such, this category is computed ex-post as a balancing item and is not independently estimated. If all other utilisations within the equation are accounted for, and there is no measurement error, then the residual would be calculated as zero.

The three concepts (tourist food, industrial use and residual and other uses) are what were referred to as "Other uses" in the Old methodology. It means that in the revised methodology, the "Other uses" component has been split into three.

1.2 Additional Variables

The basic supply and usage components described above cover all aspects of basic identity. However, using the FBS tool, some additional variables are needed to estimate per capita nutrient availability. These include:

Population

This is defined according to the UN Population Division's (UNPD) definition as, "de facto population in a country, area or region as of 1 July of the year indicated." This definition includes not only citizens, but also all residents.

■ Activity and productivity variables:

These refer to data on other relevant variables that could be necessary for the imputation of missing values.

■ *Activity variables for primary crops:* Area sown and area harvested.

■ *Activity variables for livestock:* The number of milking animals, number of slaughtered animals, and number of laying poultry.

■ *Productivity variables:* The yield of primary crops and carcass weight for animals.

Extraction rates

These are parameters that reflect the loss in weight in the conversion of a given primary product to the derived commodity. Extraction rates are typically expressed as a percentage, and are calculated as the amount (by weight) of the derived good that is produced using a given amount of input product.

Nutrients estimates

Nutrients are substances that the body needs to function properly. One of the main motivations for establishing Food Balance Sheets is to obtain estimates of the amount of calories, fat and protein that can be consumed by a country's population. These estimates are derived from the final "food" estimates on the balance sheet for each product by applying certain conversion factors to these quantities.

Processing Shares

In the context of the FBS, processing shares are percentages of the amount of a given commodity that are thought to be dedicated to a specific transformation process. They are often necessary for the composition of FBS because goods can be processed into a range of derived products, and the input used for the production of these derived goods is seldom known with certainty. As such, shares can be applied to the amount of a good sent for processing to calculate the volume of input into a given transformation process. An extraction rate can then be applied to those inputted quantities to derive a production estimate.

1.3 Self-Sufficiency Ratio and Import Dependency Ratio

In the course of analysing the food situation of a country, an important aspect is to know how much of the available domestic food supply has been imported and how much comes from the country's domestic production. The Self-Sufficiency Ratio and the Import Dependency Ratio are the two (2) indicators helping to measure these aspects.

Self-Sufficiency Ratio: Expresses the magnitude of production in relation to domestic utilisation. It is defined as:

$$SSR = \frac{PRODUCTION}{PRODUCTION + IMPORT - EXPORTS - STOCKS VARIATION} * 100$$

Import Dependency Ratio (IDR): Shows how much of the available domestic food supply has been imported and how much comes from the country's own production. It is defined as:

$$IDR = \frac{IMPORT}{PRODUCTION + IMPORT - EXPORTS - STOCKS VARIATION} * 100$$

Chapter 2

Methodology and Data Sources

To get a clear picture of the food situation in Tanzania, the Ministry of Agriculture (MoA) in Tanzania Mainland compiles information on the supply and utilisation of major staple commodities grown in the country, except livestock and fish products. These Commodity Balance Sheets differ from what we call FBS because they do not fully account for the consumption of processed products, and therefore fail to provide a complete picture of the food supply and utilisation in the country. Indeed, energy and nutritional contents vary depending on whether they apply to primary commodities (e.g. maize grains) or to processed products (e.g. maize flour). The inclusion of all the food items and not only primary commodities is what makes the FBS different from the Commodity Balance Sheets.

2.1 Methodology

The FBS presents commodities at the primary level to facilitate interpretation and policy formation. However, this does not provide a holistic picture of how the commodity is consumed, traded or processed into various products.

Therefore, Supply Utilisation Accounts (SUA) tables are used for keeping specific accounts of both primary products and all their derived goods. The SUA tables are then linked to FBS through standardisation using commodity trees.

For example, with rice, the primary commodity would be paddy. However, apart from rice, additional products may be produced, including rice bran oil, starch, beer, breakfast cereals, rice-based fermented beverages and cereal preparations. In the SUA table, the primary commodity, in our example paddy rice, will be at the top. The extraction rate from the commodity tree (in this case commodity tree for paddy rice) will be used to convert these other products into the equivalent paddy rice amount.

The methodology for the elaboration of FBS in Tanzania is based on the revised guidelines for Food Balance Sheets Compilation, developed under the global strategy to improve statistics for food security, sustainable agriculture and rural development.

The aim of this part is not to repeat the theoretical methodology as described in the guidelines, but to highlight how the FBS team, under the guidance of national and international consultants and with the supervision of the Principal Agricultural Statistician of AfDB, compiled the Supply and Utilisation Accounts and generated 2014–2017 FBS results, focusing on the specific cases related to the country.

a) Data collection before the national training workshop

Before the national training workshop, the national consultant gathered data from the different institutions. These data were then submitted to the international consultant to check their quality. This step allowed for underlining of any inconsistencies and the gaps related to the data. After that, the data were downloaded in the tool and a simulation was made on the compilation of SUAs and the generation of FBS for 2014 and 2015 reference years.

b) Checking data quality

This important step was performed as follows:

- Each type of data was reviewed to detect any inconsistencies. For example, from one year to another, if the evolution of the production of a given product is important, maybe a very high increase or decrease, it should be checked by the producers. This checking can lead to corrections in case of errors or confirmation with a supporting explanation if the value is judged to be correct by the experts.
- Missing data were flagged and the FBS team had to consider how to estimate them.

c) SUAs basic data compilation during the national training workshop

During the national training workshop, working groups were established and tasks were defined for each group. The groups worked on the quality of data, estimations and imputations, and compilation into "Shiny" tables. Missing data were estimated by the experts, based on the series of data and their knowledge of the subject. Some data had been pre-filled in the tool with FAO data, which contained both the country real data and the imputations and estimations.

We had three cases:

- The real data provided by the institutions were prioritised. This meant that the data systematically replaced those in the compilation Tool.
- For missing data, the experts did estimations based on the series of country data.
- For products with no data in the country, the FAO data were considered.

d) Compilation of production data

There are three types of production data: crops, livestock and fisheries.

Regarding crops, for most of the commodities, data come from two sources:

- Agricultural survey; and
- Administrative source

The agricultural survey is not carried out regularly (every year), hence the country sometimes relies on the administrative source. The big challenge is that there are inconsistencies between the two sources. Therefore, the agricultural survey data set was considered and the administrative data re-estimated using the agricultural survey series.

Regarding livestock, estimation data exist for some commodities, such as milk production, eggs, slaughtered animals and meat. These data were compiled and the missing values estimated by the experts.

For products with no data in the country, the FAO data were considered and supplemented with estimates based on the data series.

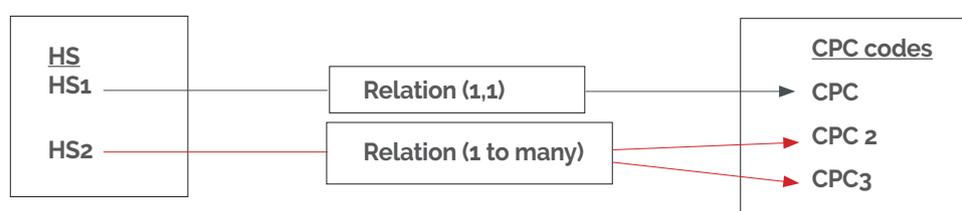
For fisheries, data are from administrative source from the Ministry of Livestock and Fisheries). More details are provided under Section (m) below.

e) *Compilation of trade data*

Trade data is codified using Harmonised System (HS) classification, while the new compilation tool requires Central Production Classification (CPC) codes. The big challenge in the compilation of trade data was mapping HS codes data to CPC. We have six (6) versions of HS classification: HS 1992, HS 1996, HS 2002, HS 2007, HS 2012 and HS 2017. In the case of Tanzania, HS 2012 is used for 2014-2017 trade data. The mapping was therefore performed as follows:

Considering, the two classifications, and for each element of the HS classification, we have two types of relations:

- Relation one to one, where one HS code corresponds to only one code of CPC; and
- Relation one to many, where one HS code corresponds to more than one CPC code.



The mapping of HS codes to CPC with relation one-one was automatically done in Excel using “VLOOKUP” function. HS codes with more than one association in the CPC classification were subject to careful attention. Indeed, it was necessary to look into the details and the description of the corresponding codes before the mapping. It should be noted that trade data are only limited to official data recorded by the customs authorities.

f) *Compilation of stock variations*

These data were estimated by the compilation Tool. According to guidelines, stock variations tend to be correlated with changes in production, net of trade (Production + Import - Export), as shown in the formula below:

$$\Delta (\text{Stock}_t) = f (\Delta \text{ProdNT}_t) + \varepsilon_t$$

where:

$\Delta (\text{Stock}_t)$ is the stock change in year t

ΔProdNT_t corresponds to $[\text{Production}_t + \text{Imports}_t - \text{Exports}_t] - [\text{Production}_{t-1} + \text{Imports}_{t-1} - \text{Exports}_{t-1}]$

ε_t is the error term.

g) *Compilation of feed, seed and losses data*

These data were estimated using the ratios and rates (feed ratios, seeding rates, loss ratios). The country specific rates or ratios did not exist. This led to the consideration of those suggested by FAO.

h) *Data on food availability*

Food availability was estimated taking into account some parameters such as Gross Domestic Product (GDP), population and elasticities of the commodities. There were no specific elasticity data for the country, hence the use of estimates by the United States Department of Agriculture.

For commodities with missing elasticities, availability was estimated by the Tool as a residual component. The estimation model is:

$$Food_t = \frac{Population_t}{Population_{t-1}} * Food_{t-1} * [1 + \varepsilon * \log\left(\frac{GDP_t}{GDP_{t-1}}\right) + \phi]$$

Where:

$Food_t$ = Food availability in the current year t

$Food_{t-1}$ = is the food availability in the previous year $t-1$

$Population_t$ = is population in year t

$Population_{t-1}$ is population in year $t-1$

ϕ is growth rate in food consumption, and

ε is income elasticity of the commodity.

i) Compilation of tourist data, industrial use and other uses

Data on number of incoming tourists, outgoing tourists and average nights stayed were used to estimate consumption by tourists. It was calculated in terms of net consumption: the amount of food available to incoming tourists minus the amount of food that would have been available to residents had they been present in the country.

There was the lack of data for industrial uses for Tanzania. FAO estimations were considered to fill this component. However, for 2017, there were no FAO estimates, which led to doing estimations based on the data series.

There were no data for residual and other uses because the possible uses in the country were taken into account in the other components. However, in terms of results, some figures for this component were found in FBS tables. This is due to the fact that during the balancing process, the Shiny Tool allocates some few quantities to other uses to allow getting the balance in supply and use equation.

In the FBS results, these three components were put together in one component named "Other Uses".

j) Compilation and correction of SUAs and FBS results

After filling in all the components, the Tool can automatically generate the SUAs tables for each year. Correction cannot be made directly to the SUAs table generated, but we have to go back to the basic data and do it in case of inconsistencies. The FBS results are automatically generated, including standardisation and aggregation process. But after generating the results, there is need to check if there are any inconsistencies. For instance, for eggs, it was noted, there was a huge increase of DES in 2016 and 2017, and it was due to an increase in yield of laying hens. The necessary correction was made in the basic data based on the estimation of reasonable yield. All these corrections contributed to improve the quality of Food Balance Sheets.

k) Checking some constraints

After generating Tanzania FBS for 2014-2017 reference years, some universal constraints were checked. The results were exported to Excel file and the formulas inserted.

The constraints checked were:

- Row constraint to ensure that the quantity of export of each commodity doesn't exceed the supply of that commodity. The formula put in the Excel file was: Production + Import - Stock Variation - Export. For all commodities, the result were positive, meaning that the supply exceeded the export and that was the expected results; and
- Vertical standardisation constraint to ensure that for each commodity, the quantity sent to the processing didn't exceed the supply of the primary products. In other words, Production + Import - export - Stock Variation - Process should be positive. This constraint highlighted that none of the derived product accounts had negative discrepancies.

l) Deriving per capita estimates

The new compilation Tool automatically computes some indicators such as dietary energy supply per day, per capita supply and per day of proteins and fats. Some other indicators were computed in Excel file. These indicators were:

- Food supply per capita and per year (Kg);
- Self-Sufficiency Ratio (SSR); and
- Import Dependency Ratio (IDR).

m) Compilation of fishery commodities

Shiny Tool does not include fisheries data, hence as part of the FBS process in Tanzania for the period of 2014-2017, production, import and export of fish was obtained from the Ministry of Livestock and Fisheries and compiled using Excel. Due to the fact that information on the other utilisations was not available, the following assumption was considered:

Supply = production + import; and

Utilisation = export + food consumption.

Thus,

Food consumption = production + import - export.

This result provides a picture of daily per capita energy, proteins and fats supply and can supplement the results obtained from the Shiny Tool.

2.2 Activities Undertaken

The process of compiling Tanzania FBS for the period of 2014-2017 was a collaborative effort involving ministries and statistics offices in Tanzania Mainland and Zanzibar, namely: Ministry of Agriculture; Ministry of Livestock and Fishery; Ministry of Industries, Trade and Investment in Tanzania Mainland; and the Ministry of Agriculture, Natural Resources, Livestock and Fisheries in Zanzibar; National Bureau of Statistics (NBS); and the Office of Chief Government Statistician (OCGS) of Zanzibar.

Other key stakeholders aboard were the Bank of Tanzania, Tanzania Revenue Authority and Tanzania Food and Nutrition Centre, which is under the Ministry of Health, Community Development, Gender, Elderly and Children.

In the process of developing the Tanzania FBS for 2014-2017, a number of activities were undertaken.

a) Development of the Roadmap

A roadmap on compilation of FBS in Tanzania was developed with a series of activities to build, improve and strengthen the collection, analysis and use of information on Supply and Utilisation Accounts (SUAs) and FBS statistics.

The objectives of the roadmap were as follows: To recommend and describe the activities that should be carried out; define the governance and institutional mechanisms to support implementation of activities that were carried out, hence building a sustainable foundation for the production of FBS; propose a realistic timetable for the execution of the activities within the agreed timeframe of the Global Strategy to improve Agricultural and Rural Statistics (GSARS); and identify and estimate the necessary resources, both human and financial, required to ensure successful formulation of the Tanzania FBS for 2014-2017.

b) Regional workshop

A one-week workshop jointly organised by the National Bureau of Statistics in Tanzania, AfDB and AFRISTAT took place in Arusha, Tanzania, in October 2018. The workshop was planned within the framework of the Action Plan for implementing the Global Strategy to improve Statistics for Food Security, Sustainable Agriculture and Rural Development in Africa.

The participants came from many African countries and from some of the regional economic bodies like Economic Community of West African States (ECOWAS) and East African Community (EAC). The main focus of the workshop was to improve national systems in producing and disseminating FBS statistics.

In line with the above-mentioned objective, the workshop also trained participants on the use of FBS guidelines and compilation tools, creating synergies and opportunities for collaboration among countries/RECs and sharing experiences. The platform was also used to identify technical assistance needed on the whole process of compiling FBS.

c) National workshop

After the regional workshop in Arusha, a one-week national training on the use of FBS Guidelines and its Compilation Tool took place in Dodoma in December 2018. This training involved all members of the core team from NBS; OCGS; the Ministry of Agriculture; Ministry of Livestock and Fisheries; Ministry of Industries, Trade and Investment from Tanzania Mainland; Ministry of Agriculture, Natural Resources, Livestock and Fisheries in Zanzibar; Tanzania Revenue Authority; Tanzania Food and Nutrition Centre and the Bank of Tanzania.

The participants were also responsible for putting together all data from their respective offices in the format of Supply and Utilisation Account framework. This enabled development of a dataset that was an input in the FBS tool for production of preliminary Annual Food Balance Sheets for 2014 to 2017.

d) Data collection

The two statistical offices, NBS and OCGS were the coordinating agencies in the process of developing the Tanzania FBS for 2014-2017. More specifically, the FBS core team dealt with the administrative data obtained from their respective ministries/institutions. To fast-track the process, team leaders were appointed in the production, livestock and fisheries components.

The main task of the team members was to check the validity of the collected data from their respective ministries/institutions and then populate it to the special template provided.

e) Data validation workshop

During the FBS compilation, there was a high possibility of introducing errors and omissions in the data-set. On the other hand, since the data came from different sources (producers and consumers), there was a possibility of putting incomplete or unreliable data. Therefore, checking the quality before use was important. In this regard, the national team members worked together for three days to validate the data so as to improve quality before use. It was during this session that data were validated, edited and imputed to fill the existing gaps before filling the SUA tables.

2.3 Data Sources

The Tanzania FBS was prepared using data from crop, livestock and fishery sectors. This involved the use of both official and estimated data relating to production, utilisation and trade (imports and exports). The required data for preparation of the Tanzania FBS was obtained from various sources as follows:

- a) Ministries of Agriculture – all crop commodities data related to production, stock feed and seed;
- b) Ministry of Livestock and Fisheries – livestock and fishery production data;
- c) National Bureau of Statistics – supplementary data on crops and livestock (from surveys), trade data (imports and exports) for all commodities in the FBS, population data, GDP, etc.; and
- d) Tanzania Revenue Authority – import and export data for all commodities in the FBS. Some data were estimated as they could not be obtained from the above-mentioned sources. These included data on losses, feed, stock, industrial use and processed food.

Chapter 3

Presentation of FBS Results

Overview

There are two distinct and useful measures of nutritional status derived from different analytical approaches. Under-nourishment numbers are estimated from existing data about the number of people and the amount of food available to them. Under-nutrition is determined from data about individuals' weight, height, and age. Ratios calculated from these measurements indicate the outcome not only of inadequate food intake, but also of poor health and sanitation conditions that may prevent people from deriving full nutritional benefit from what they eat. The two approaches, as expected, are complementary. They can be used effectively to obtain a snapshot of current conditions, even though they do not capture the full array of factors determining nutritional status. This report adopts the former approach, which relies on data that are more recent, readily available and comparable across countries.

3.1 Nutritional Requirements

Food provides the body with energy and other needs in form of carbohydrates, fats, and proteins. It also provides the body with amino acids, vitamins and minerals, all of which are needed for growth and for the maintenance of body cells and tissue. Energy requirements are a function of a multitude of variables such as gender, age, activities, body size and composition; and climate.

Proteins can be classified as either "animal proteins" or "plant proteins". Animal proteins contain more of essential amino acids than do plant proteins and, in general, have a higher nutritive value.

However, in reality, populations subsist mainly on mixed proteins of animal and plant origin. The nutritional value of such mixed protein intake is determined by biological methods, and since plant proteins possess a lower nutritional value, more of such protein is required to meet body requirements.

As a country prospers, its diet becomes more varied. Higher consumption of animal protein foods, fats, and oils increases the energy level of the diet and thus furthers protein utilisation. It is important to realise that practical nutrition is concerned with the nutritional value of diets and of individual foods.

3.2 Intake of Calories, Protein, and Fat, Tanzania, 2014-2017

This section analyses the FBS. It is worth noting that the new compilation tool does not include fisheries data, hence a different tool (Excel) was used to establish daily per capita energy, protein and fats supply from fish and its products.

Per capita food supply is a measure of the food available for human consumption during a specific reference period in terms of calorific value, protein and fat content. Daily per capita energy supply is obtained by subjecting the daily per capita food supplies to the relevant technical conversion factors.

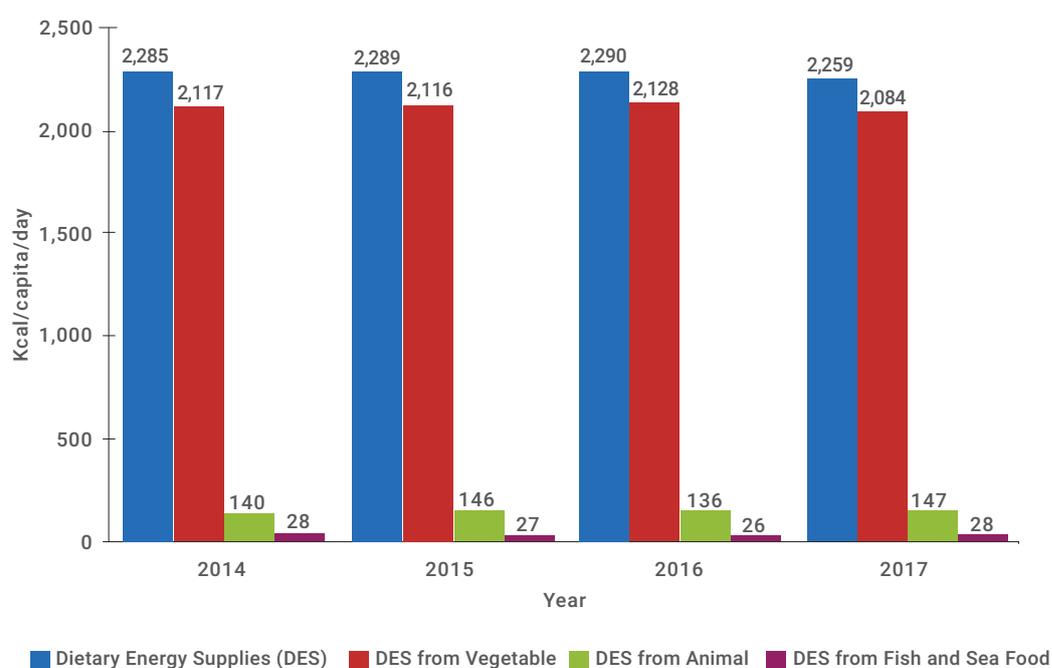
3.2.1 Calorific Supply

In the period of 2014 to 2017, the overall diet of Tanzania had not changed significantly. During this period, the daily supply of calories per person ranged from 2,259kcal in 2017 to 2,289kcal in 2015 (Figure 3.1). The slight decrease of dietary energy supply (DES) from 2,290kcal in 2016 to 2,258kcal in 2017 was largely attributed to the decrease in the production of some commodities like maize, cassava, pulses, groundnuts, palm oil and milk.

Similarly, the supply of energy from vegetal, animal and fish and sea food groups almost remained constant in the period under review. While the contribution of vegetal to total per capita dietary energy supply was highest in 2016 (2,128kcal) and lowest in 2017 (2,084kcal), that of animal was highest in 2017 (147kcal) and lowest in 2016 (136kcal). The decrease of daily per capita dietary energy supply from vegetable products experienced in 2017 was occasioned by a large failing in DES of starchy roots, pulses and vegetable oils.

The zig-zag pattern recorded in per capita daily supply of calories from animal products was due to the fluctuation experienced in the meat supply and more precisely the bovine and pig meat. On the other hand, the contribution of fish and its products to the per capita per day dietary energy remained almost constant from 2014 to 2017.

Figure 3.1: Daily per Capita Supply of Calories, Tanzania, 2014-2017



Cereals (excluding beer), which form the most important vegetal food group in Tanzania, contributed to an average of 52 percent of all calorific supply from the vegetable group during the 2014 to 2017 period (Table 3.1), with a significant proportion being made from maize and its products (Figure 3.2). Maize is one of the staple food crops in Tanzania.

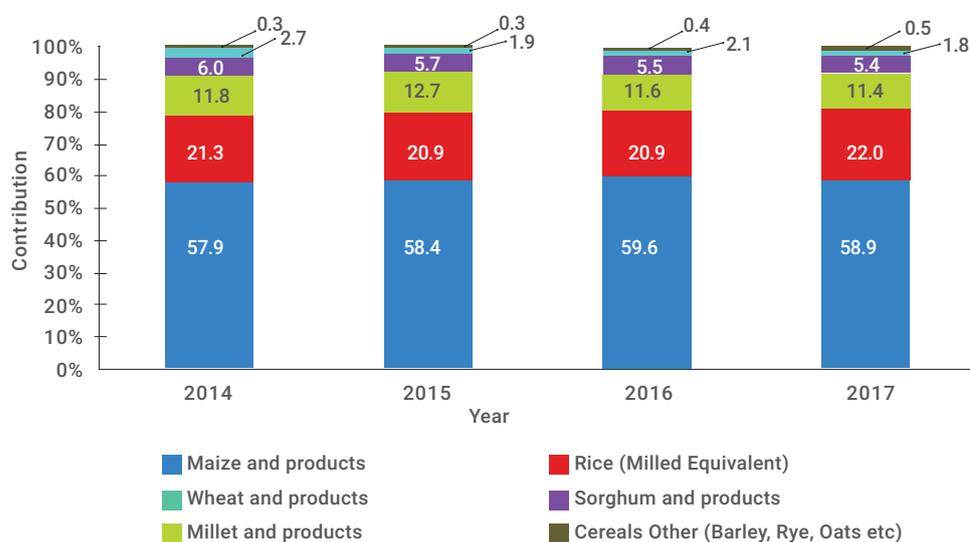
Starchy roots, vegetable oils, pulses and fruits (excluding wine) are also important source of energy after cereals. Availability and consumption of these products showed little variation during the period under review.

Table 3.1: Percentage Contribution of Vegetal Products to Per Capita Energy for Vegetable Products, Tanzania, 2014-2017

	Vegetable groups	Year				Average Contribution
		2014	2015	2016	2017	
1	Cereals (excluding beer)	51.6	51.3	50.9	52.3	51.5
2	Starchy roots	10.0	10.0	10.1	10.0	10.0
3	Sugar crops	0.2	0.2	0.2	0.3	0.2
4	Sugar & sweeteners	4.1	4.0	4.2	3.9	4.0
5	Pulses	10.5	11.2	11.6	11.5	11.2
6	Tree nuts	0.2	0.5	0.2	0.2	0.3
7	Oil crops	0.9	0.8	0.7	0.6	0.8
8	Vegetable oils	10.2	10.4	10.2	10.2	10.3
9	Vegetables	1.9	1.5	1.6	1.1	1.5
10	Fruits (excluding wine)	4.7	4.7	4.7	4.8	4.7
11	Stimulants	0.1	0.0	0.0	0.0	0.0
12	Spices	2.4	2.4	2.3	2.2	2.3
13	Alcoholic beverages	3.2	2.9	3.2	2.8	3.0
		100.0	100.0	100.0	100.0	100.0

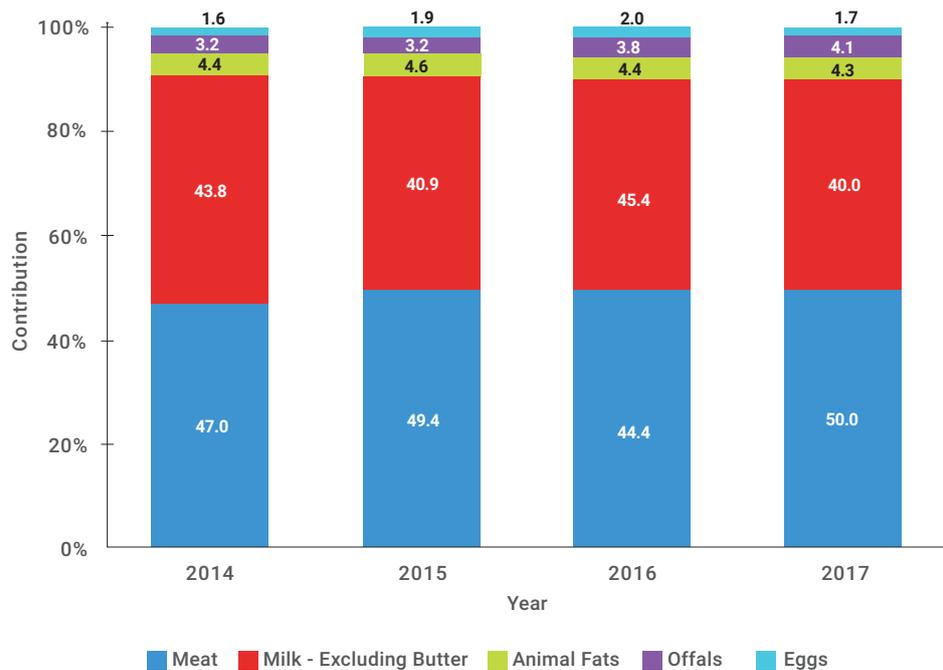
Maize contribution to the calorific supply for cereal food group was consistently the highest in all years under review, followed by rice and wheat (Figure 3.2). Moreover, the contribution of the food crops to caloric supply from the other cereal foods remained low and almost constant over time.

Figure 3.2: Contribution of Cereal Products to Daily Per Capita Energy (Kilo calories) from Vegetal Food Groups, Tanzania, 2014-2017 (%)



Of the dietary energy supply from animal products consumed in the country in the four years under review, meat contributed between 44 and 50 percent followed by milk (excluding butter) at 40 to 45 percent (Figure 3.3).

Figure 3.3: Contribution of Animal Products to the Daily per Capita Dietary Energy Supply, Tanzania, 2014-2017 (%)



The findings also reveal that most of the dietary energy supply from meat comes from bovine meat followed by mutton and goat meat. However, generally, the contribution of bovine meat has been fluctuating over time, with the minimum and maximum levels of 47 and 68 percent, which were witnessed in 2015 and 2016, respectively. This situation is due to the fluctuation in the total Dietary Energy Supply (DES) from meat products over the period under study. On the other hand, the contribution of pig meat has decreased significantly in recent years, from 25 percent in 2015 to 7 percent in 2016 and 11 percent in 2017. This situation is due to the fact that in 2016, the country experienced the emergency of disease called African Swine Fever (ASF). The disease attacked several pigs in some highly swine producing districts in the country.

The contribution of poultry and other meat has been constantly low from 2014 to 2017 (Figure 3.4).

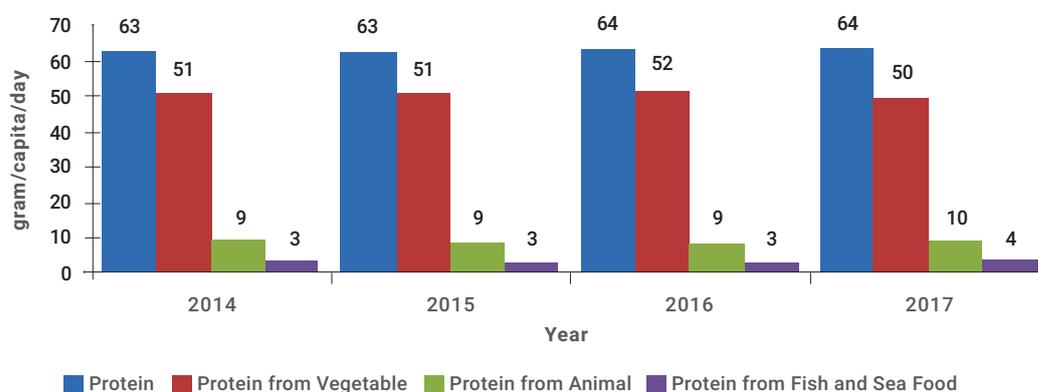
Figure 3.4: Contribution of the Different Types of Meat to Daily per Capita Energy from Meat Products, Tanzania, 2014-2017 (%)



3.2.2 Per Capita Proteins

The total supply of protein has been constant at about 63g per capita per day in 2014 to 2015 and 64g per capita per day in 2016 and 2017 (Figure 3.5). Furthermore, the supply of vegetable and animal protein has also been constant at about 51g and 9g per capita per day respectively for the period of 2014 to 2015, with slight changes in 2016 and 2017. Protein from vegetable products was 52g in 2016 and 50g in 2017. Protein from animal products increased to 10g per capita per day in 2017 due to an increase in the supply from bovine meat. The supply of protein from fish was 3g per capita per day from 2014 to 2016, increasing slightly to 4g in 2017 due to an increase in the production and import of the commodity.

Figure 3.5: Per Capita Daily Supply of Protein, Tanzania, 2014-2017



Generally, the supply of protein from vegetal products is almost five times higher than that of animal products, in all four years under review.

Cereal and pulses and starchy roots form an important component in the supply of proteins from vegetal food groups.

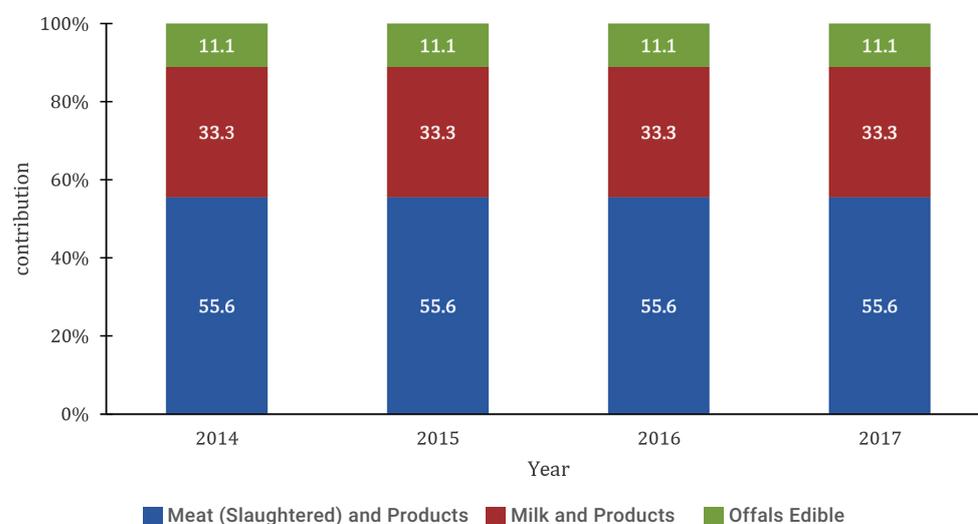
Over the review period, cereal and the related products contributed to more than half of the vegetal protein. Contribution of the pulses and products was between 28 and 31 percent, while the remaining vegetable food groups all together contributed about 20 percent (Table 3.2).

Table 3.2: Percentage Distribution of Protein from Vegetal Food Groups, Tanzania, 2014-2017

Vegetable groups / Year	2014	2015	2016	2017
Cereals and Products Excluding Beer	52.0	51.0	50.0	52.0
Pulses and Products	28.0	29.4	30.8	30.0
Starchy Roots and Products	6.0	5.9	5.8	6.0
Oil Crops (Excluding Products)	2.0	2.0	1.9	2.0
Vegetables and Products	4.0	3.9	3.8	2.0
Spice	4.0	3.9	3.8	4.0
Fruits and Products (Excluding Wine)	2.0	2.0	1.9	2.0
Alcohol (Including Beer and Wine)	2.0	2.0	1.9	2.0
	100.0	100.0	100.0	100.0

Meat and milk products have been the main source of animal protein, contributing about 90 percent of the total protein from animal products in each of the four years under review (Figure 3.6).

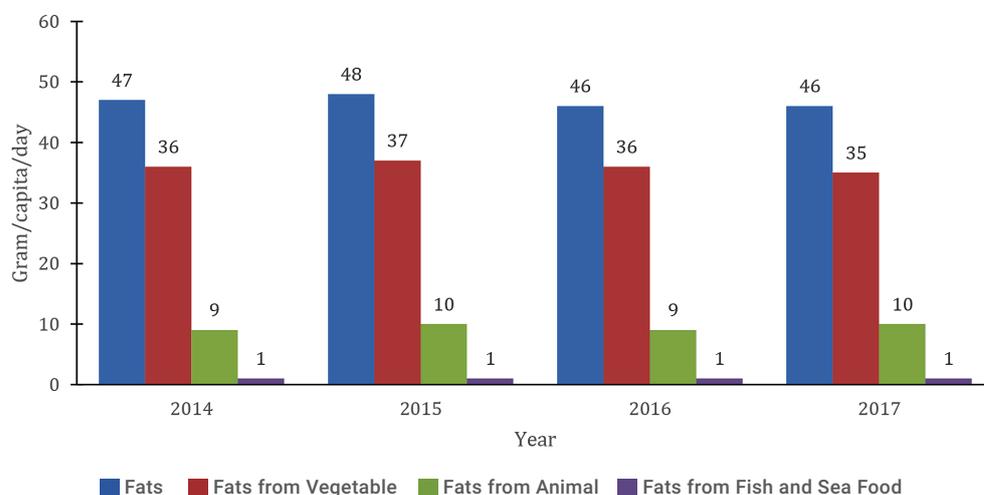
Figure 3.6: Contribution of Protein by Animal Food Groups, Tanzania, 2014-2017 (%)



3.2.3 Per Capita Fats

Supply of fats in the Tanzanians' diet has been fluctuating slightly from 46g to 48g per capita per day in the 2014-2017 period. It was 47g per capita per day in 2014 and 48g per capita per day in 2015, decreasing slightly to 46g daily per capita in 2016 and 2017. A similar trend is observed for the contribution of vegetable products in the daily per capita fats supply. On the other hand, the contribution of animal and fish and sea food and their related products to fats always remained low and about the same over the reference period (Figure 3.7).

Figure 3.7: Daily per Capita Supply of Fats, Tanzania, 2014-2017



The findings also reveal that vegetable oils and related products are an important source of fats from vegetable food groups. In the period under review, vegetable oil and products contributed about 71 percent of the total fats in 2014, 2015 and 2017. In 2016, a slight increase to 74 percent was observed (Table 3.3). This was due to a slight decrease (3%) in the total daily per capita supply from vegetable products, while the supply from vegetable oil and products remained constant (25g/capita/day)

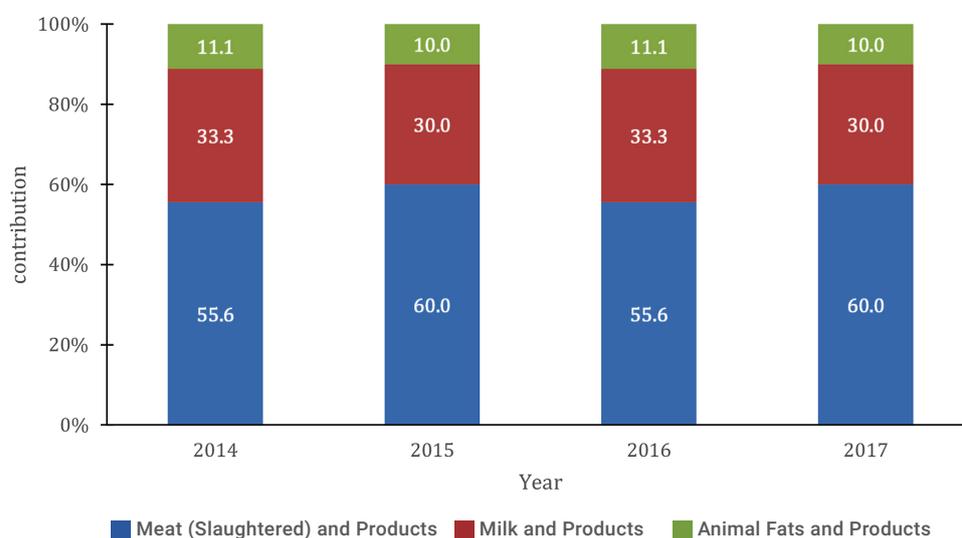
Table 3.3: Percentage Contribution of Vegetables to Daily Per Capita Fats, Tanzania, 2014-2017

Vegetable group / Year	2014	2015	2016	2017
Vegetable Oil and Products	70.6	71.4	73.5	70.6
Oilcrops (Excluding Products)	5.9	2.9	2.9	2.9
Cereals and Products (Excluding Beer)	14.7	14.3	14.7	14.7
Pulses and Products	2.9	2.9	2.9	5.9
Treenuts and Products	0.0	2.9	0.0	0.0
Spices	5.9	5.7	5.9	5.9
	100.0	100.0	100.0	100.0

On the other hand, as was the case for the animal protein, meat and milk continued to be the major source of fats from animal products. The contribution of meat and related products was 56 percent in 2014 and 2016, while that of milk was 33 percent in 2014 and 2016.

However, in 2015 and 2017, a slight increase was observed in the contribution of meat and its products (60 percent), occasioned by an increase in the supply of bovine meat, while that of milk and its products decreased to 30 percent, mainly due to a decrease in the production of cattle milk. The contribution of animal fats and products was the lowest in all years under review, fluctuating between 10 and 11 percent (Figure 3.8).

Figure 3.8: Contribution of Animal Food to Daily Per Capital Fats, Tanzania, 2014-2017 (%)



3.3 Self-Sufficiency Ratio (SSR) and Import Dependency Ratio (IDR)

Using the system of Supply Utilisation Account (SUA), two indicators, (i) Self-Sufficiency Ratio (SSR) and (ii) Import Dependency Ratio (IDR), were derived. The indicators are used to portray the capacity of a country to feed its people based on its own production and/or food imports from other countries.

Note:

Self-Sufficiency Ratio (SSR) and Import Dependency Ratio (IDR)

The minimum value for SSR and IDR is zero. These two indicators are not expected to have negative values for the simple reason that none of the involved variables (production, import and domestic supply) can be negative. However, SSR and IDR can be more than 100%. When the Self-Sufficiency Ratio (SSR) is more than 100%, it means that the production is higher than the domestic use. In this case, the surplus represents the proportion of net exports and/or transfers to stocks.

In the same logic, when the IDR of a given commodity is higher than 100%, it means that the quantity exported plus the quantity transferred to stocks is higher than the production of that commodity.

It is also important to note that the SSR and IDR can be measured for a single or many commodities based on the application of suitable conversion factors. In this case, in order to get SSR and IDR for a group of commodities, it is recommended to aggregate all concerned commodities after their conversion in the same nutritive terms.

3.3.1 Self-Sufficiency Ratio (SSR)

The ability of food produced to meet the current food demand and other related food requirements in a particular area (measured in a percentage) is called Self-Sufficiency Ratio (SSR). It is vital at this stage to know the quantity of food produced at country level, the amount imported from other countries and the stock variation, while investigating the food situation in any country.

The SSR helps to indicate the level at which the country can rely on its own production of food. Therefore, SSR is calculated as following:

$$SSR = \frac{PRODUCTION}{PRODUCTION + IMPORT - EXPORTS - STOCKS VARIATION} * 100$$

3.3.2 Import Dependency Ratio (IDR)

The IDR is used to assess the dependency of a country on imported foodstuff to be consumed by its people. The IDR ratio is calculated as following:

$$IDR = \frac{IMPORT}{PRODUCTION + IMPORT - EXPORTS - STOCKS VARIATION} * 100$$

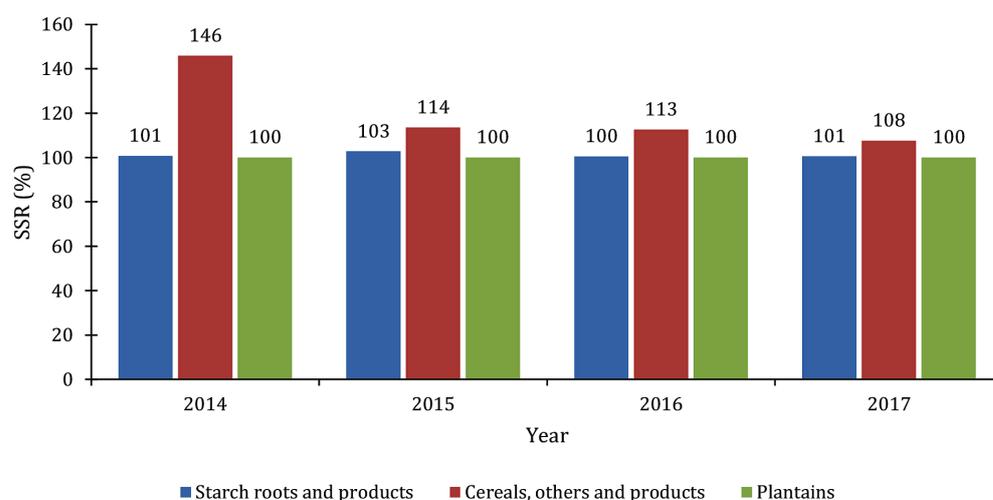
3.3.3 Analysis of IDR and SSR

3.3.3.1 Self-Sufficiency Ratio for major staple food

In Tanzania, major staple foods, particularly cereals, roots and plantains, were sufficiently supplied over the period 2014-2017. For example, the SSR for plantains was always 100 percent for the reference period. This means that during the period between 2014 and 2017, Tanzania was able to produce sufficient plantain for domestic utilisation.

SSR for "starchy roots and products" and "cereals, others and products" were well above 100 percent, meaning that the supply of these items was in excess. The highest SSR for "cereals and products" was recorded in 2014 (146 percent) and the lowest in 2017 (108 percent). The SSR for starchy and roots ranged between 100 percent in 2016 and 103 percent in 2015 (Figure 3.9).

Figure 3.9: Self-Sufficiency Ratio for Major Staple Foods, Tanzania, 2014-2017



In the period from 2014 to 2017, Tanzania recorded SSR of above 100 percent for vegetables and fruits. This means that the production of these crops was enough to cover the domestic supply during the period. The SSR for pulses was also above 100 percent in all years except 2017, when it was 90 percent due to a decrease in the production of pulses.

This means that the production of pulses in 2017 was not enough to bridge the supply gap and hence importation and use of stock was important. However, the SSR for meat, poultry and milk products were always below 100 percent in the reference period (Figure 3.10).

Figure 3.10: Self-Sufficiency Ratio for Other Food Groups, Tanzania, 2014-2017

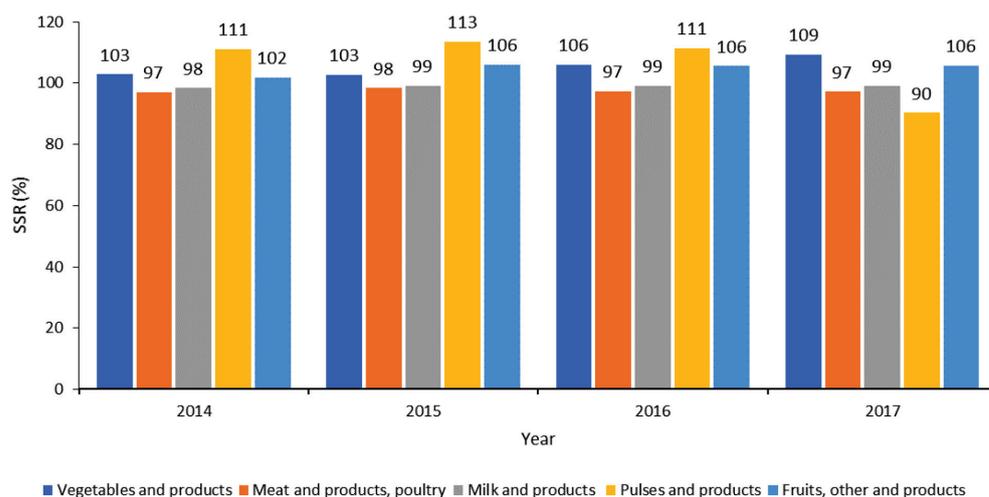
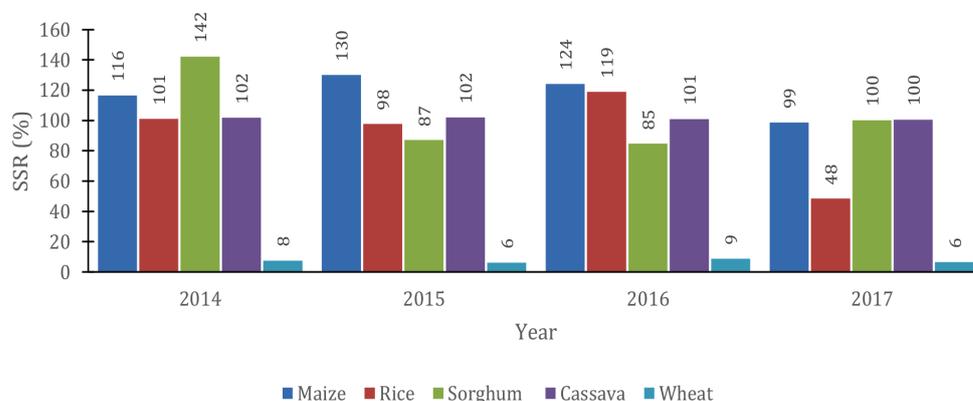


Figure 3.11 presents the SSR performance for five major food commodities in terms of production and consumption in the country. These food commodities are maize, rice, sorghum, cassava and wheat. The SSR for cassava was 100 percent or more in all the four years, whereas the SSR for maize was above 100 percent in all the years except 2017 (99 percent).

Also, rice recorded a relatively high SSR in 2014 (101 percent) and in 2016 (119 percent). However, the ratio was relatively low in 2015 (98 percent) and lowest in 2017 (48 percent), occasioned by a decrease in the production of the commodity.

The SSR for sorghum was quite high in 2014 (142 percent) but declined to 87 percent in 2015 due to the diminution by 11 percent of its production from 2014 to 2015. The SSR for wheat was always by far the lowest, ranging from 6 to 9 percent during the reference period (Figure 3.11).

Figure 3.11: Self-Sufficiency Ratio for Selected Food Crops, Tanzania, 2014-2017



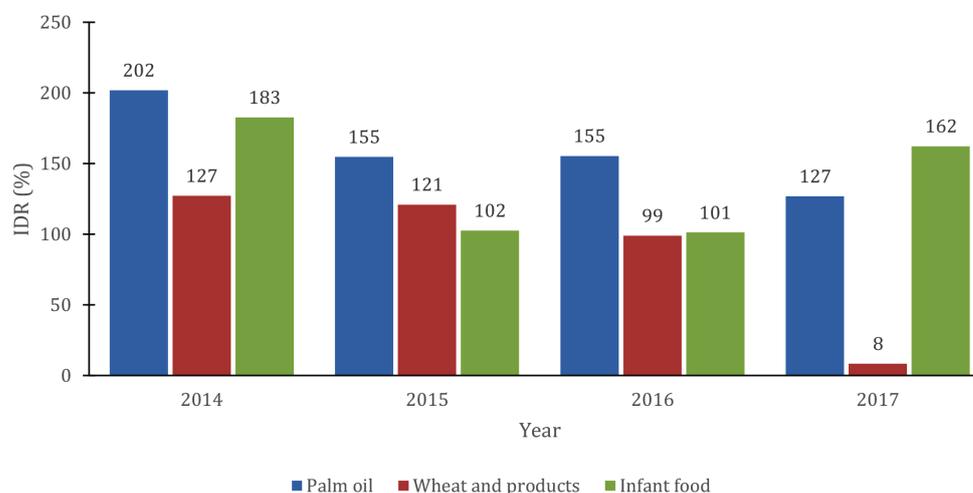
3.3.3.2 Import Dependency Ratio (IDR)

Figure 3.13 shows that palm oil, wheat and products, and infant foods, constitute the largest share of food imports in Tanzania. The imports of these foodstuffs usually supplement domestic production or in cases where a given commodity is not produced locally.

Over the review period, the IDR for palm oil was 202 percent in 2014, but significantly decreased to 155 percent in 2015 and to 127 percent in 2017. This situation can be explained by a reduction in the importation of palm oil from 2014 to 2015 (-20%) and from 2016 to 2017 (-18%). The IDR for wheat has been decreasing over time from 127 percent in 2014 to 8 percent in 2017.

However, the sharp decrease from 99 percent in 2016 to 8 percent in 2017 is explained by a decrease in the importation of wheat and products. IDR for infant foods was over 100 percent in all years under review, depicting a decreasing trend from 183 percent in 2014 to 101 in 2016, and thereafter increasing to 162 percent in 2017 (Figure 3.12).

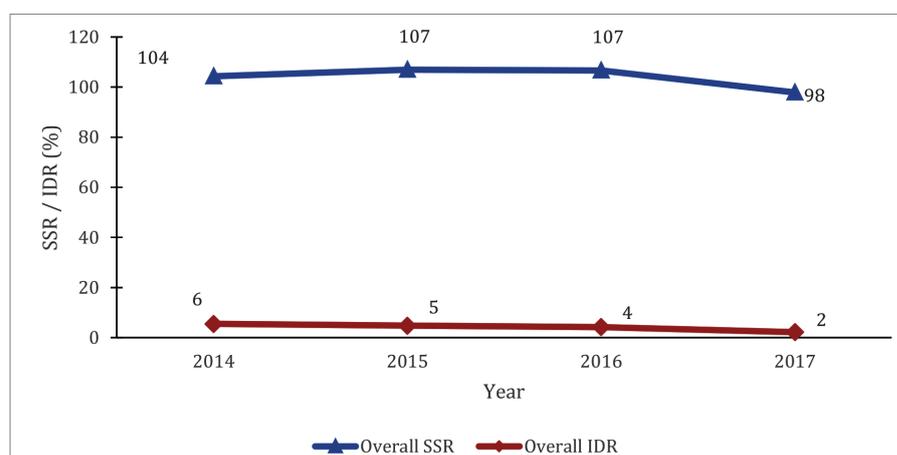
Figure 3.12: Import Dependency Ratio, Tanzania, 2014-2017



Overall SSR and IDR¹

In the period from 2014 to 2017, the overall SSR in food supply for Tanzania increased from 104 percent in 2014 to 107 percent in 2015, and then significantly decreased to 98 percent in 2017 (Figure 3.13). On the other hand, overall IDR under the review period showed a slightly different pattern from that of total SSR. The total IDR decreased slightly from 6 percent in 2014 to 2 percent in 2017, due mainly to a decrease in the importation of wheat in 2017.

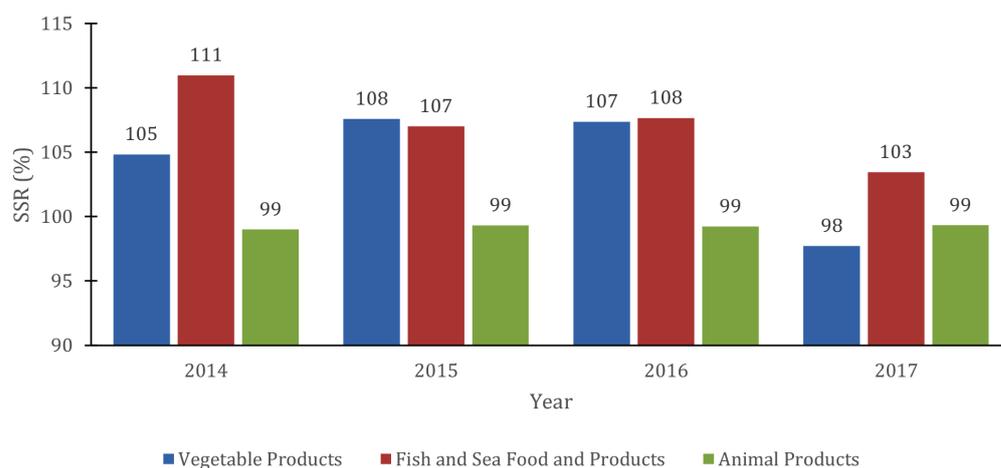
Figure 3.13: Overall Self-Sufficiency and Import Dependency Ratios, Tanzania, 2014 – 2017



¹Overall SSR and IDR and those of Vegetable and Animal Groups are estimated based on corresponding food quantities

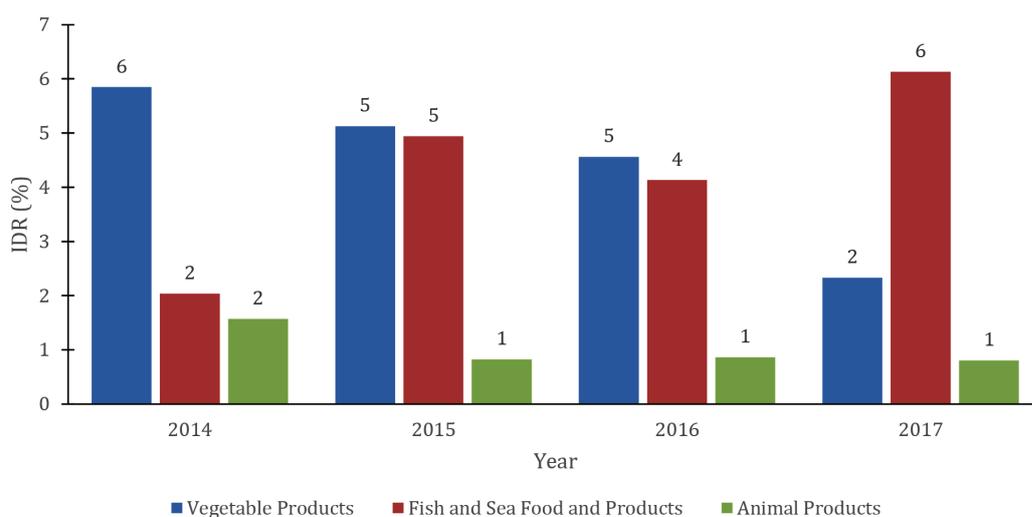
Figures 3.14 and 3.15 present the vegetable and animal food SSR and IDR respectively. In all the years under review except for 2017 (98 percent), the SSR for vegetable products was above 100 percent. The SSR for fish and seafood was always above 100 percent in the whole period from 2014 to 2017. However, the SSR for animal products was below 100 percent (99 percent) in all years under review.

Figure 3.14: Self-Sufficiency Ratio for Vegetables, Animal and Fish Products, Tanzania, 2014-2017



The IDR for vegetable products in all years except for 2017 was above that of "animal products" and "fish and sea food and products" (Figure 3.15). In 2017, the IDR for fish and sea food (6 percent) was above that of vegetable products (2 percent) and animal products (1 percent). The figure shows that the IDR for animal products was less than two percent in the whole period under review. It is further observed that IDRs for vegetable, animal and fish products were below 7 percent in all years under review. This means that a large percentage of the three products are sufficiently produced domestically for consumption.

Figure 3.15: Import Dependency Ratio for Vegetables, Animal and Fish Products, Tanzania, 2014-2017



3.4 Comparison with FAOSTAT results

The most recent data published by FAO on its FAOSTAT website are for the year 2013. For validation purposes, this section compares 2014 country results obtained using the new approach and related FBS compilation Tool with those compiled by FAO for 2013 reference year.

Table 3.4: Comparison of key results between 2013 results from FAOSTAT and 2014 Country Results

	2013 results from FAOSTAT	2014 country results
DES (Kcal/cap/day)	2,204	2,285
Proteins (g/cap/day)	58	63
Fats (g/cap/day)	46	47
Population (000)	49,253	47,453

The 2013 Dietary Energy Supply (DES) from FAOSTAT website is 2,204Kcal per capita per day, which is lower than the DES from 2014 results generated by Tanzania (2,285Kcal/capita/day). One of the main reasons that could explain this difference is the variation of data used by FAO and the country's own figures such as the population. For example, FAO population data for Tanzania (49 million), which it used to generate the 2013 FBS results, is higher than the official one (47 million) used to generate the 2014 FBS by Tanzania.

When it comes to the commodities, the results show that the huge differences in terms of DES concern maize, cassava, sweet potatoes and rice.

Table 3.5: Comparison of major commodities DES between 2013 results from FAOSTAT and 2014 Country Results

FBS Commodity	2014 country results	FAOSTAT 2013
MAIZE & PRODUCTS	632	523
CASSAVA & PRODUCTS	76	140
SWEET POTATOES	86	123
RICE & PRODUCTS (MILLED EQ.)	232	204

The results from FAOSTAT underestimated the DES of maize and rice. Furthermore, the DES of cassava and sweet potatoes were overestimated in the 2013 results published on the FAOSTAT website. This may be also explained by the differences in the approach used, and/or the basic data (different years) applied.

However, given that those differences are not significant, it can be concluded that the FBS system developed by Tanzania is robust enough to generate acceptable results.

Chapter 4

Constraints, limitations and lessons learnt

Most of the data needed for compilation of the Tanzania Food Balance Sheets for 2014-2017 were obtained from surveys (mainly from NBS and OCGS) and administrative (routine) records from the Ministry of Agriculture; Ministry of Livestock and Fisheries; Ministry of Industries, Trade and Investment, Tanzania Revenue Authority and other institutions. However, for the period under review, some of the data were missing from both surveys and routine data. In this circumstance, estimations from FAO were considered for use in the FBS tool. In the process, the team had to do estimations and/or imputation of the missing information to generate complete data for use in the FBS tool.

For example, production data of most food crops were obtained from surveys and routine data from the Ministry of Agriculture. However, data from these two sources were largely inconsistent and not comparable. Therefore, after consultations among the team members, data on especially staple food crops like maize and others like groundnuts and other cereals were estimated.

Other conversion factors could not be obtained locally. Therefore, the standard ones (Technical Conversion Factors and Nutrients Factors) were applied. Also, some information missing on seed, losses and feed were estimated or imputed by the Tool using Technical Conversion Factors.

It should also be noted that at the beginning of the process, it was not possible to run 2017 FBS with the FBS compilation Tool due to some technical problems related to the Tool. This contributed to the delay in the FBS compilation in the country.

The following are the lessons learnt from FBS computation for Tanzania for the period 2014-2017:

1. The spirit of participatory approach enhanced the quality of the data used in the production of the report, since most of the experts from different sources (ministries, institutions) had time to jointly discuss and agree on the results produced;
2. The timely availability of funds to facilitate different activities outlined in the FBS Roadmap was one of the fuelling factors towards the completion of the report. Therefore, commitment to raising funds from government to sustain the compilation of the FBS is vital;
3. The regional workshop was attended by experts from international organisations, regional bodies and different countries. It was a good platform to share and exchange knowledge on the FBS compilation process;
4. The process of elaboration of FBS allowed the team members to strengthen their capacities on the methodological aspects, the compilation of SUAs, generating FBS and especially the estimation of missing data;
5. Because the preparation of the Food Balance Sheets used numerous types of data from different institutions, the national FBS team had the opportunity to detect inconsistencies.

Conclusion

As pointed out earlier in this report, before the production of FBS, Tanzania had been producing Commodity Balance Sheets, but these had some gaps in the sense that they included only the key cereal crops, leaving out livestock and fishery products. It is thus anticipated that the 2014-2017 FBS will play a key role in decision making and planning as it provides more comprehensive data.

Knowing in advance that the required information to produce FBS would be coming from different sources, a roadmap with a list of activities, key players and timelines was developed. This resulted in the timely production of the 2014-2017 FBS report and its ownership by the government and other stakeholders.

Since data sources are diverse, the approach of working together as a team should be maintained to enhance the quality of final statistics to be used in the production of subsequent FBSs in the country. Joint work will further help in developing the capacity of staff and encourage the use of the methodology, definitions and concepts recently recommended by FAO in the process of producing FBS.

Lastly, the continued financial and technical support from the Government and AfDB have played a key role in the whole process of producing the FBS report for Tanzania. The FBS should be aligned with international and national statistical development systems, sector plans and the national development agenda for its sustainability.

To efficiently produce the annual FBS reports, all players must be committed and should agree on the release calendar of the publication. This will trigger timely use of the FBS for different purposes at both country and international levels.

To sustain the compilation of the FBS for Tanzania, concerned ministries and institutions in Mainland Tanzania and Zanzibar should annually budget for this activity.

Annex

Annex 1: Nutrients Convention Factor

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
1	0111	Wheat	334	12.2	2.3
2	0112	Maize (corn)	356	9.5	4.3
3	0113	Rice	280	6	1.4
4	0114	Sorghum	343	10.1	3.3
5	0115	Barley	332	11	1.8
6	0116	Rye	319	11	1.9
7	0117	Oats	385	13	7.5
8	0118	Millet	340	9.7	3
9	0141	Soya beans	405	33.7	17.9
10	0142	Groundnuts, excluding shelled	384	16.2	31.4
11	0143	Cottonseed	253	17.3	17.9
12	0231	Hen eggs in shell, fresh	123	10.4	8.4
13	0232	Eggs from other birds in shell, fresh, n.e.	166	11.6	12.5
14	01191	Triticale	327	11.6	2.1
15	01192	Buckwheat	330	11	2
16	01193	Fonio	338	8	3
17	01194	Quinoa	342	12	5
18	01195	Canary seed	388	16	6
19	01199.02	Mixed grain	340	8	1.5
20	01199.9	Other cereals n.e.	340	8	1.5
21	01211	Asparagus	12	1.6	0.1
22	01212	Cabbages	19	1	0.1
23	01213	Cauliflowers and broccoli	9	0.8	0.1
24	01214	Lettuce and chicory	12	1.1	0.2
25	01215	Spinach	16	2.1	0.3
26	01216	Artichokes	20	1.1	0.1
27	01219.01	Cassava leaves	53	5.8	1.1
28	01221	Watermelons	17	0.3	0.2
29	01229	Cantaloupes and other melons	17	0.4	0.1
30	01231	Chillies & peppers, green (Capsicum spp. & Pimenta spp.)	25	1.1	0.3
31	01232	Cucumbers and gherkins	13	0.5	0.1
32	01233	Eggplants (aubergines)	21	0.9	0.1
33	01234	Tomatoes	20	1	0.2

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
34	01235	Pumpkins, squash and gourds	19	0.9	0.1
35	01239.01	Okra	31	1.6	0.3
36	01241.01	String beans	27	1.6	0.1
37	01241.9	Other beans, green	50	3	0.4
38	01242	Peas, green	31	2.1	0.2
39	01243	Broad beans and horse beans, green	23	2.3	0.1
40	01251	Carrots and turnips	38	0.9	0.2
41	01252	Green garlic	118	4.7	0.1
42	01253.01	Onions and shallots, green	24	1.7	0.1
43	01253.02	Onions and shallots, dry (excluding dehydrated)	39	1.1	0.1
44	01254	Leeks and other alliaceous vegetables	37	0.7	0.1
45	01270	Mushrooms and truffles	24	2	0.4
46	01290.01	Green corn (maize)	56	1.9	0.8
47	01290.9	Other vegetables, fresh n.e.	22	1.4	0.2
48	01311	Avocados	119	1.5	11.3
49	01312	Bananas	60	1	0.1
50	01313	Plantains and others	89	0.8	0.2
51	01314	Dates	234	2.2	0.5
52	01315	Figs	73	0.8	0.3
53	01316	Mangoes, guavas, mangosteens	38	0.4	0.1
54	01317	Papayas	26	0.4	0.1
55	01318	Pineapples	31	0.3	0.1
56	01319	Other tropical fruits, n.e.c.	41	0.5	0.7
57	01321	Pomelos and grapefruits	16	0.3	0.1
58	01322	Lemons and limes	15	0.6	0.2
59	01323	Oranges	34	0.7	0.1
60	01324	Tangerines, mandarins, clementines	32	0.5	0.1
61	01325	Other citrus fruits, n.e.	26	0.5	0.2
62	01326	Grapes	58	0.6	0.4
63	01341	Apples	48	0.2	0.3
64	01342.01	Pears	54	0.4	0.4
65	01342.02	Quinces	35	0.2	0.1
66	01343	Apricots	45	1.3	0.4
67	01344.01	Sour cherries	45	0.9	0.3
68	01344.02	Cherries	65	1.1	0.9
69	01345	Peaches and nectarines	33	0.5	0.1
70	01346	Plums and sloes	52	0.7	0.6
71	01349.1	Other pome fruits	48	0.4	0.3
72	01349.2	Other stone fruits	52	0.9	0.3
73	01351.01	Currants	59	1.4	0.3
74	01351.02	Gooseberries	44	0.9	0.6
75	01352	Kiwi fruit	52	0.9	0.4

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
76	01353.01	Raspeberries	47	0.9	0.5
77	01354	Strawberries	28	0.6	0.4
78	01355.01	Blueberries	55	0.7	0.4
79	01355.02	Cranberries	47	0.4	0.2
80	01355.9	Other berries and fruits of the genus Vaccinium n.e.	49	1	0.7
81	01356	Locust beans (carobs)	111	1.6	0.5
82	01359.01	Persimmons	82	0.6	0.3
83	01359.02	Cashewapple	43	0.8	0.6
84	1359.9	Other fruits n.e.c.	45	0.5	0.5
85	1371	Almonds, in shell	236	8	20.9
86	1372	Cashew nuts, in shell	163	5.2	13
87	1373	Chestnuts, in shell	158	1.8	1.7
88	1374	Hazelnuts, in shell	291	6	28.8
89	1375	Pistachios, in shell	289	10.3	24.2
90	1376	Walnuts, in shell	289	6.4	27.8
91	1377	Brazil nuts, in shell	315	6.9	31.8
92	1379.01	Areca nuts	245	4.9	4.4
93	1379.02	Kola nuts	349	9	2
94	1379.9	Other nuts (excluding wild edible nuts and groundnuts), in shell, n.e.	262	7	25
95	1441	Linseed	498	18	34
96	1442	Mustard seed	469	24.9	28.8
97	1443	Rapeseed or colza seed	494	19.6	45
98	1444	Sesame seed	573	17.7	49.7
99	1445	Sunflower seed	253	6.8	14.4
100	1446	Safflower seed	314	9.7	30.3
101	1448	Poppy seed	533	18	44.7
102	1449.01	Melonseed	400	18.2	33.9
103	1449.9	Other oil seeds, n.e.	387	14.7	31.7
104	1450	Olives	175	1.3	17.5
105	1460	Coconuts, in shell	146	1.4	14.4
106	1491.01	Oil palm fruit	158	0.3	13.2
107	1491.02	Palm kernels	514	7.3	43.4
108	1492	Copra	636	6	61.4
109	1499.01	Karite Nuts (Sheanuts)	579	6.8	49
110	1510	Potatoes	71	1.5	0.1
111	1520.01	Cassava, fresh	110	0.9	0.1
112	1520.02	Cassava, dried	255	2.8	0.7
113	1530	Sweet potatoes	96	1.3	0.2
114	1540	Yams	100	1.6	0.2
115	1550	Taro	86	1.5	0.2
116	1591	Yautia	109	1.7	0.3

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
117	1599.1	Edible roots and tubers with high starch or inulin content, n.e., fresh	91	1.6	0.2
118	1599.2	Edible roots and tubers with high starch or inulin content, n.e., dried	282	5	0.6
119	1610	Coffee, green	47	6.7	0
120	1620	tea leaves	40	10	0
121	1630	Maté leaves	40	10	0
122	1640	Cocoa beans	456	12	46.3
123	1651	Pepper (Piper spp.), raw	276	10.7	2.7
124	1652	Chillies and peppers, dry (Capsicum spp. and Pimenta spp.), raw	312	13.9	9.4
125	1653	Nutmeg, mace, cardamoms, raw	525	5.8	36.3
126	1654	Anise, badian, coriander, cumin, caraway, fennel and juniper berries, raw	345	15.8	14.9
127	1655	Cinnamon (canella), raw	261	3.9	3.2
128	1656	Cloves (whole stems), raw	323	6	20.1
129	1657	Ginger, raw	347	9.1	6
130	1658	Vanilla, raw	334	11.3	11.5
131	1691	Chicory roots	60	1.1	0.2
132	1699	Other stimulants, spices and aromatic crops, n.e.	337	11.3	15.5
133	1701	Beans, dry	338	22.2	1.3
134	1702	Broad beans and horse beans, dry	343	23.4	2
135	1703	Chick peas, dry	357	19.6	3.7
136	1704	Lentils, dry	346	24.2	1.8
137	1705	Peas, dry	339	22.3	1.1
138	1706	Cow peas, dry	342	23.1	1.4
139	1707	Pigeon peas, dry	345	19.5	1.3
140	1708	Bambara beans, dry	365	17.7	6.3
141	1709.01	Vetches	325	31.5	1.9
142	1709.02	Lupins	390	40	13
143	1709.9	Other pulses n.e.c.	275	14.1	4.7
144	1801	Sugar beet	70	1.3	0.1
145	1802	Sugar cane	28	0.3	0.1
146	1809	Other sugar crops n.e.	390	0	0
147	01930.04	Tea nes (herbal tea)	40	10	0
148	01990.01	Vegetable products, fresh or dry nes	22	1.4	0.2
149	02161	Soya bean oil	884	0	100
150	02162	Groundnut oil	884	0	100
151	02165	Palm oil	884	0	100
152	02166	Coconut oil	884	0	100
153	02167	Olive oil	884	0	100
154	02168	Cottonseed oil	884	0	100
155	02194	Other birds	226	14.2	18.3

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
156	02211	Raw milk of cattle	63	3.1	3.5
157	02212	Raw milk of buffalo	97	3.8	6.9
158	02291	Raw milk of sheep	94	5.9	6
159	02292	Raw milk of goats	85	3.4	4.9
160	02293	Raw milk of camel	73	3.8	4.5
161	02413	Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80% vol; spirits, liqueurs and other spirituous beverages	295	0	0
162	02910	Natural honey	311	0.4	0
163	02920	Snails, fresh, chilled, frozen, dried, salted or in brine, except sea snails	42	6.3	0.5
164	21111.01	Meat of cattle with the bone, fresh or chilled	190	14.6	14.2
165	21111.02	Meat of cattle boneless, fresh or chilled	150	18.5	7.9
166	21112	Meat of buffalo, fresh or chilled	77	11.3	3.1
167	21113.01	Meat of pig with the bone, fresh or chilled	406	10.5	40
168	21113.02	Meat of pig boneless, fresh or chilled	220	13.4	18
169	21114	Meat of rabbits and hares, fresh or chilled	118	17	5
170	21115	Meat of sheep, fresh or chilled	207	13.2	16.7
171	21116	Meat of goat, fresh or chilled	154	15.5	9.6
172	21117.01	Meat of camels, fresh or chilled	174	12.7	13.2
173	21117.02	Meat of other domestic camelids, fresh or chilled	143	14.6	9
174	21118.01	Horse meat, fresh or chilled	85	15.5	2
175	21118.02	Meat of asses, fresh or chilled	94	15	3
176	21118.03	Meat of mules, fresh or chilled	94	15	3
177	21119.01	Meat of other domestic rodents, fresh or chilled	81	16.2	1.4
178	21121	Meat of chickens, fresh or chilled	122	12.3	7.7
179	21122	Meat of ducks, fresh or chilled	291	8.3	28.3
180	21123	Meat of geese, fresh or chilled	301	12.9	27.2
181	21124	Meat of turkeys, fresh or chilled	126	16.1	6.3
182	21151	Edible offal of cattle, fresh, chilled or frozen	105	18.4	2.5
183	21152	Edible offal of buffalo, fresh, chilled or frozen	105	18.4	2.5
184	21153	Edible offal of pigs, fresh, chilled or frozen	113	18.3	3.5
185	21155	Edible offal of sheep, fresh, chilled or frozen	117	14.6	5.7
186	21156	Edible offal of goat, fresh, chilled or frozen	117	14.6	5.7
187	21159.01	Edible offals of horses and other equines, fresh, chilled or frozen	105	18.4	2.5
188	21159.02	Edible offals of camels and other camelids, fresh, chilled or frozen	105	18.4	2.5
189	21160.01	Edible offals and liver of chickens and guinea fowl, fresh, chilled or frozen	125	18	3.9

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
190	21160.02	Edible offals and liver of geese, fresh, chilled or frozen	133	16.4	4.3
191	21160.03	Edible offals and liver of ducks, fresh, chilled or frozen	136	18.7	4.6
192	21160.04	Edible offals and liver of turkey, fresh, chilled or frozen	137	20	4
193	21170.01	Meat of pigeons and other birds n.e.c., fresh, chilled or frozen	185	17.1	12.4
194	21170.02	Game meat, fresh, chilled or frozen	104	18	3
195	21170.92	Other meat n.e. (excluding mammals)	126	16.4	6
196	21170.93	Offals n.e.c. (excluding mammals), fresh, chilled or frozen	105	18.4	2.5
197	21181	Pig meat, cuts, salted, dried or smoked (bacon and ham)	467	12.2	45.5
198	21182	Bovine meat, salted, dried or smoked	203	34.3	6.3
199	21183	Other meat and edible meat offal, salted, in brine, dried or smoked; edible flours and meals of meat or meat offal	250	55.4	1.5
200	21184.01	Sausages and similar products of meat, offal or blood of beef and veal	313	11.7	28.4
201	21184.02	Sausages and similar products of meat, offal or blood of pig	186	16.6	11.7
202	21185	Extracts and juices of meat, fish, crustaceans, molluscs or other aquatic invertebrates	238	16	8.9
203	21189.01	Liver Preparations	315	13.6	2.8
204	21189.02	Fatty Liver Preparations	462	11.4	43.8
205	21313	Potatoes, frozen	73	1.2	0
206	21319.01	Sweet corn, frozen	54	1.8	0.4
207	21321	Tomato juice	17	0.8	0.1
208	21329	Other vegetable juices	19	0.6	0.1
209	21330.9	Other vegetables provisionally preserved	65	3.3	0.3
210	21340	Vegetables, pulses and potatoes, preserved by vinegar or acetic acid	29	1.4	1.3
211	21392	Flour, meal, powder, flakes, granules and pellets of potatoes	349	8.5	0.4
212	21393.01	Dried mushrooms	296	9.6	1
213	21393.9	Vegetables, dehydrated	341	6.6	1.3
214	21397.01	Canned mushrooms	24	1.9	0.3
215	21399.01	Paste of tomatoes	84	3.8	0.9
216	21399.02	Tomatoes, peeled (O/T vinegar)	19	0.9	0.2
217	21399.03	Sweet corn, prepared or preserved	77	2.3	0.6
218	21411	Raisins	271	2.9	0.6
219	21412	Plums, dried	208	2.3	0.5
220	21419.01	Apricots, dried	238	3.7	0.5
221	21419.02	Figs, dried	253	3	1.2

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
222	21419.91	Other tropical fruit, dried	267	2.8	0.6
223	21419.99	Other fruit n.e.c., dried	267	2.8	0.6
224	21421	Groundnuts, shelled	567	25.7	49.2
225	21422	Almonds, shelled	589	20	52.2
226	21423	Hazelnuts, shelled	632	13	62.6
227	21424	Cashew nuts, shelled	574	15.3	46.4
228	21429.01	Brazil Nuts, shelled	656	14.3	66.2
229	21429.02	Walnuts, shelled	642	14.3	61.9
230	21429.07	Coconuts, desiccated	660	6.9	64.5
231	21431.01	Orange juice	42	0.6	0.1
232	21431.02	Orange juice, Concentrated	159	2.4	0.2
233	21432	Grapefruit juice	39	0.5	0.1
234	21432.01	Grapefruit juice, Concentrated	146	2	0.5
235	21433	Pineapple juice	56	0.3	0.1
236	21433.01	Juice of pineapples, concentrated	179	1.3	0.1
237	21434	Grape juice	61	0.6	0.1
238	21435.01	Apple juice	47	0.1	0.1
239	21435.02	Apple juice, Concentrated	166	0.5	0.4
240	21439.01	Juice of tangerine	43	0.5	0.2
241	21439.02	Juice of lemon	22	0.5	0.3
242	21439.03	Lemon juice, Concentrated	116	2.3	0.9
243	21439.04	Juice of citrus fruit nes	47	0.6	0.2
244	21439.05	Citrus juice, Concentrated nes	157	2.1	0.5
245	21439.06	Juice of plum	71	0.6	0
246	21439.07	Juice of plum, concentrated	215	2	0.1
247	21439.08	Juice of Mango	62	0.3	0.4
248	21439.9	Juice of fruits n.e.	48	0.5	0.1
249	21491	Pineapples, otherwise prepared or preserved	92	0.4	0.4
250	21495.01	Prepared Groundnuts	580	26.8	49.2
251	21495.02	Peanut Butter	589	24.3	50
252	21499.01	Mango Pulp	65	0.5	0.3
253	21511.01	Fat of pigs	712	4.7	76.7
254	21511.02	Pig, Butcher Fat	712	4.7	76.7
255	21511.03	Fat of poultry	629	3.7	68
256	21512	Cattle fat, unrendered	847	2	93
257	21512.01	Cattle, Butcher Fat	847	2	93
258	21513	Buffalo fat, unrendered	847	2	93
259	21514	Sheep fat, unrendered	902	0	100
260	21515	Goat fat, unrendered	847	2	93
261	21519.02	Fat of camels	847	2	93
262	21519.03	Fat of other camelids	847	2	93
263	21521	Pig fat, rendered	902	0	100
264	21522	Poultry fat, rendered	901	0	99.8

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
265	21523	Tallow	884	0	100
266	21529.03	Animal oils and fats nes	902	0	100
267	21631.01	Sunflower-seed oil, crude	884	0	100
268	21631.02	Safflower-seed oil, crude	884	0	100
269	21641.01	Rapeseed or canola oil, crude	884	0	100
270	21641.02	Mustard seed oil, crude	884	0	100
271	21673	Oil of olive residues	884	0	100
272	21691.01	Oil of rice bran	884	0	100
273	21691.02	Oil of maize	884	0	100
274	21691.03	Butter of karite nuts	711	0	85
275	21691.04	Oil of castor beans	884	0	100
276	21691.05	Oil of tung nuts	884	0	100
277	21691.07	Oil of sesame seed	884	0	100
278	21691.08	Oil of poppy seed	884	0	100
279	21691.1	Stillingia oil	884	0	100
280	21691.11	Oil of kapok	884	0	100
281	21691.12	Oil of linseed	884	0	100
282	21691.13	Oil of hempseed	884	0	100
283	21691.14	Oil of palm kernel	884	0	100
284	21691.9	Other oil of vegetable origin, crude n.e.	884	0	100
285	21700.01	Liquid margarine	445	0.5	50
286	21700.02	Margarine and shortening	720	0.6	81
287	21910.03	Cake of soya beans	261	46	5
288	21910.04	Cake of groundnuts	363	41.7	7.6
289	21910.11	Cake of sesame seed	376	40.7	3.4
290	21920	Flours and meals of oil seeds or oleaginous fruits, except those of mustard	393	37.2	15.6
291	22110.01	Standardised milk	48	3.3	1.5
292	22110.02	Skim milk of cows	39	3.5	0.8
293	22110.03	Reconstituted milk	61	1.8	3.4
294	22110.04	Skim milk of buffalo	41	4.3	0.1
295	22110.05	Skim sheep milk	48	6.1	0.4
296	22110.06	Skim milk of goat	35	3.4	0.2
297	22120	Cream, fresh	195	2.7	19.3
298	22130.01	Whey, fresh	26	0.8	0.2
299	22130.02	Whey, dry	346	12.3	0.8
300	22130.03	Whey, condensed	26	0.9	0.3
301	22211	Whole milk powder	496	26.3	26.7
302	22212	Skim milk and whey powder	363	35.9	0.4
303	22221.01	Whole milk, evaporated	134	6.8	7.6
304	22221.02	Skim milk, evaporated	78	7.6	0.2
305	22222.01	Whole milk, condensed	321	7.9	8.7
306	22222.02	Skim milk, condensed	271	10	0.2
307	22230.01	Yoghurt	61	3.5	3.3

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
308	22230.02	Yoghurt, with additives	82	4.7	1.5
309	22230.03	Buttermilk, curdled and acidified milk	75	3	5.2
310	22230.04	Buttermilk, dry	387	34.3	5.8
311	22241.01	Butter of cow milk	717	0.9	81.1
312	22241.02	Ghee from cow milk	873	0.3	99.1
313	22242.01	Butter of buffalo milk	717	0.9	81.1
314	22242.02	Ghee, from buffalo milk	873	0.3	99.1
315	22249.01	Butter and ghee of sheep milk	716	0.6	81
316	22249.02	Butter of goat milk	717	0.9	81.1
317	22251.01	Cheese from whole cow milk	387	25	31
318	22251.02	Cheese from skimmed cow milk	247	46	4
319	22251.03	Whey cheese	72	12.4	1
320	22251.04	Processed cheese	103	12.5	4.5
321	22252	Cheese from milk of buffalo, fresh or processed	269	16.9	22
322	22253	Cheese from milk of sheep, fresh or processed	310	23.2	22.8
323	22254	Cheese from milk of goats, fresh or processed	280	16	15
324	22260	Casein	427	100	0
325	22270	Ice cream and other edible ice	149	2	6.7
326	22290	Dairy products n.e.	61	1.8	3.4
327	23110	Wheat and meslin flour	364	11	1.3
328	23120.01	Flour of rice	366	6.4	0.8
329	23120.02	Barley flour and grits	343	9.2	1.7
330	23120.03	Flour of maize	351	8.3	2
331	23120.04	Flour of rye	341	9	1.8
332	23120.05	Flour of millet	335	8.9	2.6
333	23120.06	Flour of sorghum	345	10.7	3.2
334	23120.07	Flour of buckwheat	344	6.4	1.2
335	23120.08	Flour of fonio	355	9	2.2
336	23120.09	Flour of triticale	341	11.4	2.1
337	23120.1	Flour of mixed grain	364	10	1.1
338	23120.9	Flour of cereals nes	364	10	1.1
339	23140.01	Germ of wheat	382	29.1	10.7
340	23140.02	Bulgur	345	12.3	2
341	23140.03	Breakfast cereals	389	7.4	0.7
342	23140.04	Pot barley	348	9.6	1.1
343	23140.05	Barley, pearled	346	9	1.4
344	23140.06	Germ of maize	373	11.1	38.5
345	23140.07	Oats, rolled	394	12.6	7.4
346	23140.08	Cereal preparations	364	10	1.1
347	23161.01	Rice, milled (husked)	360	6.4	0.8
348	23161.02	Rice, milled	363	7	0.5

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
349	23161.03	Rice, broken	360	6.7	0.7
350	23162	Husked rice	357	7.5	1.8
351	23170.01	Flour of cassava	338	1.5	0.6
352	23170.02	Flour of roots and tubers nes	282	5	0.6
353	23170.03	Flour of pulses	340	22	2
354	23170.04	Flour of fruits	346	3.9	1.8
355	23180	Mixes and doughs for the preparation of bakers' wares	393	6.2	12
356	23210.01	Fructose, chemically pure	375	0	0
357	23210.02	Maltose, chemically pure	375	0	0
358	23210.03	Other fructose and syrup	298	0.3	0
359	23210.04	Sugar and syrups nes	310	0	0
360	23210.05	Glucose and dextrose	368	0	0
361	23210.06	Lactose	387	0	0
362	23210.08	Isoglucose	318	0	0
363	23220.01	Starch of wheat	362	0.5	0.3
364	23220.02	Wheat gluten	380	95	0
365	23220.03	Starch of rice	362	0.5	0.3
366	23220.04	Starch of maize	362	0.5	0.3
367	23220.05	Starch of potatoes	362	0.5	0.3
368	23220.06	Starch of cassava	362	0.5	0.3
369	23230.01	Tapioca of potatoes	362	0.5	0.3
370	23230.02	Tapioca of cassava	362	0.5	0.3
371	23320	Lucerne (alfalfa) meal and pellets	265	30.5	2
372	23490.01	Communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products.	439	9.2	13.1
373	23511.02	Cane sugar, non-centrifugal	344	0	0
374	23520	Refined sugar	387	0	0
375	23530	Refined cane or beet sugar, in solid form, containing added flavouring or colouring matter; maple sugar and maple syrup	348	0	0
376	23540	Molasses (from beet, cane and maize)	232	0	0
377	23610.01	Cocoa paste not defatted	472	1.7	44
378	23620	Cocoa butter, fat and oil	711	0	85
379	23670.01	Sugar Confectionery	310	0	0
380	23670.02	Fruit, nuts, peel, sugar preserved	212	0.6	0
381	23710	Uncooked pasta, not stuffed or otherwise prepared	379	11.8	1.3
382	23911	Coffee, decaffeinated or roasted	56	8	0
383	23912.01	Coffee substitutes	56	8	0
384	23912.02	Coffee extracts	129	4	0
385	23914	Extracts, essences and concentrates of tea or mate, and preparations with a basis thereof or with a basis of tea or mat	18	4.5	0

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
386	23991.01	Infant food	368	15.2	2.9
387	23991.02	Homogenised vegetable preparations	41	1.2	0.5
388	23991.03	Homogenised cooked fruit, prepared	59	0.3	0
389	23991.04	Homogenised meat preparations	110	13.7	5.7
390	23993.01	Egg albumin	49	10.1	0
391	23993.02	Eggs, liquid	158	12.1	11.2
392	23993.03	Eggs, dried	594	45.8	41.8
393	23995.01	Soya sauce	56	5.5	0.5
394	23995.02	Soya paste	114	11	5.8
395	23995.03	Flour of mustard seed	469	26.4	36.3
396	23999.01	Malt extract	367	6	0
397	23999.02	Food preparations of flour, meal or malt extract	377	7.5	2.7
398	23999.03	Soya curd	58	6.3	3.1
399	24212.01	Must of grape	61	0.6	0.1
400	24212.02	Wine	68	0	0
401	24220	Vermouth and other wine of fresh grapes flavoured with plants or aromatic substances	137	0.1	0
402	24230.01	Wheat-fermented beverages	60	1.9	0.3
403	24230.02	Rice-fermented beverages	133	0.3	0
404	24230.03	Cider and other fermented beverages	44	0.1	0
405	24310.01	Beer of barley, malted	43	0.5	0
406	24310.02	Beer of maize, malted	43	0.5	0
407	24310.03	Beer of millet, malted	31	0.5	0
408	24310.04	Beer of sorghum, malted	31	0.5	0
409	24320	Malt, whether or not roasted	368	13.1	1.9
410	24490	Other non-alcoholic caloric beverages n.e.c	39	0	0
411	34550	Animal or vegetable fats and oils and their fractions, chemically modified, except those hydrogenated, inter-esterified, re-esterified or elaidinized; inedible mixtures or preparations of animal or vegetable fats or oils/n	902	0	100
412	39120.01	Bran of Wheat	213	12.1	3.1
413	39120.02	Bran of Rice	276	13.3	15.8
414	39120.91	Vegetable Products for Feed nes	52	6	0.4
415	39130.01	Rice, Gluten	380	95	0
416	39130.02	Maize Gluten	380	95	0
417	39140.01	Beet Pulp	288	11.1	0.6
418	2351f	Raw cane or beet sugar (centrifugal only)	373	0	0
419	F0020	bread	261	7.7	2
420	F0022	pastry	369	7.4	17
421	F0235	prepared nuts	615	15.5	56.2
422	F0262	olives preserved	109	1.1	11.1
423	F0472	vegetables preserved nes (o/t vinegar)	38	2.1	0.3
424	F0473	vegetables frozen	71	3.3	0.5

SN	CPC Code	Commodity	Calories (/100g)	Protein (g/100g)	Fats (g/100g)
425	F0475	vegetables preserved (frozen)	54	2.4	0.4
426	F0623	fruit prepared n.e.	36	0.5	0.2
427	F0665	cocoa powder and cake	261	17.3	19
428	F0666	chocolate products nes	393	4.2	35.7
429	F0875	beef and veal preparations nes	251	27.2	15
430	F1042	pig meat preparations	239	16.1	18.8
431	F1061	poultry meat preparations	165	21.8	8
432	F1172	meat prepared n.e.	242	20.6	16.9
433	F1223	oil from fish and marine mammals	902	0	100
434	F1232	food preparations n.e.	41	1.2	0.5
435	F1243	fat preparations n.e.	720	0.6	81
436	F1275	hydrogenated oils and fats	720	0.6	81

Annex 2: Tables of Detailed FBS Results, 2014-2017

FOOD BALANCE SHEET, 2014

Population ('000)

47,453

PRODUCTS	DOMESTIC SUPPLY (1000 MT)				DOMESTIC UTILISATION (1000 MT)				PER YEAR FOOD			PER CAPITA SUPPLY			
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	Kg	Calories Number	Proteins Grams	Fats Grams
Grand Total					1,000 METRIC TONNES								2,285	63	47
Vegetable Products													2,117	51	36
Animal Products													168	12	11
Cereals and Products (Excluding Beer)	9793	1131	549	985	9390	527	1579	323	220	356	6384	135	1091	26	5
1 Wheat and products	62	1042	62	223	819	2	6	0	2	6	802	17	129	4	1
2 Barley and products	11	51	1	-28	90	83	0	0	0	0	6	0	1	0	0
3 Maize and products	6702	18	364	599	5757	34	1517	303	197	356	3350	71	632	15	4
4 Rye and products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Oats and products	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
6 Millet and products	363	3	1	0	365	166	10	2	9	17	160	3	29	1	0
7 Sorghum and products	885	0	0	262	622	240	30	3	9	-4 ²	344	7	65	2	1
8 Cereals, Other	52	2	24	-6	36	0	1	15	0	3	17	0	3	0	0
9 Rice (Milled Equivalent)	1717	16	98	-66	1701	1	14	0	3	-22	1704	36	232	4	0
Starchy Roots	5215	22	33	28	5176	0	245	333	0	-46	4644	98	211	3	0
10 Potatoes and products	1737	22	1	-19	1777	0	193	333	0	82	1169	25	48	1	0
11 Cassava and products	1842	0	32	0	1811	0	0	0	0	-103	1913	40	76	1	0
12 Sweet potatoes	1632	0	0	47	1585	0	52	0	0	-25	1558	33	86	1	0
13 Roots, Other	2	0	0	0	2	0	0	0	0	0	2	0	0	0	0
14 Yams	2	0	0	0	2	0	0	0	0	0	2	0	0	0	0
Sugar Crops	2971	0	0	0	2971	2640	19	0	0	-3	316	7	5	0	0
15 Sugar cane	2971	0	0	0	2971	2640	19	0	0	-3	316	7	5	0	0
16 Sugar beets	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
19 Sweeteners, Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Honey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulses	1923	8	227	-26	1730	0	31	333	169	16	1181	25	222	14	1
21 Beans	1115	3	82	20	1016	0	10	238	56	0	713	15	139	9	1
22 Peas	145	2	63	0	84	0	7	0	7	0	70	1	14	1	0

² The component 'other uses' in tables of Annex 2 is the sum of the three following components: 'Tourist net consumption'; 'Industrial uses'; and 'Residual and other uses'. It has been explained in the methodology that the tourist consumption is estimated as net consumption (the amount of food available to incoming tourists minus the amount of food that would have been available to absent residents had they been present in the country). So, when the value in 'other uses' is negative, it means that the amount of food that would have been available to absent residents had they been present in the country exceeds the quantity available for incoming tourists+ industrial use+ other uses.

PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY				
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY		Fats Grams		
											Kg	Calories	Proteins	Grams			
					1,000 METRIC TONNES												
23	Pulses, Other and products	663	2	82	-46	630	0	14	95	106	16	399	8	70	4	1	
24	Nuts and products	161	2	137	1	24	0	0	0	0	0	25	1	4	0	0	
25	Soyabans	6	8	1	2	12	1	0	0	2	0	8	0	2	0	0	
26	Groundnuts (Shelled Eq)	299	27	12	0	313	51	5	0	45	166	45	1	10	0	1	
27	Sunflower seed	351	1	5	0	346	326	20	0	0	0	0	0	0	0	0	
28	Rape and Mustardseed	0	10	3	2	5	0	0	0	0	0	5	0	1	0	0	
29	Coconuts (Incl Copra)	90	42	0	0	132	87	6	0	0	0	39	1	3	0	0	
30	Sesame seed	1107	0	138	665	304	90	159	0	0	56	0	0	0	0	0	
31	Palmkernels	73	0	0	0	73	73	0	0	0	0	0	0	0	0	0	
32	Olives (including preserved)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
33	Oilcrops, Other	63	20	17	8	59	35	0	0	0	0	24	0	4	0	0	
	Vegetable Oils	558	531	188	200	700	128	0	0	0	118	455	10	216	0	24	
34	Soyabean Oil	0	7	1	0	6	0	0	0	0	0	6	0	3	0	0	
35	Groundnut Oil	22	0	1	0	21	0	0	0	0	0	20	0	10	0	1	
36	Sunflowerseed Oil	160	13	7	60	106	3	0	0	0	3	100	2	51	0	6	
37	Rape and Mustard Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
38	Cottonseed Oil	128	1	1	-2	130	117	0	0	0	6	7	0	3	0	0	
39	Palmkernel Oil	6	2	1	0	7	0	0	0	0	0	7	0	3	0	0	
40	Palm Oil	16	430	153	80	213	5	0	0	0	97	110	2	56	0	6	
41	Copra oil	13	1	0	0	13	0	0	0	0	0	13	0	7	0	1	
42	Sesameseed Oil	20	0	14	0	6	0	0	0	0	0	5	0	3	0	0	
43	Olive Oil	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	
44	Ricebran Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45	Maize Germ Oil	22	1	0	0	23	0	0	0	0	0	23	0	12	0	1	
46	Oilcrops Oil, Other	172	77	10	64	174	1	0	0	0	10	163	3	68	0	8	
	Vegetables	3148	16	99	5	3060	0	360	0	0	1	2698	57	39	2	0	
47	Tomatoes and products	458	8	1	0	465	0	46	0	0	0	419	9	5	0	0	
48	Onions	214	0	7	0	208	0	32	0	0	4	172	4	4	0	0	

PRODUCTS	DOMESTIC SUPPLY (1000 MT)							DOMESTIC UTILISATION (1000 MT)							PER CAPITA SUPPLY		
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY	Calories	Proteins	Fats	
												Kg	Number	Grams	Grams	Grams	
	1,000 METRIC TONNES																
75	54	2	0	0	56	0	0	0	0	0	0	56	13	0	0	1	
76	101	3	0	0	104	0	0	0	0	0	104	2	7	1	0	0	
77	22	0	0	0	22	0	0	0	0	0	22	0	1	0	0	0	
78	72	0	0	0	72	0	0	0	0	0	72	2	4	1	0	0	
79	11	0	0	0	11	2	0	0	0	0	10	0	5	0	0	1	
80	0	0	0	0	0	-	0	0	0	0	0	0	2	0	0	0	
81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2086	36	0	1	2122	190	109	0	0	106	1717	36	61	3	3	3	
82	2086	36	0	1	2122	190	109	0	0	106	1717	36	61	3	3	3	
	Eggs	32	1	0	33	0	0	2	0	0	31	1	2	0	0	0	
83	32	1	0	0	33	0	0	2	0	0	31	1	2	0	0	0	
	Fish and Sea Food	370	7	43	0	0	0	0	0	0	333	7	28	3	1	1	
84	370	7	43	0	0	0	0	0	0	0	333	7	28	3	1	1	
	Miscellaneous	0	9	0	7	0	0	0	0	1	7	0	0	0	0	0	
85	0	1	0	0	1	-	0	0	0	0	0	0	0	0	0	0	
86	0	8	0	2	7	0	0	0	0	0	6	0	0	0	0	0	

FOOD BALANCE SHEET, 2015

Population ('000)

48,776

PRODUCTS	DOMESTIC SUPPLY (1000 MT)					DOMESTIC UTILISATION (1000 MT)					PER CAPITA SUPPLY				
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	Calories	Proteins	Fats
												Kg	Number	Grams	Grams
Grand Total													2,289	63	48
Vegetable Products													2,116	51	37
Animal Products													173	12	11
Cereals and Products (Excluding Beer)	10469	1138	158	1771	9678	578	1493	421	264	438	6483	133	1085	26	5
1 Wheat and products	52	1027	52	177	850	2	5	0	1	4	838	17	138	4	1
2 Barley and products	14	34	1	0	48	43	0	0	0	0	4	0	1	0	0
3 Maize and products	7712	23	69	1731	5935	40	1384	386	251	420	3455	71	634	15	4
4 Rye and products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Oats and products	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
6 Millet and products	128	0	4	0	125	9	1	0	0	-2	116	2	21	1	0
7 Sorghum and products	856	0	1	-128	983	484	101	5	13	42	336	7	62	2	1
8 Cereals, Other	61	0	7	0	54	0	1	31	0	3	19	0	3	0	0
9 Rice (Milled Equivalent)	1646	54	24	-9	1684	0	0	0	0	-30	1714	35	227	4	0
Starchy Roots	5244	10	56	97	5102	0	144	254	0	-136	4839	99	212	3	0
10 Potatoes and products	1482	5	9	-4	1481	0	125	254	0	-9	1111	23	44	1	0
11 Cassava and products	2103	5	47	0	2062	0	0	0	0	-102	2163	44	88	1	0
12 Sweet potatoes	1651	0	0	100	1551	0	17	0	0	-26	1559	32	84	1	0
13 Roots, Other	3	0	0	0	2	0	0	0	0	0	2	0	0	0	0
14 Yams	6	0	0	0	6	0	2	0	0	0	3	0	0	0	0
Sugar Crops	2907	0	0	0	2908	2564	24	0	0	-3	323	7	5	0	0
15 Sugar cane	2907	0	0	0	2908	2564	24	0	0	-3	323	7	5	0	0
16 Sugar beets	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Sugar and Sweeteners	564	6	0	104	467	34	0	0	0	-3	436	9	86	0	0
17 Sugar non centrifugal	2	2	0	0	4	3	0	0	0	0	1	0	0	0	0
18 Sugar (Raw Equivalent)	562	4	0	103	462	31	0	0	0	-4	435	9	85	0	0
19 Sweeteners, Other	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Honey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PRODUCTS	DOMESTIC SUPPLY (1000 MT)					DOMESTIC UTILISATION (1000 MT)					PER CAPITA SUPPLY					
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY			
												Kg	Calories	Proteins	Fats	
					1,000 METRIC TONNES								Number	Grams	Grams	
21	Beans	1202	2	52	30	1122	0	33	267	20	0	802	16	152	10	1
22	Peas	131	2	36	0	98	0	6	0	7	0	86	2	16	1	0
23	Pulses, Other and products	662	0	99	25	538	0	11	100	39	2	387	8	69	4	1
	Treenuts	228	3	181	-42	92	0	1	0	0	0	91	2	10	0	1
24	Nuts and products	228	3	181	-42	92	0	1	0	0	0	91	2	10	0	1
	Oilcrops	2072	17	172	697	1221	702	157	0	18	254	90	2	18	1	1
25	Soyabeans	6	2	0	-1	9	0	0	0	2	0	7	0	1	0	0
26	Groundnuts (Shelled Eq)	380	3	4	0	379	71	42	0	16	195	54	1	12	1	1
27	Sunflower seed	350	0	0	0	350	334	16	0	0	0	0	0	0	0	0
28	Rape and Mustardseed	0	3	1	-3	5	0	0	0	0	0	5	0	1	0	0
29	Coconuts (Incl Copra)	37	0	0	0	37	36	1	0	0	0	0	0	0	0	0
30	Sesame seed	1161	0	164	708	289	133	97	0	0	59	0	0	0	0	0
31	Palmkernels	74	0	0	0	74	74	0	0	0	0	0	0	0	0	0
32	Olives (including preserved)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Oilcrops, Other	64	7	2	-7	76	53	0	0	0	0	23	0	4	0	0
	Vegetable Oils	677	415	155	232	706	119	0	0	0	111	476	10	220	0	25
34	Soyabean Oil	0	4	2	0	2	0	0	0	0	0	2	0	1	0	0
35	Groundnut Oil	20	0	0	0	20	0	0	0	0	0	20	0	10	0	1
36	Sunflowerseed Oil	165	8	5	64	104	2	0	0	0	3	99	2	49	0	6
37	Rape and Mustard Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Cottonseed Oil	123	8	0	0	131	113	0	0	0	4	14	0	6	0	1
39	Palmkernel Oil	6	3	0	0	8	0	0	0	0	0	8	0	4	0	0
40	Palm Oil	16	345	131	7	223	3	0	0	0	95	125	3	62	0	7
41	Copra oil	12	0	0	0	12	0	0	0	0	0	12	0	6	0	1
42	Sesameseed Oil	20	0	6	0	14	0	0	0	0	0	13	0	7	0	1
43	Olive Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Ricebran Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Maize Germ Oil	22	1	0	0	22	0	0	0	0	0	22	0	11	0	1
46	Oilcrops Oil, Other	293	46	10	161	168	0	0	0	0	8	160	3	65	0	7
	Vegetables	2521	12	80	-4	2457	0	306	0	0	1	2150	44	31	2	0
47	Tomatoes and products	92	6	0	0	97	0	38	0	0	0	59	1	1	0	0

PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY			
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY			
												Kg	Calories	Proteins	Fats	
	1,000 METRIC TONNES															
48	Onions	9	0	2	0	7	0	0	0	0	0	0	0	0	0	0
49	Vegetables, Other	2420	6	77	-4	2353	0	260	0	0	2	2091	43	30	2	0
50	Oranges, Mandarines	431	4	11	0	424	0	0	0	-4	428	9	8	0	0	0
51	Lemons, Limes & products	15	0	0	0	16	0	0	0	0	16	0	0	0	0	0
52	Grapefruit and products	13	0	0	0	13	0	0	0	0	13	0	0	0	0	0
53	Citrus Fruit nes & prod	45	0	0	0	45	0	4	0	0	41	1	1	0	0	0
54	Bananas	1812	0	2	0	1810	177	353	0	0	-15	1294	27	44	1	0
55	Plantains	601	0	0	0	601	46	47	7	0	-6	508	10	25	0	0
56	Apples and products	0	6	1	0	6	0	0	0	0	0	6	0	0	0	0
57	Pineapples and products	368	1	1	0	368	0	34	0	0	-1	335	7	6	0	0
58	Dates	1	3	0	0	4	0	0	0	0	0	4	0	1	0	0
59	Grapes and products (excluding wine)	5	1	0	0	6	0	0	0	0	0	6	0	0	0	0
60	Fruits, Other	834	1	48	0	787	0	66	0	0	10	711	15	15	0	0
	Stimulants	90	0	85	0	6	0	1	0	0	2	3	0	0	0	0
61	Coffee and products	43	0	43	0	0	0	0	0	0	0	0	0	0	0	0
62	Cocoa Beans and products	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0
63	Tea (including mate)	36	0	31	0	5	0	1	0	0	2	3	0	0	0	0
	Spices	270	0	2	0	269	0	0	0	0	0	268	6	51	2	2
64	Pepper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Pimento	8	0	0	0	8	0	0	0	0	8	0	1	0	0	0
66	Cloves	9	0	1	0	8	0	0	0	0	8	0	1	0	0	0
67	Spices, Other	252	0	0	0	252	0	0	0	0	252	5	48	2	2	2
	Alcoholic Beverages	3090	0	0	0	3090	0	29	0	0	2	3060	63	59	1	0
68	Wine	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
69	Barley beer	430	0	0	0	430	-	0	0	-3	433	9	10	0	0	0
70	Beverages, Fermented	2640	0	0	0	2640	-	29	0	-13	2625	54	49	1	0	0
71	Beverages, Alcoholic	2	0	0	0	2	-	0	0	0	2	0	0	0	0	0
72	Alcohol, non food	18	0	0	0	18	-	0	0	18	0	0	0	0	0	0
	Meat	631	4	2	0	633	0	0	0	-3	636	13	72	5	6	6
73	Bovine Meat	327	1	0	0	328	0	0	0	-3	330	7	35	3	3	3

	PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY			
		Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD Kg	Calories Number	PER DAY		
															Proteins Grams	Fats Grams	
		1,000 METRIC TONNES															
74	Mutton & Goat Meat	97	0	2	0	96	0	0	0	0	0	96	2	10	1	1	
75	Pig meat	79	1	0	0	80	0	0	0	0	0	80	2	18	0	2	
76	Poultry Meat	106	2	0	0	107	0	0	0	0	0	107	2	7	1	0	
77	Meat, Other	22	0	0	0	22	0	0	0	0	0	22	0	1	0	0	
78	Offals, Edible	76	0	0	0	76	0	0	0	0	0	76	2	5	1	0	
79	Fats, Animals, Raw	12	1	0	0	13	2	0	0	0	0	11	0	5	0	1	
80	Butter, Ghee	0	0	0	0	0	-	0	0	0	0	0	0	1	0	0	
81	Cream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Milk and Products (Excluding Butter)	2156	19	2	0	2173	183	168	0	0	108	1713	35	60	3	3	
82	Milk and Products (Excluding Butter)	2156	19	2	0	2173	183	168	0	0	108	1713	35	60	3	3	
	Eggs	49	0	0	0	49	0	0	0	7	3	40	1	3	0	0	
83	Eggs and Products	49	0	0	0	49	0	0	0	7	3	40	1	3	0	0	
	Fish and Sea Food	363	17	40	0	0	0	0	0	0	0	339	7	27	3	1	
84	Fish and Sea Food	363	17	40	0	0	0	0	0	0	0	339	7	27	3	1	
	Miscellaneous	0	6	0	0	6	0	0	0	0	0	6	0	0	0	0	
85	Infant Food	0	2	0	0	2	-	0	0	0	0	2	0	0	0	0	
86	Miscellaneous, Other	0	4	0	0	4	0	0	0	0	0	4	0	0	0	0	

FOOD BALANCE SHEET, 2016

Population ('000)

50,144

PRODUCTS	DOMESTIC SUPPLY (1000 MT)					DOMESTIC UTILISATION (1000 MT)					PER CAPITA SUPPLY				
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY	PER DAY	
	1,000 METRIC TONNES	Kg	Number	Grams	Grams							Kg	Calories	Proteins	Fats
					1,000 METRIC TONNES								Number	Grams	Grams
Grand Total													2,290	64	46
Vegetable Products													2,128	52	36
Animal Products													162	12	10
Cereals and Products (Excluding Beer)	9517	925	170	1350	8922	613	862	191	162	382	6712	134	1088	26	5
1 Wheat and products	76	864	66	1	874	3	17	0	2	29	824	16	126	4	1
2 Barley and products	9	32	0	1	39	36	0	0	0	0	4	0	0	0	0
3 Maize and products	6141	15	83	1126	4947	26	701	165	107	313	3635	72	649	15	4
4 Rye and products	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
5 Oats and products	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
6 Millet and products	274	1	1	0	273	124	9	1	6	0	133	3	23	1	0
7 Sorghum and products	729	1	1	-131	861	418	53	6	15	37	333	7	60	2	1
8 Cereals, Other	50	1	1	5	45	0	1	19	0	3	22	0	4	0	0
9 Rice (Milled Equivalent)	2237	10	17	348	1883	7	81	0	32	1	1761	35	227	4	0
Starchy Roots	5487	10	19	16	5462	0	138	246	0	1	5077	101	216	3	0
10 Potatoes and products	1501	10	0	-18	1528	0	129	246	0	1	1152	23	45	1	0
11 Cassava and products	2361	0	19	-1	2343	0	0	0	0	0	2343	47	88	1	0
12 Sweet potatoes	1614	0	0	34	1580	0	5	0	0	0	1575	31	83	1	0
13 Roots, Other	3	0	0	0	3	0	0	0	0	0	3	0	0	0	0
14 Yams	8	0	0	0	8	0	3	0	0	0	5	0	0	0	0
Sugar Crops	2845	0	1	0	2844	2501	20	0	0	0	323	6	5	0	0
15 Sugar cane	2845	0	1	0	2844	2501	20	0	0	0	323	6	5	0	0
16 Sugar beets	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Sugar and Sweeteners	669	4	0	117	556	77	0	0	0	32	447	9	89	0	0
17 Sugar non centrifugal	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0
18 Sugar (Raw Equivalent)	667	4	0	117	554	75	0	0	0	32	447	9	89	0	0
19 Sweeteners, Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Honey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY			
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	Calories	Proteins	Fats	
												Kg	Number	Grams	Grams	
					1,000 METRIC TONNES											
Pulses	2108	9	328	-101	1891	0	56	384	101	7	1343	27	249	16	1	
21 Beans	1307	2	98	0	1210	0	9	284	65	0	852	17	157	10	1	
22 Peas	144	6	17	0	133	0	6	0	7	0	120	2	22	1	0	
23 Pulses, Other and products	657	2	213	-101	547	0	40	100	28	7	372	7	69	4	0	
Treenuts	226	3	230	-38	37	0	1	0	0	0	35	1	5	0	0	
24 Nuts and products	226	3	230	-38	37	0	1	0	0	0	35	1	5	0	0	
Oilcrops	2144	22	172	784	1211	675	141	0	74	239	81	2	15	1	1	
25 Soybeans	6	6	1	-1	12	0	0	0	3	0	9	0	2	0	0	
26 Groundnuts (Shelled Eq)	340	6	2	0	344	50	4	0	71	177	42	1	9	0	1	
27 Sunflower seed	352	0	3	51	298	282	15	0	0	0	0	0	0	0	0	
28 Rape and Mustardseed	0	3	1	-1	4	0	0	0	0	0	4	0	1	0	0	
29 Coconuts (Incl Copra)	89	0	0	0	89	78	6	0	0	0	6	0	0	0	0	
30 Sesame seed	1218	0	164	738	316	138	116	0	0	62	0	0	0	0	0	
31 Palmkernels	75	0	0	0	75	75	0	0	0	0	0	0	0	0	0	
32 Olives (including preserved)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
33 Oilcrops, Other	65	6	3	-4	72	52	0	0	0	0	20	0	3	0	0	
Vegetable Oils	692	442	29	384	721	121	0	0	0	117	484	10	219	0	25	
34 Soyabean Oil	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	
35 Groundnut Oil	17	0	0	0	17	0	0	0	0	0	17	0	8	0	1	
36 Sunflowerseed Oil	165	6	7	68	96	2	0	0	0	2	92	2	44	0	5	
37 Rape and Mustard Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
38 Cottonseed Oil	122	3	0	-1	127	113	0	0	0	4	9	0	4	0	0	
39 Palmkernel Oil	6	1	0	0	7	0	0	0	0	0	7	0	3	0	0	
40 Palm Oil	17	382	13	140	246	5	0	0	0	97	144	3	69	0	8	
41 Copra oil	12	0	0	0	12	0	0	0	0	0	12	0	6	0	1	
42 Sesameseed Oil	20	0	4	0	16	0	0	0	0	0	15	0	7	0	1	
43 Olive Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
44 Ricebran Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45 Maize Germ Oil	28	0	0	0	28	0	0	0	0	0	28	1	13	0	2	
46 Oilcrops Oil, Other	307	47	5	177	172	0	0	0	0	12	159	3	63	0	7	
Vegetables	3005	15	189	-2	2833	0	332	0	0	11	2490	50	33	2	0	

PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY			
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	Calories	Proteins	Fats	
												Kg	Number	Grams	Grams	
	1,000 METRIC TONNES															
47	Tomatoes and products	540	8	1	1	547	0	40	0	0	0	506	10	6	0	0
48	Onions	229	0	17	0	212	0	26	0	0	8	178	4	4	0	0
49	Vegetables, Other	2236	7	171	-3	2075	0	266	0	0	3	1806	36	24	1	0
	Fruits and Products (Excluding Wine)	4198	19	71	0	4146	208	458	6	0	7	3468	69	101	1	0
50	Oranges, Mandarines	466	3	20	0	449	0	0	0	0	0	449	9	8	0	0
51	Lemons, Limes & products	16	0	0	0	16	0	0	0	0	0	16	0	0	0	0
52	Grapefruit and products	2	1	0	0	2	0	0	0	0	2	2	0	0	0	0
53	Citrus Fruit nes & prod	45	0	0	0	46	0	4	0	0	42	1	1	0	0	0
54	Bananas	1812	0	0	0	1812	168	320	0	0	0	1324	26	43	1	0
55	Plantains	601	0	0	0	601	40	41	6	0	0	515	10	25	0	0
56	Apples and products	2	7	4	0	6	0	0	0	0	0	6	0	0	0	0
57	Pineapples and products	419	1	0	0	420	0	26	0	0	0	395	8	8	0	0
58	Dates	1	3	0	0	4	0	0	0	0	0	4	0	0	0	0
59	Grapes and products (excluding wine)	5	1	0	0	5	0	0	0	0	0	5	0	0	0	0
60	Fruits, Other	828	2	46	0	784	0	67	0	0	7	709	14	15	0	0
	Stimulants	100	1	92	2	7	0	1	0	0	2	4	0	0	0	0
61	Coffee and products	58	0	55	2	1	0	0	0	0	0	1	0	0	0	0
62	Cocoa Beans and products	9	0	9	-1	1	0	0	0	0	0	1	0	0	0	0
63	Tea (including mate)	33	1	28	0	5	0	1	0	0	2	3	0	0	0	0
	Spices	270	1	3	0	268	0	0	0	0	0	267	5	49	2	2
64	Pepper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Pimento	8	0	0	0	8	0	0	0	0	0	8	0	1	0	0
66	Cloves	9	0	1	0	8	0	0	0	0	0	8	0	1	0	0
67	Spices, Other	253	0	1	0	252	0	0	0	0	0	252	5	46	2	2
	Alcoholic Beverages	3121	0	0	0	3121	0	27	0	0	22	3072	61	58	1	0
68	Wine	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
69	Barley beer	430	0	0	0	430	-	0	0	0	0	430	9	10	0	0
70	Beverages, Fermented	2671	0	0	0	2671	-	27	0	0	4	2640	53	48	1	0
71	Beverages, Alcoholic	2	0	0	0	2	-	0	0	0	0	2	0	0	0	0
72	Alcohol, non food	18	0	0	0	18	-	0	0	0	18	0	0	0	0	0

	PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY			
		Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD		PER DAY		
													Kg	Number	Grams	Proteins	Grams
		1,000 METRIC TONNES															
	Meat	596	4	2	0	598	0	0	0	0	0	598	12	60	5	5	
73	Bovine Meat	397	1	1	0	398	0	0	0	0	0	398	8	41	3	3	
74	Mutton & Goat Meat	92	0	2	0	91	0	0	0	0	0	91	2	9	1	1	
75	Pigmeat	19	1	0	0	20	0	0	0	0	0	20	0	4	0	0	
76	Poultry Meat	65	2	0	0	67	0	0	0	0	0	67	1	5	0	0	
77	Meat, Other	23	0	0	0	23	0	0	0	0	0	23	0	1	0	0	
	Offals	88	0	0	0	88	0	0	0	0	0	88	2	5	1	0	
78	Offals, Edible	88	0	0	0	88	0	0	0	0	0	88	2	5	1	0	
	Animal Fats	12	0	0	0	12	2	0	0	0	0	10	0	6	0	1	
79	Fats, Animals, Raw	12	0	0	0	12	2	0	0	0	0	10	0	5	0	1	
80	Butter, Ghee	0	0	0	0	0	-	0	0	0	0	0	0	1	0	0	
81	Cream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Milk and Products (Excluding Butter)	2221	21	0	1	2241	139	192	0	0	108	1803	36	62	3	3	
82	Milk and Products (Excluding Butter)	2221	21	0	1	2241	139	192	0	0	108	1803	36	62	3	3	
	Eggs	47	0	0	0	47	0	0	0	6	2	39	1	3	0	0	
83	Eggs and Products	47	0	0	0	47	0	0	0	6	2	39	1	3	0	0	
	Fish and Sea Food	363	14	40	0	0	0	0	0	0	0	337	7	26	3	1	
84	Fish and Sea Food	363	14	40	0	0	0	0	0	0	0	337	7	26	3	1	
	Miscellaneous	0	9	0	0	9	0	0	0	0	0	9	0	1	0	0	
85	Infant Food	0	2	0	0	2	-	0	0	0	0	2	0	0	0	0	
86	Miscellaneous, Other	0	7	0	0	7	0	0	0	0	0	7	0	0	0	0	

FOOD BALANCE SHEET, 2017

Population ('000)

51,557

PRODUCTS	DOMESTIC SUPPLY (1000 MT)					DOMESTIC UTILISATION (1000 MT)					PER CAPITA SUPPLY				
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY	Fats	
												Kg	Calories Number	Proteins Grams	Fats Grams
Grand Total													2,259	64	46
Vegetable Products													2,084	50	35
Animal Products													175	14	11
Cereals and Products (Excluding Beer)	7732	257	81	-1762	9669	485	1395	293	183	388	6924	134	1089	26	5
1 Wheat and products	57	74	50	-801	881	4	14	0	1	33	828	16	124	4	0
2 Barley and products	17	60	0	3	74	60	0	0	0	0	13	0	2	0	0
3 Maize and products	5731	117	28	13	5807	45	1315	268	174	311	3695	72	641	15	4
4 Rye and products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Oats and products	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
6 Millet and products	127	2	0	0	128	8	1	0	0	0	118	2	20	1	0
7 Sorghum and products	823	0	1	0	823	367	63	3	8	41	340	7	59	2	1
8 Cereals, Other	52	0	1	3	48	0	1	23	0	3	22	0	3	0	0
9 Rice (Milled Equivalent)	924	3	1	-980	1907	0	0	0	0	0	1907	37	239	5	0
Starchy Roots	5489	5	14	21	5459	0	138	299	0	1	5021	97	209	3	0
10 Potatoes and products	1622	5	5	6	1617	0	135	299	0	1	1182	23	45	1	0
11 Cassava and products	2231	0	9	-1	2222	0	0	0	0	0	2222	43	82	1	0
12 Sweet potatoes	1633	0	0	16	1617	0	3	0	0	0	1614	31	82	1	0
13 Roots, Other	2	0	0	0	2	0	0	0	0	0	2	0	0	0	0
14 Yams	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Sugar Crops	2873	0	0	0	2873	2486	28	0	0	0	358	7	5	0	0
15 Sugar cane	2873	0	0	0	2873	2486	28	0	0	0	358	7	5	0	0
16 Sugar beets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar and Sweeteners	408	0	0	-82	490	41	0	0	0	19	430	8	80	0	0
17 Sugar non centrifugal	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0
18 Sugar (Raw Equivalent)	406	0	0	-82	488	40	0	0	0	19	430	8	80	0	0
19 Sweeteners, Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Honey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PRODUCTS	DOMESTIC SUPPLY (1000 MT)				DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY				
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY		
												Kg	Calories Number	Proteins Grams	Fats Grams
					1,000 METRIC TONNES										
Pulses	1962	14	166	-170	1980	0	48	309	197	7	1418	28	240	15	2
21 Beans	1254	2	55	0	1201	0	27	289	19	0	866	17	156	10	1
22 Peas	138	11	2	0	147	0	6	0	8	0	133	3	24	2	0
23 Pulses, Other and products	570	1	109	-170	632	0	15	20	171	7	419	8	61	3	1
Treenuts	195	28	315	794	1144	689	139	0	9	214	93	2	3	0	0
24 Nuts and products	195	1	211	-41	26	0	0	0	0	2	25	0	3	0	0
Oilcrops	2029	27	104	834	1118	689	139	0	9	212	68	1	13	1	1
25 Soyabeans	12	2	1	-1	14	0	0	0	3	0	10	0	2	0	0
26 Groundnuts (Shelled Eq)	217	19	3	0	232	32	5	0	6	152	38	1	8	0	1
27 Sunflower seed	354	6	3	34	322	305	18	0	0	0	0	0	0	0	0
28 Rape and Mustardseed	0	0	1	-3	2	0	0	0	0	0	2	0	0	0	0
29 Coconuts (Incl Copra)	118	0	0	0	118	108	10	0	0	0	0	0	0	0	0
30 Sesame seed	1192	0	95	814	284	118	106	0	0	60	0	0	0	0	0
31 Palmkernels	74	0	0	0	74	74	0	0	0	0	0	0	0	0	0
32 Olives (including preserved)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 Oilcrops, Other	63	0	1	-9	72	53	1	0	0	0	18	0	3	0	0
Vegetable Oils	577	407	14	248	721	122	0	0	0	115	484	9	213	0	24
34 Soyabean Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35 Groundnut Oil	14	1	0	0	14	0	0	0	0	0	14	0	7	0	1
36 Sunflowerseed Oil	161	35	9	80	106	3	0	0	0	3	101	2	47	0	5
37 Rape and Mustard Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38 Cottonseed Oil	119	1	0	-4	125	113	0	0	0	5	7	0	3	0	0
39 Palmkernel Oil	6	0	0	0	6	0	0	0	0	0	6	0	3	0	0
40 Palm Oil	16	311	2	80	245	5	0	0	0	97	143	3	67	0	8
41 Copra oil	12	0	0	0	12	0	0	0	0	0	12	0	6	0	1
42 Sesameseed Oil	20	0	1	0	20	0	0	0	0	0	19	0	9	0	1
43 Olive Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44 Ricebran Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45 Maize Germ Oil	23	1	0	0	24	0	0	0	0	0	24	0	11	0	1
46 Oilcrops Oil, Other	205	57	2	92	168	0	0	0	0	9	159	3	61	0	7

PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY			
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	Calories	Proteins	Fats	
												Kg	Number	Grams	Grams	
					1,000 METRIC TONNES											
Vegetables	2381	12	210	-2	2186	0	339	0	0	3	1844	36	24	1	0	
47 Tomatoes and products	116	3	1	0	118	0	41	0	0	0	77	1	1	0	0	
48 Onions	89	0	14	0	75	0	27	0	0	1	47	1	1	0	0	
49 Vegetables, Other	2176	9	195	-2	1992	0	271	0	0	2	1720	33	22	1	0	
Fruits and Products (Excluding Wine)	4215	18	71	0	4162	187	436	5	0	7	3527	68	100	1	0	
50 Oranges, Mandarines	504	2	21	0	485	0	0	0	0	0	485	9	9	0	0	
51 Lemons, Limes & products	14	0	0	0	14	0	0	0	0	0	14	0	0	0	0	
52 Grapefruit and products	4	0	0	0	4	0	0	0	0	0	4	0	0	0	0	
53 Citrus Fruit nes & prod	45	0	0	0	45	0	3	0	0	0	42	1	1	0	0	
54 Bananas	1812	0	1	0	1811	152	305	0	0	0	1355	26	43	1	0	
55 Plantains	602	0	0	0	602	35	38	5	0	0	524	10	25	0	0	
56 Apples and products	0	6	0	0	6	0	0	0	0	0	6	0	0	0	0	
57 Pineapples and products	378	1	0	0	379	0	22	0	0	0	356	7	7	0	0	
58 Dates	1	4	0	0	5	0	0	0	0	0	5	0	1	0	0	
59 Grapes and products (excluding wine)	6	1	1	0	6	0	0	0	0	0	6	0	0	0	0	
60 Fruits, Other	851	2	48	0	805	0	68	0	0	7	730	14	15	0	0	
Stimulants	92	1	79	11	4	0	0	0	0	0	3	0	0	0	0	
61 Coffee and products	55	1	42	11	3	0	0	0	0	0	3	0	0	0	0	
62 Cocoa Beans and products	9	0	10	0	0	0	0	0	0	0	0	0	0	0	0	
63 Tea (including mate)	27	1	27	0	0	0	0	0	0	0	0	0	0	0	0	
Spices	266	0	3	2	261	0	0	0	0	0	261	5	47	2	2	
64 Pepper	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	
65 Pimento	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
66 Cloves	9	0	1	0	8	0	0	0	0	0	8	0	1	0	0	
67 Spices, Other	256	0	2	2	253	0	0	0	0	0	253	5	45	2	2	
Alcoholic Beverages	3250	0	0	0	3250	0	25	0	0	20	3205	62	58	1	0	
68 Wine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
69 Barley beer	423	0	0	0	423	-	0	0	0	0	423	8	10	0	0	
70 Beverages, Fermented	2807	0	0	0	2807	-	25	0	0	1	2781	54	48	1	0	

PRODUCTS	DOMESTIC SUPPLY (1000 MT)						DOMESTIC UTILISATION (1000 MT)						PER CAPITA SUPPLY				
	Production	Import	Export	Stock Variation	Total Domestic Supply	Processed	Loss	Feed	Seed	Other Uses	Food	PER YEAR FOOD	PER DAY		Fats		
												Kg	Calories	Proteins	Grams	Grams	
	1,000 METRIC TONNES																
71	Beverages, Alcoholic	2	0	0	0	2	-	0	0	0	0	2	0	0	0	0	0
72	Alcohol, nonFood	19	0	0	0	19	-	0	0	0	19	0	0	0	0	0	0
	Meat	724	4	4	0	725	0	0	0	0	0	725	14	73	5	6	
73	Bovine Meat	474	1	2	0	473	0	0	0	0	473	9	48	4	4	4	
74	Mutton & Goat Meat	111	0	2	0	109	0	0	0	0	109	2	11	1	1	1	
75	Pigmeat	37	1	0	0	39	0	0	0	0	39	1	8	0	0	1	
76	Poultry Meat	79	2	0	0	82	0	0	0	0	82	2	5	1	0	0	
77	Meat, Other	23	0	0	0	23	0	0	0	0	23	0	1	0	0	0	
	Offals	105	0	0	0	105	0	0	0	0	105	2	6	1	0	0	
78	Offals, Edible	105	0	0	0	105	0	0	0	0	105	2	6	1	0	0	
	Animal Fats	11	0	0	0	11	0	0	0	0	11	0	6	0	1	0	
79	Fats, Animals, Raw	11	0	0	0	11	0	0	0	0	11	0	5	0	0	1	
80	Butter, Ghee	0	0	0	0	0	-	0	0	0	0	0	0	1	0	0	
81	Cream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Milk and Products (Excluding Butter)	2184	20	0	0	2205	166	161	0	106	1773	34	59	3	3	3	
82	Milk and Products (Excluding Butter)	2184	20	0	0	2205	166	161	0	106	1773	34	59	3	3	3	
	Eggs	45	0	0	0	45	0	0	5	2	38	1	3	0	0	0	
83	Eggs and Products	45	0	0	0	45	0	0	5	2	38	1	3	0	0	0	
	Fish and Sea Food	23	36	0	0	0	0	0	0	0	375	7	28	4	1	0	
84	Fish and Sea Food	23	36	0	0	0	0	0	0	0	375	7	28	4	1	0	
	Miscellaneous	0	8	0	1	7	0	0	0	0	7	0	0	0	0	0	
85	Infant Food	0	1	0	0	1	-	0	0	0	1	0	0	0	0	0	
86	Miscellaneous, Other	0	7	0	0	7	0	0	0	0	7	0	0	0	0	0	

Annex 3:

References

1. Technical conversion factors for agricultural commodities
<http://www.fao.org/fileadmin/templates/ess/documents/methodology/tcf.pdf>
2. Guidelines for the compilation of Food Balance Sheets
<http://gsars.org/en/guidelines-for-the-compilation-of-food-balance-sheets/>

Annex 4:

List of members of the Technical Working Group on FBS

	NAME	INSTITUTION	REGION
1.	Titus Mwisomba	National Bureau of Statistics	Dodoma
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15.	Dr. Zegezege Mpemba	Bank of Tanzania	Dodoma
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17.	Michael Sangiwa	Ministry of Livestock and Fishery	Dar es Salaam
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21.	Mwalimu Juma	Office of Chief Government Statistician	Zanzibar
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