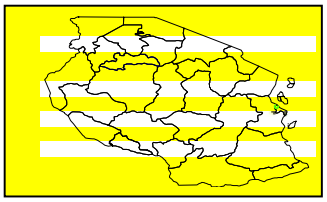
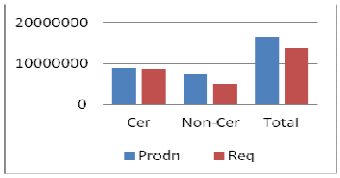
United Republic of Tanzania
Ministry of Agriculture





AGSTATS FOR FOOD SECURITY REPORT

VOLUME 1: The 2018/2019
Preliminary Food Crop Production Assessment for 2019/2020 Food Security

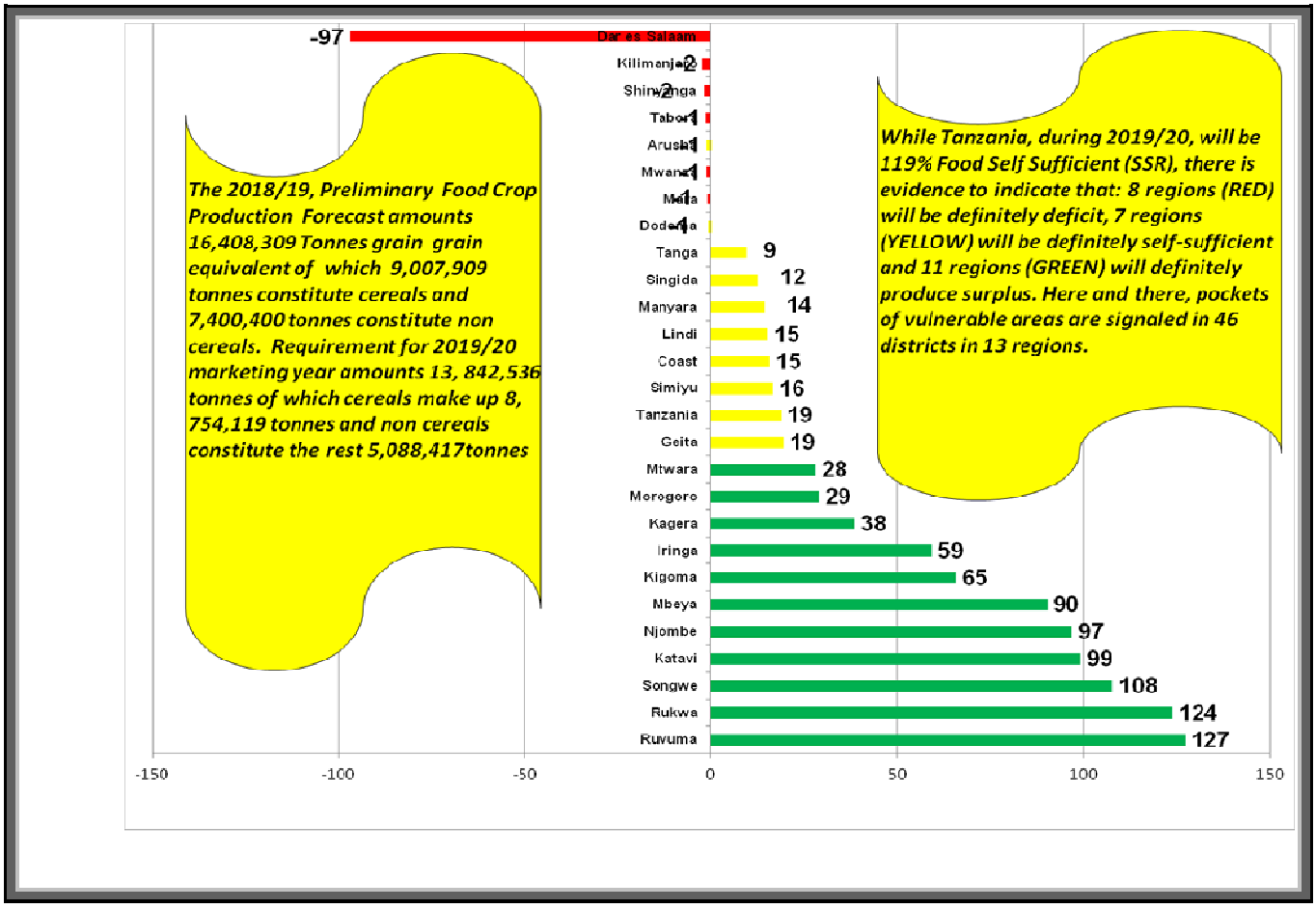


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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONOMY

AGSTAT	Agricultural Statistics
CMEW	Crop Monitoring and Early Warning System
EAC	East African Community
FFCPF	Final Food Crop Production Forecast
FSQ1	Food Security Questionnaire
LGAs	Local Government Authorities
NBS	National Bureau of Statistic
RRS1	Routine Reporting System
SADC	Southern African Development Community
SSR	Self Sufficiency Ratio
TSA	Triple S Analysis
WRS1-5	Weekly Retrieval System

1.0 HIGHLIGHTS

*The 2018/2019 Preliminary Food Crop Production Forecast (PFCPF) amounts **16,408,309** metric tons grain equivalent, of which **9,007,909** metric tons constitute cereals and **7,400,400** metric tons comprise non-cereals. Requirement for **2019/2020** marketing year amounts **13,842,536** metric tons of which cereals make up **8,754,119** metric tons and non-cereals constitute the rest**, 5,088,417** metric tons.*

*Based on these production and requirement figures, a Self-Sufficiency Ratio (SSR) of **119** has been attained in terms of total food crops whereby cereals make up **103** and non-cereals make up **145**. In terms of gap/surplus analysis, this is respectively **2,565,774** metric tons surplus of total food, of which a cereal surplus amounting **253,790** metric tons coexists with a non-cereal surplus amounting **2,311,984** metric tons.*

An analysis of carryover stocks (COS) shows that, on the eve of new marketing year a total of 505,274 tonnes of food stock was available and carried over into 2019/20 marketing year of which 68,057.72 tonnes was held in NFRA (National Food Reserve Agency) and 5,616.24 tonnes was held in CPB (Cereals and other Produce Board) warehouses while 93,760 tonnes was held by private stockists and 337,840 tonnes was estimated as farm retention. Added to the 2,565,774 tonnes of food surplus indicated above, the total food available, over and above national requirement is 3,071,048 tonnes.

*At national level, the upper end SSR is impressively evidenced by **11** regions **(128 – 227%)** that have definitely produced surplus and **7** regions **(109-119%)** that are definitely self-sufficient, while **8** regions (**3-99%**) is evidenced to be definitely deficit.*

*Over six years consecutively (2012/13 to 2018/19 of consumption year) the country has been observed to produce surplus food in the range of **120-125.***

*Towards operational setting to curb food insecurity in the country, vulnerable areas are well signaled in **46** district councils out of **184** LGAs within **13** regions out of **26** regions. The identified vulnerable areas will be closely monitored while in-depth vulnerability assessments will be carried out as a necessary step towards appropriate intervention actions.*

The earmarked food surplus areas and food deficit areas are seen as opportunities and challenges that need to be appropriately addressed. It is therefore highly recommended that local market potential as per deficit regions signals should be well exploited.

2.0 BACKGROUND

The National Early Warning System (CMEWS) has been instrumental in producing food crop production data and information from the regions and district councils in regular basis for decision making. Starting year 1992/1993, the Ministry of Agriculture through CMEWS has produced on annual basis, preliminary and final forecast reports and trigger vulnerability assessment that zoom into detected hotspots at district level towards household level. The system has also been contributing in preparing monthly food security updates and other ad hoc reports in response to management needs. The other unique contribution is that of populating and updating national food balance sheets and sharing with the process of integrating regional food security situation with East African Community (EAC) and Southern African Development Community (SADC) secretariats along regional food balance sheet approach.

The forecasts have been using specially designed tools to capture data, initially at a seasonal frequency involving the use of a sample survey questionnaire (FSQ1) which address "Subjectivity" problems, later on at a weekly and a monthly frequency involving routine reporting forms (WRS1-5 and RRS1) to address early warning issues for food security and further TSA, Jed 6 and Jed 7 which are intended to get local authority and experts opinions on general aspects of agriculture as a whole, food security, prices and rainfall data on record as well as addressing urgency and ad hoc issues amidst stringent budgetary constraints. These tools have been constantly improved to capture data with reasonable statistical accuracy while opening doors of opportunities towards deeper insights of short-term to long-term food security interventions.

For effectiveness purposes, the tools are used to monitor food crop production in the field on weekly, bi-weekly, monthly and in the preliminary and final food crop production forecast surveys. These surveys are normally carried out at the beginning and at the middle of consumption year which runs from 1st June to 31st May of each year.

The outcome of using these tools enables the analysis of food crop production, requirement and food security status both at National and Sub-national levels and contributes to the output given by "AGSTATS for Food Security". Actions taken in sustaining food security acknowledge the need to involve key and relevant stakeholders in all different areas including, the dissemination of this report. Improvement of data reliability, accuracy and timeliness in this output has been 100% subject to resource availability by Government and commitment on the part of professional capacity in place.

3.0 METHODOLOGY

3.1 Methodological consideration

The preliminary forecast survey involved the 2018/2019 retrieval of food crop production data and information from the Regional and District Council levels partly through Crop Monitoring and Early Warning System. In addition, actual field visits of CMEW team of experts to eye - witness crop performance in some regions in unimodal areas and all the bimodal regions in respect of *masika* for 2018/2019 was applied.

Comprehensive analysis covering different retrievals were undertaken and results are presented in different formats such as figures, tables, charts and maps in this report. The results concentrated on National and Regional level food status with brief district councils highlights of vulnerable areas.

Following the limitation of data collection techniques, the early warning system has been increasingly worked around subjectivity towards objectivity. Moreover, absence or late availability of data due to timeliness and inability to access data sources hinders the ability to address urgency and ad hoc data needs, have been the pitfalls.

To address these pitfalls, sample surveys using FSQ1 have been used for more than 20 years to address subjectivity problems. Furthermore, the routine reporting system involving WRS1- 5 and RRS1 - have prevailed for more than 16 years to address ad hoc data needs. They have been used to generate food security reports for decision making amidst stringent budgetary constraints common in Tanzania Mainland.

In a nutshell, there are 10 different key data collection tools used by CMEW to record, validate and prepare data for retrieval and monitoring food crops production situation as follows:

i) Targets and implementation of crop cultivation at field level: Weekly Retrieval System 1 (WRS1);

ii) Phenological phases applying *ko-be-cha-ku-ota* principle at field crops: Weekly Retrieval System 2 (WRS2);

iii) Crop pests both at pre-harvest and post-harvest phases: Weekly Retrieval System 3 (WRS3);

iv) Food availability at local markets: Weekly Retrieval System 4 (WRS4);

v) Rainfall precipitation as locally perceived: Weekly Retrieval System 5 (WRS5);

vi) Food Security Questionnaire 1 (FSQ1): Captures various food security variables applied in National Bureau of Statistics (NBS) based sample villages.

vii) Routine Reporting System 1 (RRS1): Various agricultural and food security variables on monthly basis;

viii) Triple S Analysis (TSA) = Snap-Shot Stories: Conventionally reported information by local authority as guided by Crop Monitoring and Early Warning;

ix) Jed6: Capture monthly average price trend at local markets and;

x) Jed7: Capture monthly average rainfall (mm) and number of days as received per local station.

xi) The results from analysed data and information using the above tools include;

xii) Production figures: At National and Regional levels

xiii) Food Requirement: Food requirement for the year based on population (mid-year population), food consumption requirement, and non-food requirement; such as seeds, animal feeds, trade and crop losses that are a certain percentage of food crops produced.

xiv) Food Surplus/Shortage: surplus or shortages based on the production of the specific season deducting (-) the requirement (Production less Requirement) where the answer may be positive (+) indicating surplus or negative (-) indicating deficit depending on the production situation. Comprehensive analysis covering different retrievals are undertaken and results are presented in this report. The results concentrate on national and regional level food status with brief district level highlights of vulnerable areas and;

xv) The Self Sufficiency Ratio - SSR: Derived by comparing production and requirement whereby: **0 - 99** represents Food shortages; **100 - 119** denotes food self-sufficient while **120** and above indicates food surplus.

In line with this, the whole process is associated with some assumptions and limitations namely: -.

3.1.1 Assumptions

i. Harvested areas are equivalent to planted areas,
ii. Weather conditions are favorable throughout the season,
iii. The sample villages represent all villages in the country.

3.1.2 Limitations

i. Eye estimation especially on area and yield.
ii. Outdated non-food consumption requirement parameters.
iii. Inadequate agronomical weather information especially from representative sample villages.
iv. Undisaggregated yield data in irrigated and non-irrigated areas.

4.0 FINDINGS

The forecast results show that, food availability for the consumption year 2019/2020 indicates to fall compared to previous year. This reduction is due to among others, unpredictable weather, outbreaks of pests such as fall armyworms, queleaquelea, rodents, fungal diseases, insufficient extension services and reduced use of agriculture inputs especially fertilizer during the 2018/2019 production season. The situation is explained in detail in the following sections: -

4.1 Food Crop Production Data at National and Sub - national Level

From the analysis at National level, food crop production for the 2018/2019 season has reached **16,408,309** metric tons (*Grain Equivalent*) of which **9,007,909** metric tons are cereals and **7,400,400** metric tons are non-cereals. On the other hand, requirement for 2019/2020 is **13,842,536** metric tons of which **8,754,119** metric tons are cereals and **5,088,417** metric tons are non-cereals. Comparing these production figures with the requirement figures of 13,842,536 metric tons for 2019/2020 consumption year, it is evident that the country produced a surplus amounting **2,565,774** metric tons of total food crop production where **253,790** metric tons comprise cereals and **2,311,984** metric tons is non-cereals (**Table 1**). Furthermore, food crop production at Sub-national level varies from one region to another as shown in Table 1 and Table 2 & 3.

Table 1*: The 2018/19 National Level Final Food Crop Production versus Requirement and Gap (-) / Surplus (+) Analysis for 2019/2020 (Grain Equivalent Tonnage)*

Cereals	Maize	Sorghum&Millets	Rice	Wheat	Cereals
Production	5,817,508	1,117,839	2,009,174	63,388	9,007,909
Requirement	5,513,469	1,974,778	999,543	266,329	8,754,119
Gap (-)/ Surplus(+)	304,040	-856,939	1,009,631	-202,942	253,790
SSR	106	57	201	24	103
Non-cereals	Pulses	Banana	Cassava	Potatoes	Non-cereals
Production	1,880,438	1,135,645	2,739,318	1,644,999	7,400,400
Requirement	816,659	936,359	2,337,839	997,559	5,088,417
Gap (-)/ Surplus(+)	1,063,778	199,286	401,479	647,440	2,311,984
SSR	230	121	117	165	145
TOTAL	*Cereals*	*Non-cereals*			*TOTAL*
Production	9,007,909	7,400,400			16,408,309
Requirement	8,754,119	5,088,417			13,842,536
Gap (-)/ Surplus(+)	253,790	2,311,984			2,565,774
SSR	103	145			119

Source: *PFCPF, 2018/2019*

5.0 CARRYOVER STOCKS (COS)

An analysis of Carryover stocks (COS) shows that, on the eve of new marketing year a total of 505,274 tonnes food stock was carried over into 2019/20 marketing year of which 68,057.72 tonnes and 5,616.24 tonnes was held in NFRA and CPB premises respectively while 93,760 tonnes was held by private stockists and 337,840 tonnes was estimated as farm retention (Figure 1).

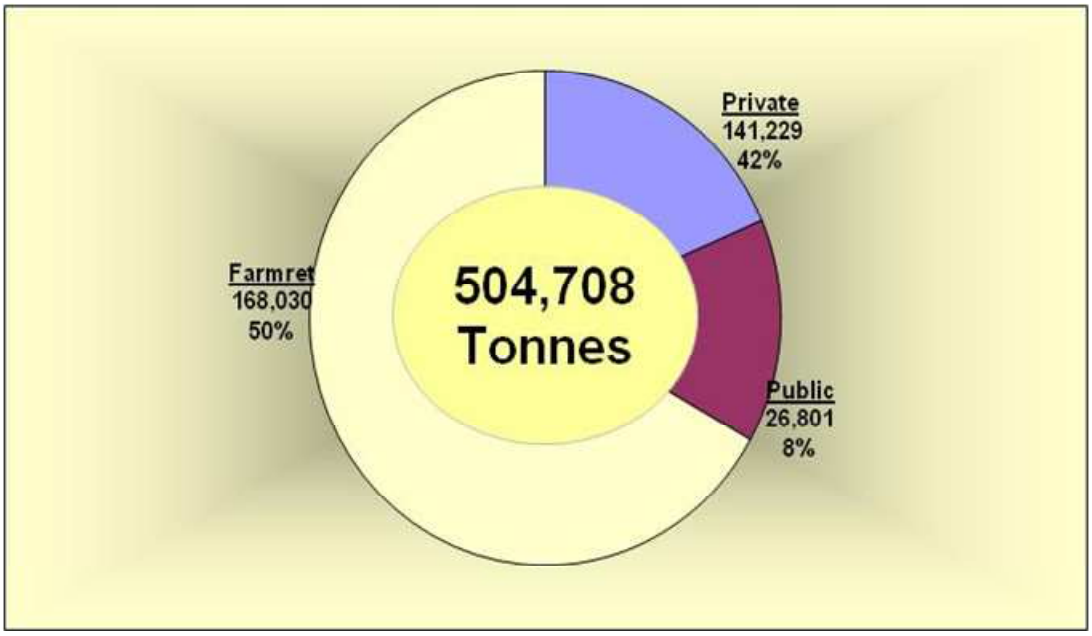

Figure 1*: Carry-Over Stocks Analysis as of 31stMay, 2019 (Tonnes),* **Source***: PFCPF, 2018/2019*

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Table 2: *Production of Cereals by Region.*

Cereals Production 2018/2019																				
Region	Maize			Sorghum			Finger Millet			Bulrush Millet			Rice			Wheat			Cereals		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	roduction	Area	Yield	Production	Area	Yield	Production	Total Area	Total Production	Region
Arusha	98,877	1.4	138,428	23,247	0.9	20,922	791	0.9	712				51,000	3.3	168,300	3,906	1.5	5,964	177,821	334,326	Arusha
Pwani	27,257	1.0	27,257	6,185	1.3	7,807							47,768	1.2	58,423				81,210	93,487	Pwani
Dar es Salaam	656	0.9	608										1,835	0.7	1,229				2,491	1,837	Dar es Salaam
Dodoma	111,689	0.9	100,520	151,396	1.0	151,396	5,055	1.4	7,076	127,581	1.4	178,614	5,704	1.2	6,845				401,425	444,451	Dodoma
Iringa	117,160	1.8	210,889	4,458	0.9	3,858	6,454	1.1	7,305				13,040	2.3	29,728	10,280	1.4	14,195	151,392	265,974	Iringa
Njombe	160,899	2.0	321,798	1,250	1.1	1,370	1,311	1.1	1,507				838	1.7	1,448	4,329	1.2	5,404	168,627	331,527	Njombe
Kagera	80,318	1.8	144,572	8,426	1.3	10,776	1,637	1.1	1,862	225	1.1	256	8,857	1.7	15,057				99,463	172,524	Kagera
Kigoma	218,794	1.9	417,330	2,379	1.8	4,224	185	1.1	198				23,009	1.8	41,415				244,366	463,168	Kigoma
Kilimanjaro	80,010	1.9	152,019	301	1.3	396				1,528	1.1	1,738	13,451	2.9	39,038	310	2.2	689	95,600	193,880	Kilimanjaro
Lindi	87,832	1.1	99,946	36,556	1.0	36,556							13,698	1.2	16,438				138,086	152,940	Lindi
Manyara	240,648	1.4	329,139	21,353	0.9	19,575	8,922	1.4	12,490	1,429	1.3	1,857	5,013	3.0	15,039	9,438	1.9	17,932	286,802	396,032	Manyara
Mara	87,207	1.8	156,972	65,409	1.5	97,836	4,093	1.1	4,626	325	1.1	368	17,940	1.4	25,012				174,974	284,814	Mara
Mbeya	192,069	2.4	460,966	3,575	1.5	5,236	1,614	1.0	1,642				72,849	3.0	218,547	3,665	1.7	6,264	273,772	692,654	Mbeya
Songwe	164,724	2.5	416,211	15,192	1.4	21,152	4,804	1.4	6,726	127	1.2	153	19,625	3.0	58,875	391	1.0	389	204,863	503,505	Songwe
Morogoro	95,100	1.4	135,027	12,733	1.5	19,075	469	1.0	450	47	1.0	45	190,326	2.5	477,978				298,675	632,575	Morogoro
Mtwara	40,677	1.1	44,745	13,606	0.7	9,506	152	0.9	143	65	0.9	61	18,847	0.9	17,361				73,347	71,815	Mtwara
Mwanza	83,310	1.2	99,972	11,546	1.1	12,320	11	1.2	13	1,145	1.4	1,602	86,346	0.9	77,712				182,358	191,619	Mwanza
Geita	98,797	1.7	167,955	9,796	1.1	10,365	592	1.0	586	1,825	1.3	2,373	80,119	1.8	144,214				191,129	325,493	Geita
Rukwa	209,067	1.8	376,320	6,905	1.0	7,197	20,000	1.6	32,000				33,274	1.9	63,221	6,231	1.2	7,341	275,477	486,079	Rukwa
Katavi	63,554	2.3	146,175	760	1.6	1,236	13	0.8	10	7	0.8	6	55,518	2.3	127,691				119,852	275,117	Katavi
Ruvuma	275,439	2.4	661,054	1,020	1.8	1,858	7,137	1.4	9,992				54,211	1.9	104,016	2,847	1.2	3,416	340,655	780,337	Ruvuma
Shinyanga	76,095	0.9	68,486	44,963	0.9	38,889	1,311	1.2	1,625	8,307	1.4	11,630	91,170	1.0	91,170				221,846	211,800	Shinyanga
Simiyu	169,141	1.5	260,759	71,209	1.2	82,175	14	1.1	15				35,818	1.2	41,678				276,182	384,628	Simiyu
Singida	158,601	1.1	166,613	100,396	1.2	120,475	6,706	1.5	10,058	53,413	1.6	85,461	8,315	1.5	12,067				327,429	394,674	Singida
Tabora	237,956	1.3	309,343	33,333	1.4	46,666	486	1.3	632	2,190	1.0	2,129	95,176	1.5	139,352				369,141	498,122	Tabora
Tanga	252,753	1.6	404,405	878	1.2	1,013							8,801	2.0	17,320	780	2.3	1,794	263,211	424,532	Tanga
Total	3,428,630	1.6	5,817,508	646,868	1.2	731,877	71,756	1.2	99,670	198,213	1.2	286,292	1,052,547	1.8	2,009,174	42,177	1.6	63,388	5,440,192	9,007,909	Total

Source: PFCPF, 2018/2019

Table 3*: Production of Non-Cereals by Region*

Non-cereals Production 2018/2019

Region	Beans			Pegeon Peas			Cowpeas			Groundnuts			Greengram			Bambaranuts			Cassava			Banana			Sweet Potatoes			Round Potatoes			Total Area	Total Non Cereal	Total Area Cer&Ncer	Total Food Production	Region
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production					
Arusha	21,846	1.0	21,764	18,159	0.9	15,549	606	0.9	519										1,495	1.5	2,263	34,547	4.0	138,188	2,020	1.4	2,828	2,813	0.9	2,532	81,486	183,642	259,307	517,968	Arusha
Pwani				5,323	1.2	6,388	10,640	0.8	8,974										65,186	3.7	241,189	1,746	1.9	3,282	3,963	2.0	7,926				86,859	267,760	168,068	361,247	Pwani
Dar es Salaam							371	1.0	371										5,649	3.8	21,466	148	2.5	367	8,992	2.9	26,077				15,160	48,281	17,651	50,119	Dar es Salaam
Dodoma	2,603	0.7	1,822	13,236	0.7	9,819	8,974	0.7	6,658	59,665	0.7	44,263	930	0.7	690	19,084	0.7	14,157	18,686	2.5	46,715				15,427	1.9	28,866	1,190	3.2	3,774	139,796	156,763	541,221	601,215	Dodoma
Iringa	84,328	1.3	109,626				1,327	1.6	2,152	719	1.6	1,166	11,172	1.6	18,111				273	3.5	957	157	3.3	524	8,599	3.0	25,744	12,218	3.0	36,578	118,793	194,857	270,185	460,831	Iringa
Njombe	27,772	1.3	36,103				350	1.5	523	333	1.5	497	3,939	1.5	5,876	35	1.5	52	4,364	2.3	10,253	424	3.2	1,376	2,562	2.9	7,409	23,057	2.8	64,372	62,837	126,462	231,464	457,989	Njombe
Kagera	109,276	1.5	163,914				161	1.2	193	866	1.3	1,126				2,705	1.3	3,517	100,250	2.4	240,600	118,789	3.9	463,277	5,991	2.4	14,265	3,177	2.4	7,565	341,215	894,456	440,678	1,066,980	Kagera
Kigoma	105,368	1.6	167,644	172	1.3	224	245	1.6	389	7,120	1.6	11,328				84	1.3	109	140,178	2.6	364,649	27,202	3.8	103,366	6,585	3.3	21,829	426	3.3	1,413	287,380	670,951	531,746	1,134,118	Kigoma
Kilimanjaro	41,947	1.0	41,947	529	1.2	638	217	1.2	262				539	1.2	649				3,658	2.1	7,682	64,199	3.1	199,016	841	3.0	2,522	5,003	3.0	15,009	116,932	267,725	212,532	461,605	Kilimanjaro
Lindi							1,018	0.9	901										43,746	2.7	118,114				2,144	1.6	3,430				46,908	122,446	184,994	275,386	Lindi
Manyara	110,894	1.1	121,983	19,197	1.2	23,037	3,382	1.2	3,940				6,307	1.2	7,348				1,133	1.7	1,974	807	3.0	2,426	2,503	1.9	4,795	1,061	1.9	2,033	145,284	167,537	432,086	563,568	Manyara
Mara	11,664	1.2	14,219																60,188	2.5	150,470	3,790	2.4	9,078	35,434	1.9	67,324	820	2.0	1,641	111,896	242,731	286,870	527,545	Mara
Mbeya	25,904	1.6	42,083	506	1.5	771	1,554	1.5	2,369	10,825	1.6	17,320	1,376	1.5	2,098	3,573	1.5	5,447	9,883	4.5	44,474	12,201	5.3	64,374	14,619	4.9	71,581	34,327	4.9	168,202	114,768	418,719	388,540	1,111,373	Mbeya
Songwe	56,265	1.5	84,398	33	1.5	50	114	1.5	171	21,067	1.5	31,601	218	1.5	327				5,380	3.0	16,140	7,901	4.8	37,722	14,834	5.3	79,232	2,481	5.3	13,252	108,293	262,891	313,156	766,396	Songwe
Morogoro	21,137	1.3	27,478	8,151	1.3	10,438	8,447	1.2	10,309	1,473	1.2	1,797	226	1.2	276				18,592	3.4	63,056	12,464	4.9	61,076	14,254	4.8	68,421	755	3.0	2,265	85,499	245,116	384,174	877,691	Morogoro
Mtwara				2,331	1.1	2,561	18,440	1.7	31,400										99,807	3.2	319,381	473	1.1	520	2,811	1.8	5,060				123,861	358,922	197,208	430,737	Mtwara
Mwanza	19,380	1.1	21,292				9,257	1.2	11,096	6,060	1.1	6,658	17,970	1.1	19,766	277	1.1	304	80,522	3.1	249,619	513	2.5	1,275	110,138	3.0	325,625				244,116	635,635	426,474	827,254	Mwanza
Geita	29,144	1.1	32,146				4,137	1.4	5,950	12,560	1.3	16,704	1,023	1.4	1,471	9	1.4	13	68,386	2.3	157,288	684	1.3	893	49,672	2.0	99,344				165,615	313,809	356,744	639,302	Geita
Rukwa	106,284	1.6	168,165	53	1.3	68				18,145	1.3	23,265	339	1.3	435				25,795	4.3	110,918	413	3.3	1,361	15,873	3.5	55,554	3,080	2.8	8,623	169,981	368,389	445,458	854,469	Rukwa
Katavi	6,158	1.7	10,447	46	1.4	64				18,289	1.8	32,919							14,048	3.4	47,094	22	3.0	66	9,125	3.8	34,638	103	3.1	319	47,790	125,547	167,642	400,664	Katavi
Ruvuma	38,507	1.2	46,208	1,412	1.9	2,684	489	1.9	929	4,967	1.9	9,437	182	1.9	346	178	1.9	337	87,121	2.5	217,803	3,383	4.5	15,222	17,826	3.3	58,827	182	2.1	391	154,246	352,183	494,901	1,132,519	Ruvuma
Shinyanga	14,010	1.0	13,410				2,492	1.0	2,385	42,002	1.6	67,203	16,755	1.0	16,037	1,916	1.0	1,834	12,752	2.4	30,605				53,904	1.7	91,637				143,831	223,111	365,677	434,911	Shinyanga
Simiyu	9,692	1.0	9,448	16,590	1.0	16,173	25,159	1.0	24,527	21,071	1.0	20,541	39,831	1.0	38,830	751	1.0	733	7,491	1.0	7,242				52,701	1.1	58,072				173,286	175,567	449,468	560,195	Simiyu
Singida	6,385	1.0	6,385	205	1.0	205	1,997	1.0	1,997	5,160	1.0	5,160	7,090	1.0	7,090	1,766	1.0	1,766	4,722	2.3	10,861	7	1.7	12	12,584	3.8	47,818				39,916	81,293	367,345	475,968	Singida
Tabora	20,352	0.7	14,798	972	0.7	707	9,992	0.7	7,265	37,815	0.7	27,495	2,119	0.7	1,540	2,750	0.7	1,999	44,955	1.9	85,414				68,549	1.3	85,768				187,503	224,986	556,644	723,108	Tabora
Tanga	24,654	1.4	34,516	510	1.4	713	3,287	1.4	4,602	991	1.4	1,387	1,175	1.4	1,645				66,574	2.6	173,092	12,890	2.5	32,224	7,563	1.7	12,606	5,901	1.7	9,835	123,545	270,621	386,756	695,153	Tanga
Total	893,570	1.2	1,189,795	87,425	1.2	90,088	112,657	1.2	127,884	269,127	1.3	319,866	111,189	1.3	122,536	33,127	1.2	30,268	990,835	2.7	2,739,318	302,758	3.1	1,135,645	539,513	2.7	1,307,197	96,594	2.8	337,803	3,436,795	7,400,400	8,876,987	16,408,309	Total

Source: PFCPF, 2018/2019

5.1 Food Security 2019/2020 Consumption Year

The proportional contribution crop wise for 2019/2020 consumption year is as indicated in **figure 1**.

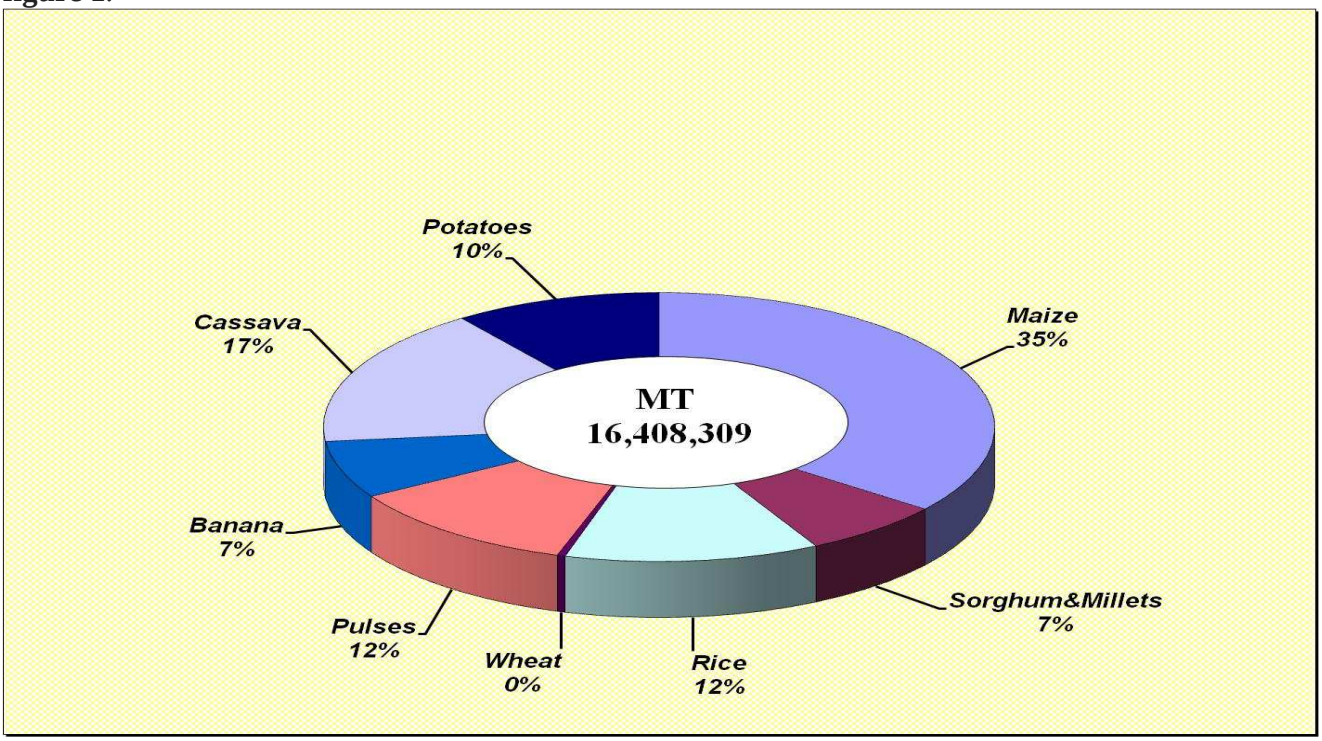


Figure 2: Crop wise proportional contribution, **Source***: PFCPF, 2018/2019*

NB:

1. Pulses comprise of beans, *cow peas, pigeon peas, chick peas, Bambara nuts, Green gram, Ground nuts, Green peas and Lablab.*
2. Millets comprise of *Finger and Bulrush millets.*
3. Potatoes comprise of S*weet and Round potatoes.*

6.0 RAINFALL PERFORMANCE AND AGRO METEOROLOGICAL IMPACTS DURING CROP PRODUCTION 2018/2019

6.1 *Msimu* rains

Msimu rains started during first to second week of November, 2018 over western areas, Kigoma and Katavi region in particular, and spread over Tabora, Dodoma, Singida, Rukwa, Mbeya, Songwe and Njombe during third to fourth week. Otherwise, over the remaining unimodal areas; the rains started during the first week of December. The rains started with fair distribution and progressed well till during February, 2019 where dry spells transpired. Generally, the rains performed normal to above normal except central areas (Dodoma and Singida regions) and some parts of Tabora where long dry spells persisted. In other hand, the season has been extended over some areas such as Mtwara, Lindi and southern parts of

Morogoro, where it was expected to stop at the end of April. This prolonged dry spell caused crop failure to permanent wilting over those areas. Otherwise, crop productions over remaining unimodal areas were favourable which provide a better situation of food security.

6.2 Long rains (*Masika* season)

Masika rains started earlier during fourth week of February, 2019 over Kagera, Kilimanjaro, Arusha, Manyara, Dar es Salaam and Pwani regions, while over Geita, Mara, Mwanza, Simiyu, Shinyanga, Tanga and eastern part of Morogoro region started during first to second week of March, 2019. It was followed by prolonged dry spells over most areas of this bimodal regime, except over Kagera region. This situation causes severe crop damage over most areas especially of Moshi, Same, Kiteto, Pwani, Dar es salaam and Tanga.

However, above normal rainfall performed at the end of April to May, 2019. It causes crop condition to be improved, especially over Tanga, Morogoro, Dar es Salaam and Pwani. This opportunity was used for replanting, though some of the crops were damaged due to water lodging.

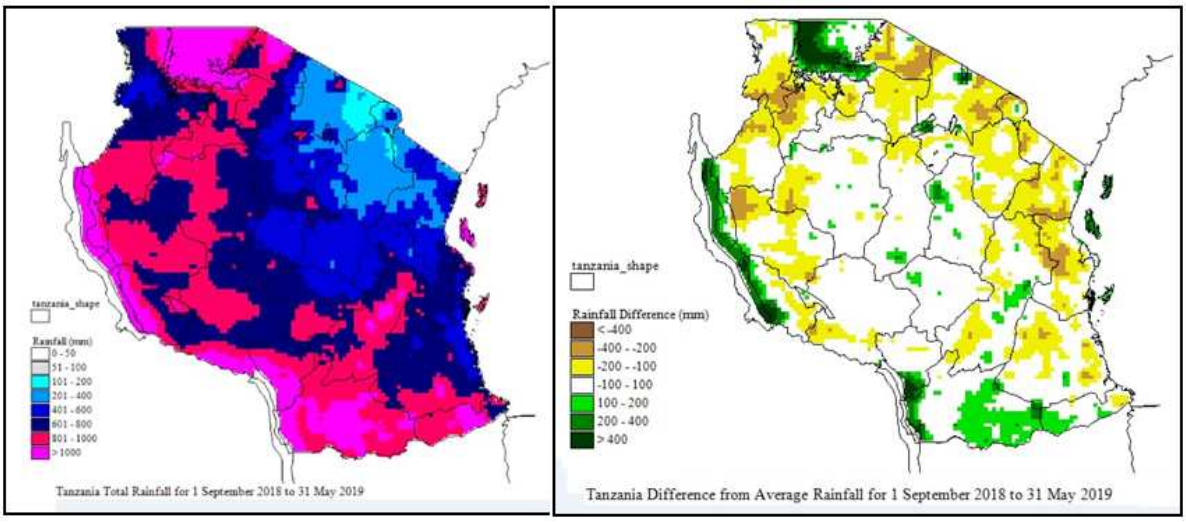


Figure 3: Rainfall distribution 1st September, 2018 – 31st May, 2019; As Total (left) and Difference from Average (right), Source**: TMA**

7.0 TIME SERIES ANALYSIS

Time series analysis shows that, compared to 2017/2018 production season, total food crop production has decreased by 3% (decreased by 6% in cereals and non-cereals increased by 1%) in 2018/2019 production season. Crop-wise, rock from -9% in Rice to 22% in Millets with other crops has been observed. Compared to trend values computed from 1986/87-2018/19 (a reasonable period of reliable food crop statistics adopted by CMEW), total tonnage stands up by 68% with total cereals standing up by 70% and non-cereals up by 66%. While Sorghum, Millets, Wheat, Pulses and Potatoes show positive swings; Maize, Rice and Cassava are showing negative swings, while Banana remain unchanged. Comparisons with other measures in trend analysis such as 32 years average and 5 years average for total food

crops, cereals and non-cereals as well as for different crops are as presented in **Table 4** and **Appendix1**.

Table 4*: Time Series Analysis of Production of Major Food Crops in Tanzania, based on available series (1986/87 – 2018/2019 in Thousand Metric Tons and in Percentages).*

Production Year	Maize	Sorghum	Millets	Rice	Wheat	Cereals	Pulses	Cassava	Banana	Potatoes	Non Cereals	Total	Consumption Year
2013/14	6,734	883	363	1,681	167	9,829	1,697	1,664	1,064	1,761	6,187	16,015	2014/15
2014/15	5,903	677	330	1,937	72	8,919	1,808	1,962	1,195	1,645	6,610	15,529	2015/16
2015/16	6,149	729	273	2,229	76	9,457	1,959	2,205	1,061	1,491	6,716	16,173	2016/17
2016/17	6,681	755	309	1,594	50	9,389	2,318	1,342	845	2,008	6,512	15,901	2017/18
2017/18	6,273	672	316	2,220	57	9,538	1,823	2,791	1,132	1,608	7,354	16,892	2018/19
2018/19	5,817	731	386	2,009	63	9,007	1,880	2,739	1,136	1,645	7,400	16,407	2019/20
33yaverage	3,435	709	205	869	81	5,299	937	1,729	860	941	4,466	9,766	33yaverage
5yaverage	6,165	713	323	1,998	64	9,262	1,958	2,208	1,074	1,679	6,918	16,180	5yaverage
Trend Values	6,973	689	333	2,177	92	10,264	2,453	1,926	1,169	2,256	7,805	18,069	Trend Values
%age change from 33y-average	69	3	88	131	-22	70	101	58	32	75	66	68	%age change from 33y-average
%age change from 5y-average	-6	3	20	1	-1	-3	-4	24	6	-2	7	1	%age change from 5y-average
%age change from Trend Values	-17	6	16	-8	-31	-12	-23	42	-3	-27	-5	-9	%age change from Trend Values
%age change from year t-1	-7	9	22	-9	12	-6	3	-2	0	2	1	-3	%age change from year t-1

Source: PFCPF Reports

7.1 Food Supply, Requirement and Self Sufficiency Ratio (SSR) for 2019/2020 Consumption Year

Based on 2018/2019 PFCPF analysis, the 2019/2020 regional requirements for cereals range from **134,008** metric tons (Katavi) to **925,798** metric tons (Dar es Salaam) while that of non-cereals, it ranges from **67,382** metric tons (Katavi) to **606,618** metric tons (Dar es Salaam) (**Table 6).** Through Gap and Surplus analysis, the SSR is derived. This indicates the extent of food surplus, self-sufficient or deficit that will be available for use when production from a particular production season is compared with food requirement for the subsequent consumption year.

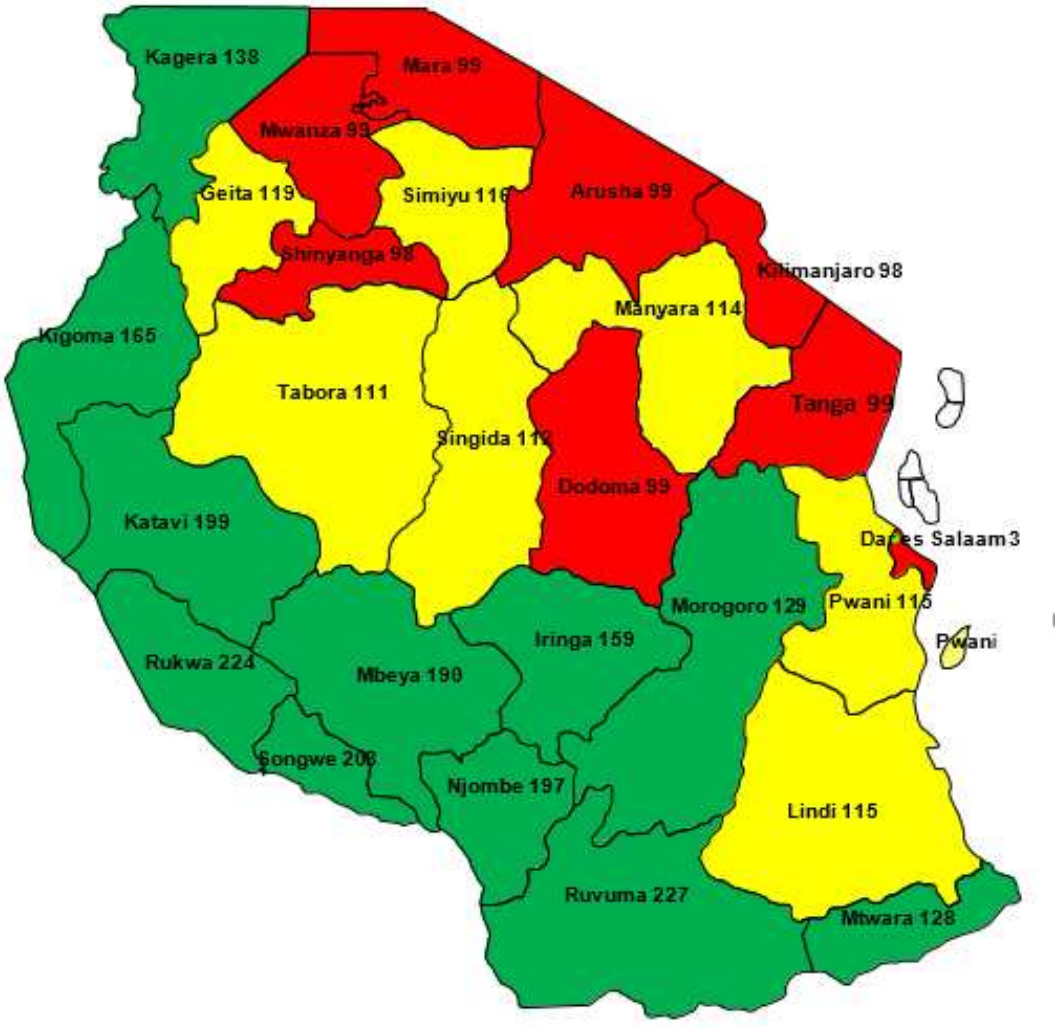
Whether the available food for use at that level is surplus, self sufficient or deficit it excludes:- available stocks (i.e. farm retention, public and private stocks that were available at that material time); trade (imports/exports), etc, the analysis of which is done at a latter to give a bigger picture to the total food availability in the country. From the 2018/2019 preliminary forecast analysis, an overall SSR of **119** was achieved for the 2019/2020 consumption year which is lower compared to that of **124** and **120** for 2018/2019 and 2017/2018 consumption years respectively. It was also the forecast analysis revealed that, SSR for cereals and non-cereals production reached **103** and **145** respectively in the 2019/2020 consumption year while at Sub-national levels, SSR range from **3** (Dar es Salaam) to **227** (Ruvuma) (**Table 5** and **Figure 3**).

Table 5*: Tanzania Food Supply, Requirement and Self Sufficiency Ratio for 2019/2020 Consumption year*

Region	TOTAL CEREALS (Tonnes)				TOTAL NON CEREALS (Tonnes)				TOTAL PRODUCTION (Tonnes)					REGION
	PROD	REQ	Gap/Surplus	SSR-Cer	PROD	REQ	Gap/Surplus	SSR Ncer	PROD	REQ	Gap/Surplus	SSR (Total)	Deficit Indicator (*)	
Ruvuma	780,337	344,408	435,929	227	352,183	154,408	197,775	228	1,132,519	498,816	633,703	227		Ruvuma
Rukwa	486,079	247,239	238,840	197	368,389	134,844	233,546	273	854,469	382,082	472,386	224		Rukwa
Songwe	503,505	247,440	256,065	203	262,891	121,763	141,128	216	766,396	369,203	397,193	208		Songwe
Katavi	275,117	134,008	141,109	205	125,547	67,382	58,165	186	400,664	201,391	199,273	199		Katavi
Njombe	331,527	159,695	171,832	208	126,462	73,345	53,116	172	457,989	233,040	224,949	197		Njombe
Mbeya	692,654	387,100	305,554	179	418,719	198,048	220,671	211	1,111,373	585,147	526,226	190		Mbeya
Kigoma	463,168	432,424	30,744	107	670,951	253,167	417,784	265	1,134,118	685,590	448,528	165		Kigoma
Iringa	265,974	183,402	82,572	145	194,857	106,434	88,423	183	460,831	289,836	170,995	159		Iringa
Kagera	172,524	466,549	-294,025	37	894,456	305,194	589,263	293	1,066,980	771,743	295,238	138		Kagera
Morogoro	632,575	432,738	199,837	146	245,116	249,211	-4,095	98	877,691	681,949	195,742	129		Morogoro
Mtwara	71,815	207,599	-135,784	35	358,922	129,810	229,111	276	430,737	337,409	93,328	128		Mtwara
Geita	325,493	337,485	-11,992	96	313,809	199,192	114,616	158	639,302	536,677	102,625	119		Geita
Tanzania	9,007,909	8,754,119	260,888	103	7,400,400	5,088,417	2,311,984	145	16,408,309	13,842,536	2,565,774	119		Tanzania
Simiyu	384,628	311,804	72,825	123	175,567	169,698	5,868	103	560,195	481,502	78,693	116		Simiyu
Coast	93,487	192,923	-99,436	48	267,760	120,360	147,400	222	361,247	313,282	47,965	115		Coast
Lindi	152,940	153,346	-406	100	122,446	86,484	35,962	142	275,386	239,830	35,556	115		Lindi
Manyara	396,032	313,469	82,562	126	167,537	179,642	-12,106	93	563,568	493,112	70,456	114		Manyara
Singida	394,674	271,639	123,035	145	81,293	151,847	-70,554	54	475,968	423,486	52,481	112		Singida
Tanga	424,532	409,572	14,960	104	270,621	227,505	43,116	119	695,153	637,076	58,077	109		Tanga
Dodoma	444,451	378,860	65,592	117	156,763	226,848	-70,085	69	601,215	605,708	-4,493	99	*	Dodoma
Mara	284,814	335,498	-50,684	85	242,731	196,514	46,218	124	527,545	532,011	-4,466	99	*	Mara
Mwanza	191,619	513,129	-321,511	37	635,635	323,353	312,282	197	827,254	836,482	-9,229	99	*	Mwanza
Arusha	334,326	329,970	4,356	101	183,642	194,400	-10,758	94	517,968	524,370	-6,402	99	*	Arusha
Tabora	498,122	467,458	30,664	107	224,986	265,136	-40,150	85	723,108	732,594	-9,486	99	*	Tabora
Shinyanga	211,800	276,321	-64,521	77	223,111	168,307	54,804	133	434,911	444,628	-9,717	98	*	Shinyanga
Kilimanjaro	193,880	294,247	-100,368	66	267,725	178,906	88,819	150	461,605	473,154	-11,549	98	*	Kilimanjaro
Dar es Salaam	1,837	925,798	-923,961	0	48,281	606,618	-558,337	8	50,119	1,532,416	-1,482,297	3	*	Dar es Salaam

Legend:	SSR 120 and above (Surplus)		SSR 100-199 (Self-sufficient)		SSR 0-99 (Deficit)	

Source: *PFCPF, 2018/2019*



Legend:	SSR 120 and above (Surplus)		SSR 100-199 (Self-sufficient)		SSR 0-99 (Deficit)	

Figure 4 ***Map:*** *Tanzania Food Supply Analysis and Self Sufficiency Ratio for 2019/2020 based on the 2018/2019 Preliminary Food Crop Production Forecast.*

7.2 SSR Trend Analysis

The 10 years trend analysis indicates that at national level, SSR has rocked annually from **105 to 125** as shown in **Figure 4**.

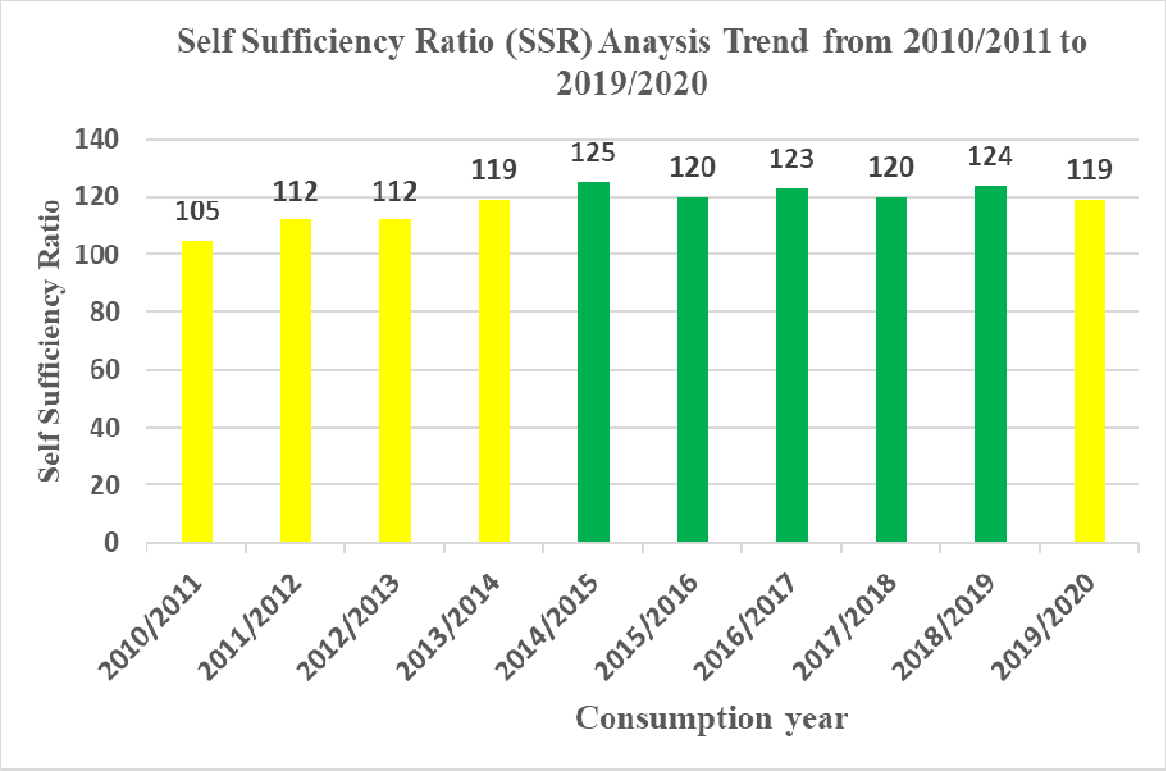


Figure 5: SSR in 10 years trend analysis**, Source:** PFCPF, 2018/2019

8.0 VULNERABILITY

The analysis revealed that, there are 46 LGAs in **13** regions bearing pockets with food crop production shortage where **1** district councils are from **1** surplus region, **13** district councils are from **5** Self Sufficient regions and **32** district councils are from **7** Deficit regions. The presence of vulnerable areas among deficit, self-sufficient and surplus food security status masks the true colours that are better reflected at lower levels towards household/individuals **Table 6**.

Table 6*: Vulnerable Areas in 2019/2020 According to 2018/2019 Preliminary Food Crop Production Forecast*

S/N	Region	No of Dist Councils &SSR Level indicator in color	Number of Districts	District Councils
1	DODOMA	99	7	Bahi DC, Chamwino DC, Chemba DC, Kondoa DC, Kondoa TC, Kongwa DC, Mpwapwa DC
2	MARA	99	5	Bunda TC, Bunda DC, Musoma DC, Musoma MC, Rorya
3	TABORA	99	5	Uyui DC, Igunga DC, Nzega DC, Nzega TC, Kaliua DC
4	SHINYANGA	98	4	Kishapu DC, Shinyanga DC, Msalala DC, Shinyanga MC
5	KILIMANJARO	98	4	Mwanga DC, Same DC, Siha DC, Hai DC
6	MWANZA	99	4	Misungwi DC, Ukerewe DC, Kwimba DC, Sengerema DC
7	MANYARA	114	4	Simanjiro DC, Kiteto DC, Hanang DC, Mbulu TC
8	SIMIYU	116	4	Itilima DC, Maswa DC, Meatu DC, Busega DC
9	ARUSHA	99	3	Longido DC, Ngorongoro DC, Monduli DC
10	SINGIDA	112	3	Ikungi DC, Manyoni DC, Singida DC
11	TANGA	109	1	Tanga Jiji
12	LINDI	115	1	Lindi DC
13	IRINGA	159	1	Iringa DC
Total			**46**	
<u>TANZANIA:</u> Food Security Status: Self Sufficient (SSR=119%), Vulnerability 13 regions, 46 district councils		**<u>Regions</u> containing Vulnerable areas 13: 7 Deficit, 5 Self Sufficient, 1 Surplus**	**<u>Districts</u> containing Vulnerable areas 46: 32 deficit, 13 self sufficient, 1 Surplus**	**<u>In general</u>, While at national level Tanzania during 2019/20 will be 119% food self sufficient, 13 regions contain vulnerable areas in 46 district councils….=>=> Hence an early warning against food deficit status in these areas!!**

Source: *PFCPF, 2018/2019*

9.0 CONCLUSION AND RECOMMENDATIONS

9.1 CONCLUSION

Based on this assessment, a self-sufficient level of **119** percent has been obtained for the consumption year 2019/2020 implying that the country will be **self sufficient**. However, district councils in which food deficit is expected, a comprehensive Food and Nutrition security assessment will be conducted in order to identify how many people are vulnerable, where they are, when they will be insecure and what type of interventions are needed. Close monitoring of food security situation in the country is therefore an ongoing activity for early warning purposes.

9.2 RECOMMENDATIONS

From the analysis and findings of the 2018/2019 preliminary food crop production forecast, it is recommended that: -

i. Based on ASDP II component 2 sub component 2.5, in collaboration with Food Security stakeholders capacity building on Crop Monitoring and Early Warning System for food security should be strengthened to ensure timely availability of quality, accurate and reliable data for food security analysis and enhance informed decisions;

ii. Vulnerable areas should be subjected to an in-depth vulnerability assessment and analysis to guide the needed interventions;

iii. Potential local market as per deficit regions should be well exploited so as to increase food availability and accessibility in those areas;

iv. Value addition and other post-harvest management techniques on crop produce should be strengthened at all levels to minimize crop losses to enhance quality of produce and increase farmers' income; and

v. Availability and access mechanisms to farmers on extension services and agricultural inputs should be improved at all levels to enhance production, and productivity of food crops;

10.0 APPENDICES

Appendix 1 :Time Series Analysis

Time Series Analysis of Production for Major Food Crops in Tanzania, based on Available Series (1986/87 - 2018/19) (Thousand Tonnes and Percentages as Indicated)

Production Year	Maize	Sorghum	Millets	Rice	Wheat	Cereals	Pulses	Cassava	Banana	Potatoes	Non Cereals	Total	Consumption Year
1986/87	2,359	779	175	419	72	**3,804**	251	1,709	792	336	**3,088**	6,892	1987/88
1987/88	2,339	557	125	400	76	**3,497**	379	1,736	812	319	**3,246**	6,743	1988/89
1988/89	3,125	656	148	468	97	**4,494**	385	1,948	743	337	**3,413**	7,907	1989/90
1989/90	2,445	464	104	481	106	**3,600**	388	1,724	823	1,023	**3,958**	7,558	1990/91
1990/91	2,332	612	138	406	84	**3,572**	425	1,566	750	291	**3,032**	6,604	1991/92
1991/92	2,226	694	156	256	64	**3,396**	312	1,778	794	257	**3,141**	6,537	1992/93
1992/93	2,282	758	171	417	59	**3,687**	406	1,708	800	260	**3,174**	6,861	1993/94
1993/94	2,159	568	128	399	59	**3,313**	187	1,802	834	267	**3,090**	6,403	1994/95
1994/95	2,567	1,020	230	470	75	**4,362**	378	1,492	651	451	**2,972**	7,334	1995/96
1995/96	2,663	1,012	228	477	84	**4,463**	475	1,498	641	420	**3,034**	7,497	1996/97
1996/97	1,831	690	155	357	78	**3,112**	374	1,426	603	372	**2,776**	5,888	1997/98
1997/98	2,685	652	147	676	111	**4,271**	462	1,758	836	644	**3,700**	7,972	1998/99
1998/99	2,452	617	139	506	82	**3,796**	528	1,795	752	570	**3,645**	7,440	1999/00
1999/2000	2,009	667	150	508	33	**3,368**	674	1,781	703	798	**3,955**	7,322	2000/01
2000/01	2,579	742	167	564	89	**4,141**	733	1,445	779	596	**3,553**	7,695	2001/02
2001/02	2,705	834	206	640	77	**4,462**	683	1,725	752	950	**4,111**	8,572	2002/03
2002/03	2,322	488	139	713	74	**3,735**	850	1,321	706	761	**3,638**	7,373	2003/04
2003/04	3,157	757	201	688	67	**4,871**	879	1,480	734	874	**3,967**	8,838	2004/05
2004/05	3,219	714	221	759	102	**5,015**	886	1,846	991	931	**4,654**	9,669	2005/06
2005/06	3,423	712	228	805	110	**5,277**	1,050	2,053	1,169	1,396	**5,668**	10,945	2006/07
2006/07	3,302	971	194	872	83	**5,422**	1,156	1,733	1,028	1,322	**5,238**	10,660	2007/08
2007/08	3,556	861	203	875	92	**5,588**	1,126	1,797	982	1,379	**5,285**	10,872	2008/09
2008/09	3,326	709	220	868	95	**5,219**	1,116	1,972	1,073	1,392	**5,554**	10,773	2009/10
2009/10	0	0	0	0	0	**0**	0	0	0	0	**0**	0	2010/11
2010/11	4,341	807	312	1,461	113	**7,033**	1,632	1,549	1,048	1,710	**5,939**	12,972	2011/12
2011/12	5,104	839	214	1,170	109	**7,436**	1,827	1,821	842	1,418	**5,908**	13,344	2012/13
2012/13	5,288	782	292	1,342	102	**7,807**	1,871	1,878	1,317	1,808	**6,873**	14,680	2013/14
2013/14	6,734	883	363	1,681	167	**9,829**	1,697	1,664	1,064	1,761	**6,187**	16,015	2014/15
2014/15	**5,903**	**677**	**330**	**1,937**	**72**	**8,919**	**1,808**	**1,962**	**1,195**	**1,645**	**6,610**	15,529	2015/16
2015/16	**6,149**	**729**	**273**	**2,229**	**76**	**9,457**	**1,959**	**2,205**	**1,061**	**1,491**	**6,716**	16,173	2016/17
2016/17	**6,681**	**755**	**309**	**1,594**	**50**	**9,389**	**2,318**	**1,342**	**845**	**2,008**	**6,512**	15,901	2017/18
2017/18	**6,273**	**672**	**316**	**2,220**	**57**	**9,538**	**1,823**	**2,791**	**1,132**	**1,608**	**7,354**	16,892	2018/19
2018/19	**5,817**	**731**	**386**	**2,009**	**63**	**9,007**	**1,880**	**2,739**	**1,136**	**1,645**	**7,400**	16,407	2019/20
33yaverage	3,435	709	205	869	81	5,299	937	1,729	860	941	4,466	9,766	33yaverage
5yaverage	6,165	713	323	1,998	64	9,262	1,958	2,208	1,074	1,679	6,918	16,180	5yaverage
Trend Values	6,973	689	333	2,177	92	10,264	2,453	1,926	1,169	2,256	7,805	18,069	Trend Values
%age change from 33y-average	69	3	88	131	-22	70	101	58	32	75	66	68	%age change from 33y-average
%age change from 5y-average	-6	3	20	1	-1	-3	-4	24	6	-2	7	1	%age change from 5y-average
%age change from Trend Values	-17	6	16	-8	-31	-12	-23	42	-3	-27	-5	-9	%age change from Trend Values
%age change from year t-1	-7	9	22	-9	12	-6	3	-2	0	2	1	-3	%age change from year t-1

Source: ***PFCPF Reports, 2018/2019***

Appendix 2: Methodological Considerations**.**

Production expressed in T – (Grain Equivalent) = Area (Ha) * Yield (T/Ha). NB: **Grain equivalent calculations** assume a common denominator among all cereals while roots, tubers and plantains compare at 1:3 ratio. Requirement R = Average Per capita Consumption requirement of 650g/day + Parameter % estimates of production that is committed to other uses. Consumption requirement is estimated as average kg. per person per crop as follows: Maize 86kg, Millets 18kg, Rice16 kg, Sorghum 18 kg, Wheat 5 kg, Bananas18 kg, Cassava 44 kg, Potatoes 19 kg, Pulses 13 kg totaling up to 237kg. Respective "other uses" are estimated as percentage extraction from produced crop that is used for mainly seed, feed, losses and trade as shown on the Table below.

Food Requirement Table

Parameters used for estimating food requirement per cop

Crop		Consumption	Other uses (% removed from Productio				
		Requirement per capita	Seed[2]	Feed[2]	Losses[2]	Trade[2]	
		Kilograms	Percent	Percent	Percent	Percent	%
Cereals	Maize[3]	86	1.3	2	8.7	4.4	
	Millet[5]	18	2.3	0.6	7.7	0	
	Rice[4]	16	2.5	0	2.5	1.8	
	Sorghum	18	1.5	0.6	8.5	0	
	Wheat	5	2.5	0	2.5	0	
Non-Cereals	Bananas[7,8]	18	0	0	0	0	
	Cassava[7]	44	0	0	0	0	
	Potatoes[7,9]	19	0	0	0	0	
	Pulses[6]	13	5	0	2.5	2.5	
Total		237					

P/R=SSR (expressed in %). SSR Categories are: Deficit (<100%), Self Sufficient <=100<120%, Surplus >=120%) Vulnerable areas (VA): derived directly from RRS1 questionnaire as filled-in by DALDO statistical experts is based on households expected to produce <=30% of norm.

Requirement per day per person = 0.650 kilograms Cereal Equivalent

1 = Per capita annual consumption Cereal Equivalent

2 = Percent used from total production

3 = Whole grain

4 = Paddy converts to rice at 65 percent ratio.

5 = Includes bulrush and finger millet

6 = Mainly beans but other pulses (groundnuts, peas, grams etc) included

7 = Based on dry weight from which waste is already subtracted

8 = Includes sweet and cooking bananas

9 = Includes round and sweet potatoes.

Source: Ministry of Agriculture and Cooperative, Dar es Salaam, Food Security Bulletin, July 14, 1993

APENDIX 3: Tanzania Food Supply Analysis and Self Sufficiency Ratio for 2019/20 (Based on the 2018/19 Preliminary Food Crop Production Forecasts).

REGION	Total Food										REGION
	PROD.	REQ.	Consumption[1]	Seed[2]	Feed[2]	Losses[2]	Trade[2]	Gap/ Surplus	SSR (Tot)	*Deficit indicator (*)*	
Arusha	517,968	524,370	485,531	7,558	2,894	18,722	9,664	-6,402	99	*	Arusha
Pwani	361,247	313,282	304,012	1,932	592	4,496	2,251	47,965	115		Coast
Dar es Salaam	50,119	1,532,416	1,532,233	39	12	84	49	-1,482,297	3	*	Dar es Salaam
Dodoma	601,215	605,708	572,527	3,874	2,919	21,848	4,609	-4,493	99	*	Dodoma
Iringa	460,831	289,836	241,148	10,343	4,241	22,996	13,037	170,995	159		Iringa
Njombe	457,989	233,040	176,141	6,499	6,444	29,346	15,247	224,949	197		Njombe
Kagera	1,066,980	771,743	729,475	10,675	2,958	18,016	10,758	295,238	138		Kagera
Kigoma	1,134,118	685,590	597,120	14,906	8,372	41,893	23,299	448,528	165		Kigoma
Kilimanjaro	461,605	473,154	441,297	5,113	3,053	15,435	8,440	-11,549	98	*	Kilimanjaro
Lindi	275,386	239,830	218,446	2,259	2,218	12,214	4,694	35,556	115		Lindi
Manyara	563,568	493,112	422,941	11,496	6,700	34,173	17,802	70,456	114		Manyara
Mara	527,545	532,011	492,775	4,844	3,726	22,953	7,712	-4,466	99	*	Mara
Mbeya	1,111,373	585,147	489,611	13,796	9,251	47,221	25,268	526,226	190		Mbeya
Songwe	766,396	369,203	286,240	11,429	8,451	41,600	21,483	397,193	208		Songwe
Morogoro	877,691	681,949	622,533	15,455	2,815	26,050	15,277	195,742	129		Morogoro
Mtwara	430,737	337,409	327,883	1,158	952	5,135	2,281	93,328	128		Mtwara
Mwanza	827,254	836,482	811,367	4,825	2,073	12,386	6,496	-9,229	99	*	Mwanza
Geita	639,302	536,677	495,013	7,552	3,421	19,902	10,790	102,625	119		Geita
Rukwa	854,469	382,082	298,120	15,194	7,570	39,331	21,911	472,386	224		Rukwa
Katavi	400,664	201,391	167,559	5,634	2,931	16,276	8,991	199,273	199		Katavi
Ruvuma	1,132,519	498,816	378,341	14,090	13,232	61,747	32,350	633,703	227		Ruvuma
Shinyanga	434,911	444,628	421,733	4,423	1,603	11,878	4,990	-9,717	98	*	Shinyanga
Simiyu	560,195	481,502	426,248	7,164	5,708	31,463	12,973	78,693	116		Simiyu
Singida	475,968	423,486	381,932	4,949	4,055	25,374	7,885	52,481	112		Singida
Tabora	723,108	732,594	665,959	10,369	6,480	35,584	17,177	-9,486	99	*	Tabora
Tanga	695,153	637,076	565,928	7,558	8,094	36,651	19,010	58,077	109		Tanga
Tanzania Mainland	16,408,309	13,842,536	12,552,112	203,133	120,766	652,774	324,444	2,565,774	119		Tanzania Mainland

Source: *PFCPF Reports, 2018/2019*