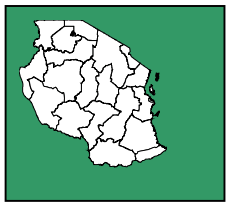
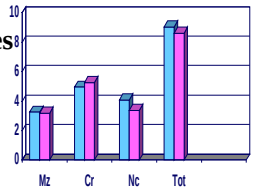


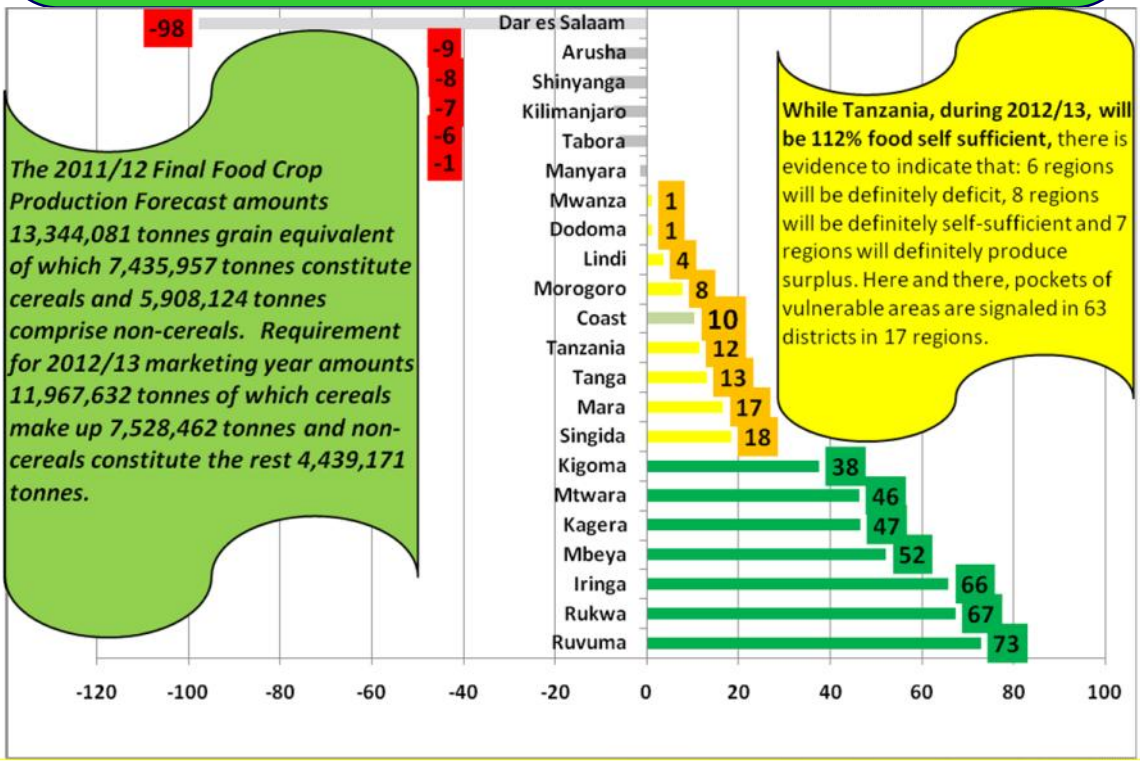
United Republic of Tanzania
Ministry of Agriculture Food Security and Cooperatives



AGSTATS FOR FOOD SECURITY

VOLUME 1: The 2011/12 Final Food Crop Production Forecast for 2012/13 Food Security

EXECUTIVE SUMMARY



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Dar es Salaam **February, 2013**

Foreword

Starting 1992/93, the then Ministry of Agriculture through its National Early Warning System has developed and operated the food security assessment procedure with some specially designed forms to capture data, initially at a seasonal frequency involving the use of a sample survey questionnaire, FSQ1 to address 'subjectivity' problems and later on at a weekly and a monthly frequency involving routine reporting forms (WRS1-5 and RRS1) to address 'urgency' issues amidst 'stringent budgetary constraint' for early warning for food security. Overtime, following challenges and opportunities surrounding the system these forms and questionnaires have been evolving towards the currently improved version where 10 different forms retrieving data from districts and sample villages towards assessing food situation and reporting with a reasonable statistical accuracy around the AGSTATS for Food Security Report to forecast eminent food security situation at national and sub-national level while opening doors of opportunities towards deeper insights of short-term to long-term interventions. While sample surveys using FSQ1 is now 20 years old addressing subjectivity problems in district estimates the routine reporting system using WRS1-5 and RRS1 has prevailed for 10 years addressing urgency and ad hoc issues amidst stringent budgetary constraint common in Tanzania.

In recent years following rampant data gaps perceived in some retrievals it was necessary to introduce three additional forms which are retrieving more data to harmonize food security reflection at ground level amidst the data gap situation. The forms are TSA, Jed 6 and Jed 7 which are respectively intended to get local authority and expert opinion on general aspects of agriculture and food security as well as prices and rainfall data on record. For effectiveness purposes, the forms are used at the beginning and at the middle of consumption year which runs from 1st June to 31st May every year during respective preliminary and final forecast surveys conducted as follow-up data validation exercises in company of the other structured forms explained earlier above. The outcome of these tools contributes to the output given by AGSTATS and enables us to analyse production, requirement and food security status both at national and sub-national levels. Actions taken in sustaining food security acknowledge the need to involve stakeholders in all areas which must be supported by dissemination of this report. Improvement of data reliability accuracy and precision in this output has been 100% subject to resource availability by Government and commitment on the part of professional capacity in place.

Amidst the implementation of this Final Forecast exercise the team recognizes the presence of 4 newly instituted regions viz. Geita, Katavi, Njombe and Simiyu and in due respect initiated the process of disentangling them from parent affiliates namely Mwanza, Rukwa, Iringa and Shinyanga regions respectively. The disentangling process will ultimately add the new regions into the list of 21 to 25 regions once done. Back in the history of Early warning system a similar exercise happened while disentangling Dar es Salaam, Manyara regions from hitherto Coast and Arusha regions respectively. The eventuality of this process will pave way to a lower level disentangling process that will cover new districts which are relatively numerous.

The system is now 20 years old (the age of a grown-up) where challenges and opportunities have been manifold and appropriately taken and addressed while whole heartedly serving Government cognizant of stakeholders needs. Towards revisiting the system in terms of organization, methodology and management of programs for strengthening statistical stronghold in AGSTATS for Food Security alongside the ongoing drive to prepare official agricultural statistics comparable among both public and private institutions in Tanzania we invite users to share with us in our endeavour to sustain the system.

Main Highlights

- ***The 2011/12 Final Food Crop Production Forecast amounts 13,344,081 tonnes of total food (grain equivalent) of which 7,435,957 tonnes constitute cereals and 5,908,124 tonnes comprise non-cereals. Requirement for 2012/13 marketing year amounts 11,967,632 tonnes of which cereals make up 7,528,462 tonnes and non-cereals constitute the rest 4,439,171 tonnes.***

- ***Based on these availability and requirement figures, a self sufficient status of 112% is attainable in terms of total food crops whereby cereals make up 99% and non-cereals make up 133%. In terms of gap/surplus analysis, this is respectively, 1,376,448 tonnes surplus of total food, of which a cereal gap amounting 92,505 tonnes coexists with a non-cereal surplus amounting 1,468,953 tonnes.***

- ***At sub-national level, there is evidence to indicate that: 7 regions will be definitely surplus, 8 regions will be definitely self-sufficient and 6 regions will be definitely deficit. Here and there, pockets of vulnerable areas are signaled in 63 LGAs in 17 regions. The identified vulnerable areas will be closely monitored while in-depth vulnerability assessments will be carried out as necessary towards appropriate intervention actions.***

- ***Compared to preliminary forecast released in June, 2012, production decrease of 1.7% has been observed in total food (1.8% decrease in non-cereals and 1.6% decrease in cereals). Specific cases of increase were mainly notable in the utilization of non-cereal seed, losses and trade of 0.2% each.***

- ***Except for rice, wheat and pulses which have respectively increased at a rate of 4%, 6% and 1.6%, all food crops have dropped at a rate of 1-12 percent. The insignificant changes may be attributed to good attempts made to improve on statistical improvement following a countrywide spread of the final forecast exercise this year practiced for first time covering not only bimodal areas but also unimodal areas.***

- ***Compared to previous season, production increase of 3% has been observed in total food (1% decrease in non-cereals and 6% increase in cereals). While leading cases of increase were notable in maize (18%), cassava (18%) and pulses (12%), the decline was most evident in millets (31%) rice (20%), bananas (20%) and potatoes (17%). Changes in other crops are as per Appendix 6. The 3% broad gain is due to, among others, relatively better rains in respect of timely onset and a fairly appropriate distribution experienced over the season. Other factors like input subsidies particularly in cereals could as well have a stake in***

this respect.

- ***An analysis of carryover stocks (COS) shows that, on the eve of new marketing year 2012/13 (i.e. the midnight of 1/06/12) a total of 462,213 tonnes food stock was carried over into 2012/13 marketing year of which 77,935 tonnes was held in NFRA (National Food Reserve Agency) warehouses while 153,172 tonnes was held by private stockists and 231,107 tonnes was estimated as farm retention. Together with the 1,376,448 tonnes of food surplus arrived at as above, the total food availability, over and above national requirement becomes 1,838,661 tonnes.***

- ***As cautioned earlier in June, 2012 the forecast sensitivity to vuli performance has demonstrated itself by drawing down the vuli contribution by 434,396 tonnes to 1,835,526 tonnes from the norm of 2,272,815 tonnes. Based on the national denominator of 21 regions the normal vuli contribution revises down to 17% while the bimodal areas perspective involving 11 regions keeps the contribution at 32% but as of current performance, it contributes 14% and 26% respectively.***

- ***It is highly recommended that the earmarked food surplus areas and food deficit areas are seen as opportunities and challenges that need to be appropriately addressed. Local market potential as per deficit signals should be well exploited prior to external orientation of surplus food as comparative advantage opens doors in the context of food and seed without borders especially around integrated EAC and SADC regions. And, the local import-export interaction points currently under establishment should be enhanced for transparency purposes and in conformity with ongoing vigor to clear off ever widening border porosity.***

Background

During the month of December, 2012 the National Food Security Division (Crop Monitoring and Early Warning) carried out a regular final food crop production forecast survey to determine food crop harvest status for 2011/12 and the corresponding availability for 2012/13. While the main objective was to establish the final status concluded through capturing the effect of influential crop production factors that ruled over the growth stages from seed germination to maturity, specific objectives were threefold: **first,** to establish statistically if food crop production has a substantial influence in agricultural performance, **secondly,** if national and local level food security status can be accounted for using the forecasts and, **thirdly,** if food security vulnerability is adequately detected to warrant vulnerability assessment.

The exercise involved collection of the 2011/12 data and information from all 133 LGAs of mainland Tanzania in collaboration with Regional Agricultural Advisors (RAAs) and the District Agricultural and Livestock Development Officers (DALDOs) partly through routine crop monitoring and early warning tools and partly through actual fielding of MAFC teams of experts to ground proof crop performance in both unimodal and bimodal areas correspondingly in respect of *msimu*, *vuli* and masika rainfall patterns of the 2011/12 crop season. Comprehensive analyses covering different retrievals were undertaken and results are presented in this report. The results concentrate on national and regional level food status with main highlights of regions and districts bearing vulnerable areas.

Methodology

Briefly, the methodology of crop forecasting essentially combined 3 consecutive steps, Eye estimation approaches (EEM) used by DALDOs, Projective-forecasting (PFM) used by MAFC and the Food crop production forecasting sample survey (FCPFS) with background of joint design, test and approval by NBS and MAFC under the technical guidance of FAO and later manned by MAFC. Later on, in the process of analyzing Self Sufficiency Ratios (SSRs) and National Food Balances Sheets (NFBS) also following the technical guidance of FAO, the methodology extends to the calculation of food production in grain equivalent terms.

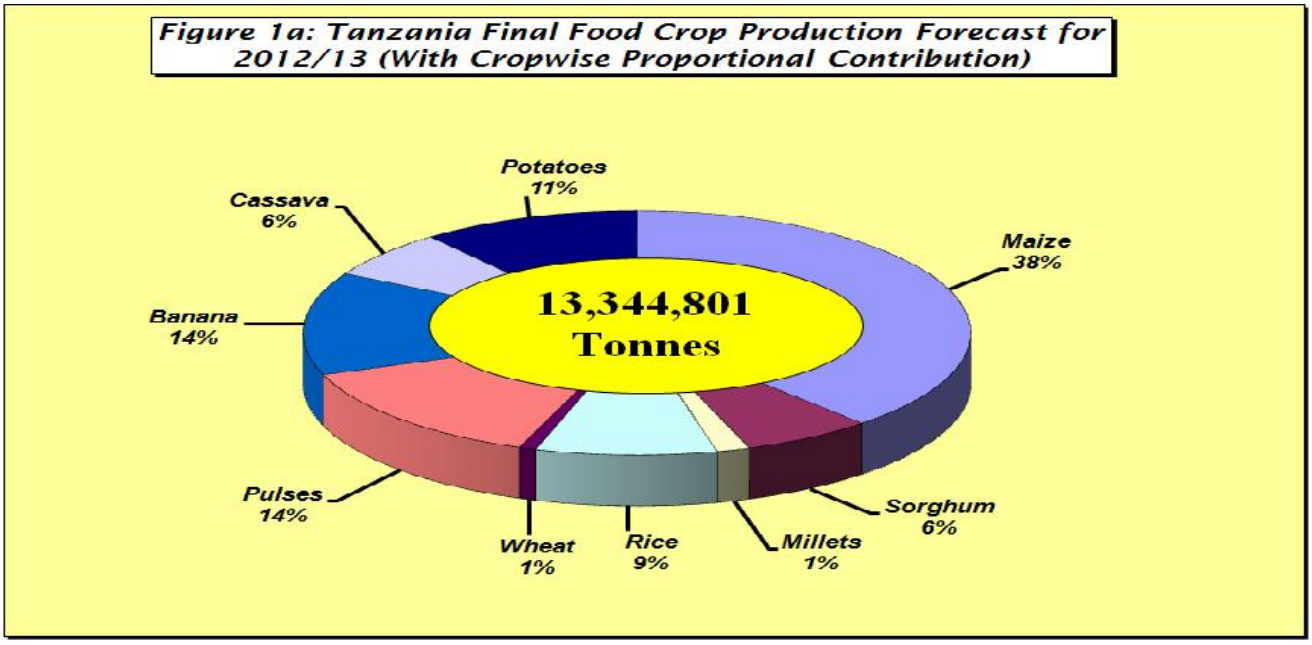
While Area and Production estimates largely borrows from DALDO estimates and partially improved by projective forecasting methods, Yield is largely improved by Agrometeorological approaches that borrow from plant-water-satisfaction indices and Production is computed and presented in grain equivalent terms. Self Sufficiency Ratio (SSR) calculations follow a simple food adequacy principle whereby production is related with requirement encompassing consumption and other uses based on requirement parameters employed by CMEW (See Appendix 8) and are presented in percentage terms. The difference between preliminary forecast and final forecast is best based on the principle of *kobechakuota* whereby different phenological stages are monitored and estimated in percentage terms and crop coverage. The area estimated during preliminary forecast focuses at planted area while during final forecast the area switches to harvested area and the *kobechakuota* principle guides the estimates towards mature and harvestable crop.

Initially, the crop is largely in the vegetative and germination stages which is later promoted into mature and grain filling stages. In both these extreme stages, only traces of flowering stages are visible.

Findings

SSR shows the extent of deficits and surpluses as a locally available and accessible surplus sink and emergency based vulnerability management before considering external market opportunities available in neighbouring countries or elsewhere. From the analysis, it has been found that ***13,344,081*** tonnes of food crops will be available from farm production comprising ***7,435,957*** tonnes of cereals[1] and ***5,908,124*** tonnes of non-cereals[2] (Table 1, Figure 1, Appendix 1 and Appendix 2) and will meet national food requirement amounting ***11,967,632*** tonnes of food by 112 percent implying a ***1,376,448*** tonnes of surplus food (Table 1, Appendix 2). An alternative approach is the national food balance sheet which relates country to country food balance status to guide policies of whether to export or import and the extent thereof.

Figure 1a: Tanzania Final Food Crop Production Forecast for 2012/13 (With Cropwise Proportional Contribution)



1 The cereal crops covered under CMEWS include maize, sorghum, millets, rice and wheat.
2 The non-cereals include pulses, cassava, banana and potatoes

Figure 1b: Tanzania Final Food Crop Requirement Forecast for 2012/13 (With Cropwise Proportional Contribution)

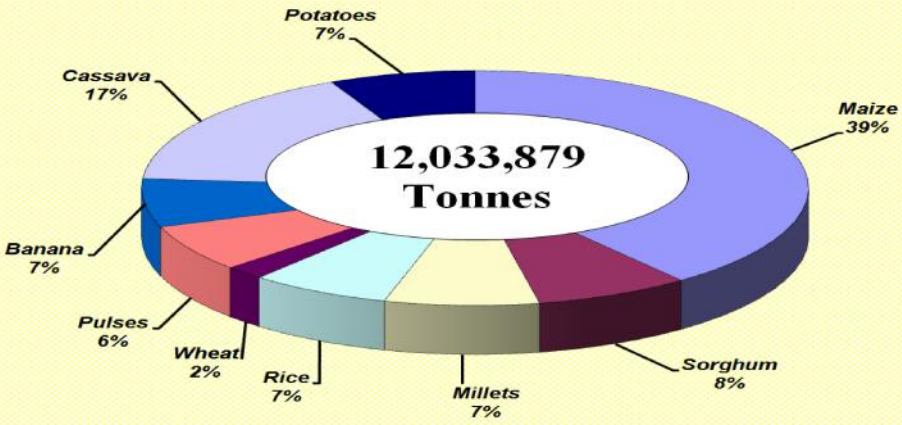


Table 1: The 2011/12 National Level Final Food Crop Production versus Requirement and gap (-)/surplus(+) analysis for 2012/13 (GRAIN EQUIVALENT tonnages)

Cereals	Maize	Sorghum&Millets	Rice	Wheat	Cereals
Production	5,104,248	1,052,464	1,170,358	108,887	7,435,957
Requirement	4,742,349	1,736,565	818,699	230,848	7,528,462
Gap (-)/ Surplus(+)	361,899	-684,102	351,659	-121,961	-92,505
Non-cereals	Pulses	Banana	Cassava	Potatoes	Non-cereals
Production	1,827,180	842,387	1,820,818	1,417,739	5,908,124
Requirement	780,300	802,008	2,002,425	854,438	4,439,171
Gap (-)/ Surplus(+)	1,046,880	40,379	-181,607	563,301	1,468,953
TOTAL	*Cereals*	*Non-cereals*			*TOTAL*
Production	7,435,957	5,908,124			13,344,081
Requirement	7,528,462	4,439,171			11,967,632
Gap (-)/ Surplus(+)	-92,505	1,468,953			1,376,448

Carryover Stocks Analysis and its reflection to total surplus availability

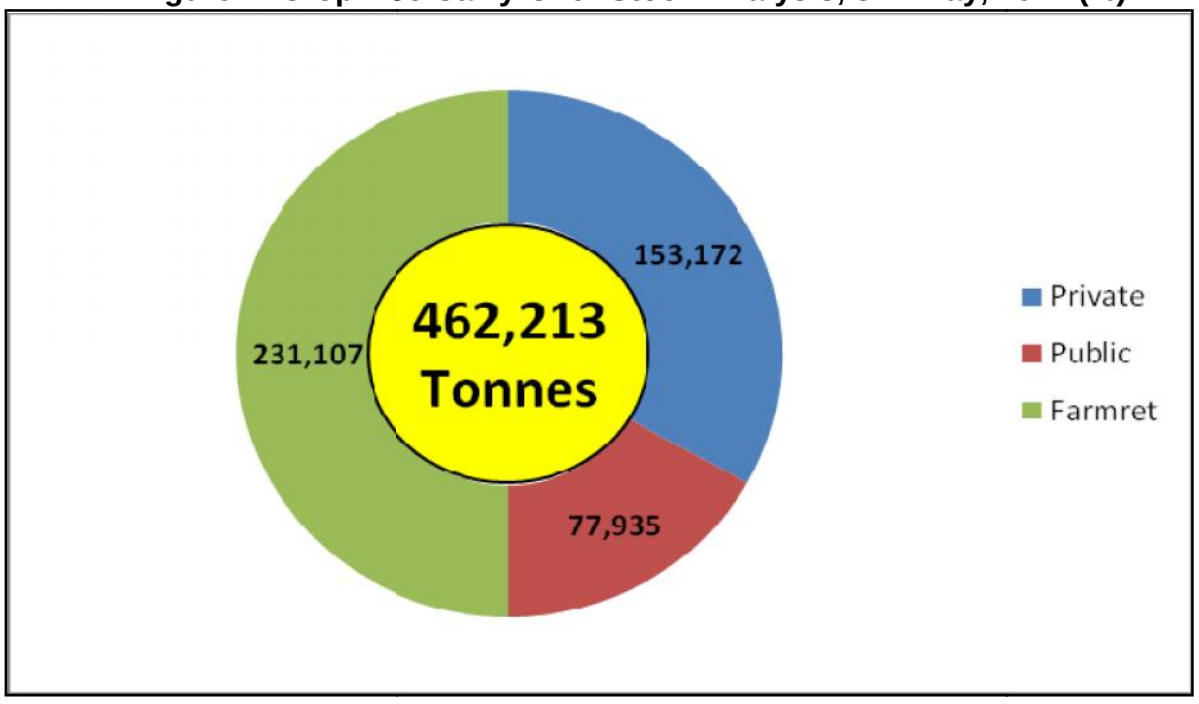
An analysis of Carryover Stocks (COS) shows that, on the eve of new food marketing year (1st June, 2012) a total of **462,213** tonnes of food stock was carried over into 2012/13 marketing year, of which **77,934.937** tonnes was held in NFRA premises while **153,172** tonnes was held by private stockists and **231,107** tonnes was estimated as farm retention (Table 2 and Figure 2).

Table 2: Carryover Stocks Analysis, 1 June, 2012 (Tonnes)

May, 2012	Private	Public	Farmret	Total Stocks
Maize	8,710	77,935		86,645
Rice	93			93
Wheat	123,578			123,578
Sorghum	-	-		-
Pulses	20,791			20,791
COS	**153,172**	**77,935**	**231,107**	**462,213**

Added to the 1,376,448 tonnes final forecast of food surplus arrived at as above, the total food available, over and above national requirement is ***1,838,661*** tonnes. On the crop wise basis, wheat is the largest followed by maize, pulses and rice is the token (Fig. 2).

Figure 2: Cropwise Carry-Over Stock Analysis, 31st May, 2012 (%)



Time series analysis

Time series analysis shows that, compared to previous season, production increase of 3% has been observed in total (6% in cereals and -1% in non-cereals). Cropwise swings vary from -31% in millets to 18 in maize with other crops standing as per Table 3 below and Appendix 6.

Table 3: Time Series Analysis of Production of Major Food Crops in Tanzania, based on available series (1986/87 - 2011/12) (Thousand Tonnes and Percentages as indicated)

Year	Maize	Sorghum	Millets	Rice	Wheat	Cereals	Pulses	Cassava	Bananas	Potatoes	Non-cereals	Total	Year
2011/12 (Final)	5,104	839	214	1,170	109	7,436	1,827	1,821	842	1,418	5,908	13,344	2011/12 (Final)
2011/12 (Preliminary)	5,240	843	244	1,128	103	7,558	1,824	1,857	897	1,436	6,014	13,573	2011/12 (Preliminary)
2010/11	4,341	807	312	1,461	113	7,033	1,632	1,549	1,048	1,710	5,939	12,972	2010/11
25yaverage	2,795	725	186	647	82	4,436	680	1,684	831	755	3,950	8,386	25yaverage
5yaverage	3,800	827	260	1,155	89	6,132	1,257	1,703	1,021	1,407	5,388	11,520	5yaverage
Trend Values	3,992	774	268	1,239	96	6,368	1,422	1,721	1,065	1,601	5,808	12,176	Trend Values
%age change from 25y-average	83	16	15	81	33	68	169	8	1	88	50	59	%age change from 25y-average
%age change from 5y-average	34	1	-18	1	22	21	45	7	-18	1	10	16	%age change from 5y-average
%age change from Trend Values	28	8	-20	-6	14	17	28	6	-21	-11	2	10	%age change from Trend Values
%age change from year t-1	18	4	-31	-20	-3	6	12	18	-20	-17	-1	3	%age change from year t-1
%age change from Prel2012	-3	-1	-12	4	6	-2	0.16	-2	-6	-1	-2	-2	%age change from Prel2012

Compared to trend values computed from 1992/93-2011/12 (a reasonable period of reliable food crop statistics adopted by CMEW), total tonnage stands up by 10% while total cereals stand down by 2% and non-cereals stand down by 1%. Individual crops swing between +28% in maize and -21% in bananas with bananas, millets, potatoes and rice showing negative swings and maize, pulses, wheat, sorghum and cassava showing positive swings. Comparisons with other measures in trend analysis such as 25 years average and 5 years average for total food crops, cereals and non-cereals as well as for different crops are as per Table 3 Appendix 6. SSR variations overtime back to 1994/95 shows that except for 5 years where food shortage was nationally felt, the country was on average self sufficient in the range of 102-117%.

Vuli Contribution

Based on this Final Forecast, the normal vuli contribution to total food crop production revises to 32% bimodal area perspective or 17% national aggregate perspective. As of current availability, it contributes 26% bimodal areas perspective or 14% national aggregate perspective. In tonnage terms, the amounts which would normally amount 2,2,72,815 tonnes currently stand at 1,835,526 tonnes. The earlier prediction of 451,352 tonnes draw-down impact now revises down to 434,396 tonnes (Table 4a, Table 4b, Appendix 2).

Table 4a: Vuli contribution to 2011/12 total production - Normal and Current

REGION	2011/12 Production (T)	Normal Vuli contribution (%)	Normal-Vuli contribution (T)	Current-Vuli contribution (%)	Current-Vuli contribution (T)
Bimodal-Tz	7,130,996	32	2,272,815	26	1,838,419
Total-Tz	**13,344,081**	17	**2,272,815**	14	**1,838,419**
Estimated draw down					434,396

Table 4b: Percentage Comparison of Vuli contribution to preliminary predictions

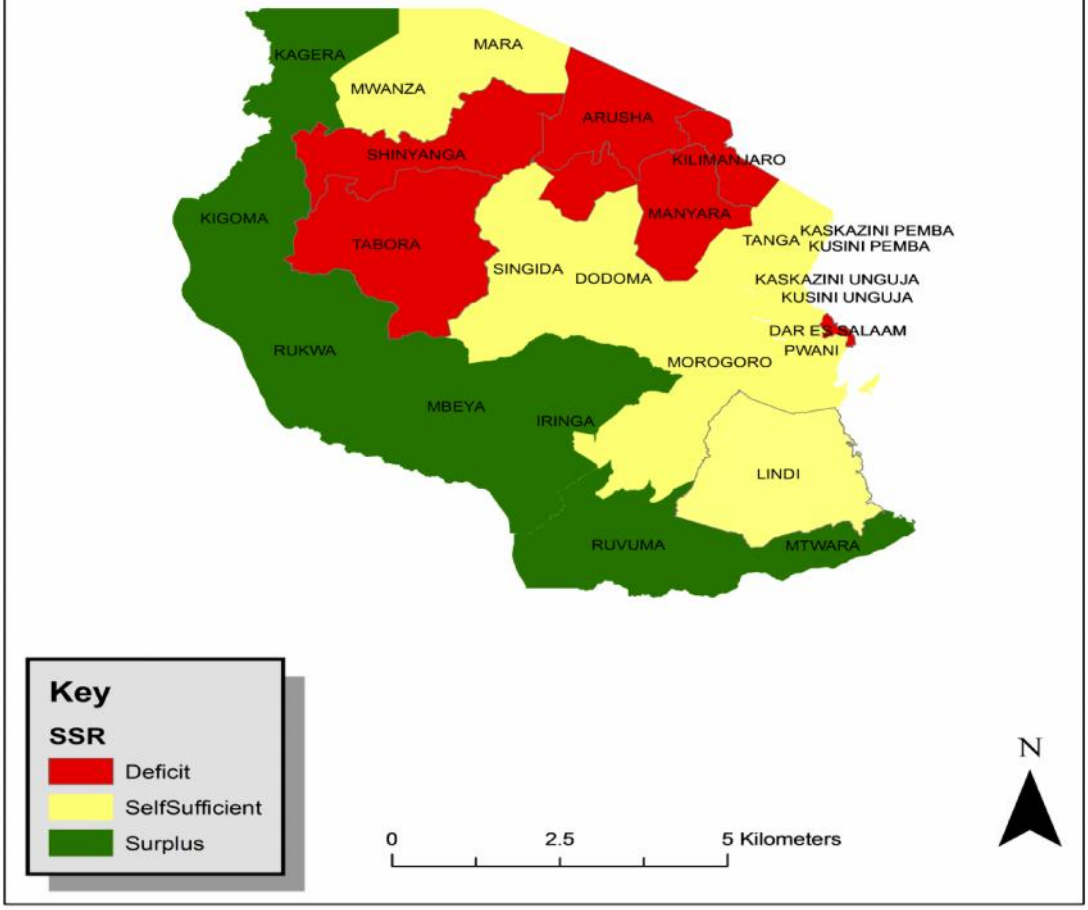
REGION	2011/12 Production (T)	Normal Vuli contribution (%)	Normal-Vuli contribution (T)	Current-Vuli contribution (%)	Current-Vuli contribution (T)	Draw down compared to Prelforc
Bimodal-Tz Compared to Pelforc	1	-3	-4	-5	-4	-4
Total-Tz Compared to Pelforc	-2	0	-4	-2	-4	-4

Following observed vuli performance the draw-down impact of 434,396 Tonnes is 4% less harsh compared to 451,352 tonnes predicted earlier vide Preliminary forecast.

Sub-national level Food Security

At sub-national level, the 2011/12 production is finally (based on final forecast) revised to meet food requirement for 2012/13 marketing year in 15 regions of which 7 regions have produced surplus with SSR of 138% upwards to 173% and 8 regions have produced at SSR of 101%-118%. The rest (6 regions) have produced at a definitely deficit status with SSR of 2%-99% (See Fig. 3).

Figure 3: Tanzania Food Supply Analysis and Self Sufficiency Ratio for 2012/13
(Based on the 2011/12 Final Food Crop Production Forecasts)



Notwithstanding, here and there, pockets of vulnerable areas are scattered over 63 LGAs in 17 regions of which 4 have produced surplus, 8 have only meet local demand and 5 have produced at deficit levels. Implicitly, 4 regions are declared free of agriculture related vulnerability (See Appendix 3).

Vulnerability

From the above, it is notable that except for Dar es Salaam, which is largely non-agricultural, the deficit regions (5 therefore) bear 31 districts with high level vulnerability and a warning is accordingly sent out. Further warnings are focused to 12 additional regions bearing pockets of food shortage in 32 additional districts, 28 from 8 definitely self sufficient regions and 4 from 4 definitely

surplus regions. The rampant vulnerability amidst self sufficient and surplus food security status indicate that, the lower level down from national the worse and the national self sufficient status masks the true colors that are better reflected at lower levels down towards household/individuals. Accordingly the following recommendations are worth implementation.

Recommendations

- From above, a total of 63 districts in 17 regions have been identified to bear vulnerable areas and been gradually subjected to an in-depth vulnerability assessment for necessary intervention by Government. Initially 41 districts were assessed followed by 9 others depending on extent of vulnerability revealed and time when due.

- The food surplus areas and food deficit areas should be seen as opportunities and challenges that need to be appropriately addressed. Local market potential following deficit signals should be well exploited prior to external orientation of predicted surplus as comparative advantage opens doors in the context of food without borders as well as seed without borders especially around integrated EAC and SADC regions.

- The local import-export interaction points currently under establishment should be enhanced for transparency purposes and in an endeavour to clear off unofficial entry-exit points through ever increasing border porosity. Concurrently, the recent initiatives towards improve food access and utilization information should be encouraged and supported beyond existing initiatives towards availability and stabilization.

- The foreign market sinks should be seen as opportunities that are encouragingly widening opportunities to unravel national growth potential beyond existing local market.

Appendix 1: Tanzania Final Food Crop Production Forecast by Region - 2011/12 (as of 30/11/2012)

(Area and Production in Hectares and Tonnes Respectively, Yield in Tonnes per Hectare)

Cereals		0.95																
Region	Maize			Sorghum			Millets			Rice			Wheat			Cereals		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Production	
Arusha	123,976	0.7	86,783	2,626	1.4	3,676	10,148	0.8	8,119	106,941	1.9	203,188	17,576	0.9	15,819	261,267	317,584	Arusha
Coast	51,873	0.3	15,562	10,480	0.5	5,240	-	-	-	52,155	0.8	41,724	-	-	-	114,508	62,526	Coast
Dar es Salaam	5,100	0.6	3,060	-	-	-	-	-	-	2,455	1.0	2,455	-	-	-	7,555	5,515	Dar es Salaam
Dodoma	141,874	0.5	70,937	241,504	1.0	241,504	92,899	0.7	65,029	10,423	0.6	6,254	-	-	-	486,699	383,724	Dodoma
Iringa	491,862	1.3	639,421	10,007	0.9	9,007	2,520	0.7	1,764	10,035	1.0	10,035	40,073	1.0	40,073	554,498	700,300	Iringa
Kagera	153,178	2.0	306,355	26,207	1.1	28,828	11,485	1.0	11,485	5,612	1.0	5,612	-	-	-	196,482	352,280	Kagera
Kigoma	262,052	2.0	524,103	20,307	1.0	20,307	5,715	1.0	5,715	42,864	1.5	64,296	-	-	-	330,938	614,421	Kigoma
Kilimanjaro	119,814	1.0	119,814	2,781	0.9	2,503	825	0.9	743	10,593	1.3	13,771	8,982	1.2	10,778	142,995	147,609	Kilimanjaro
Lindi	101,268	0.4	40,507	68,286	0.7	47,800				12,376	0.9	11,138	-	-	-	181,930	99,446	Lindi
Manyara	245,643	0.7	171,950	8,826	0.9	7,944	3,294	0.9	2,964	2,051	0.9	1,846	22,915	1.3	29,789	282,729	214,493	Manyara
Mara	69,086	2.3	158,898	55,935	1.6	89,495	5,771	0.9	5,194	8,265	1.3	10,744	-	-	-	139,056	264,331	Mara
Mbeya	366,198	1.8	659,156	39,290	1.1	43,219	15,957	1.0	15,957	69,144	2.0	138,288	5,927	1.1	6,520	496,516	863,140	Mbeya
Morogoro	383,568	0.8	306,854	9,506	1.0	9,506	4,200	0.8	3,360	92,610	1.3	120,393	150	0.4	60	490,033	440,173	Morogoro
Mtwara	58,122	0.4	23,249	26,017	0.8	20,813	285	1.0	285	28,813	1.0	28,813	-	-	-	113,237	73,160	Mtwara
Mwanza	211,607	1.4	296,249	92,728	1.1	102,001	4,933	1.0	4,933	83,037	1.6	132,859	-	-	-	392,305	536,043	Mwanza
Rukwa	249,428	2.1	523,798	51,555	0.9	46,400	19,657	1.1	21,622	38,526	1.6	61,641	13,852	0.4	5,541	373,017	659,002	Rukwa
Ruvuma	183,947	2.3	423,078	3,686	1.1	4,054	3,641	1.1	4,005	38,793	1.2	46,551	-	-	-	230,067	477,689	Ruvuma
Shinyanga	417,560	0.8	334,048	59,664	0.9	53,698	21,563	0.9	19,407	73,986	1.3	96,182	-	-	-	572,774	503,335	Shinyanga
Singida	163,075	0.5	81,537	72,692	0.9	65,423	43,169	0.7	30,218	5,799	0.6	3,479	-	-	-	284,734	180,658	Singida
Tabora	231,515	1.0	231,515	37,238	1.0	37,238	14,092	0.9	12,682	92,859	1.7	157,861	-	-	-	375,704	439,297	Tabora
Tanga	87,371	1.0	87,371	89	0.7	62	263	1.0	263	12,026	1.1	13,229	342	0.9	308	100,091	101,232	Tanga
Total	4,118,117	1.2	5,104,248	839,423	1.0	838,717	260,417	0.8	213,746	799,361	1.5	1,170,358	109,816	1.0	108,887	6,127,135	7,435,957	Total

Non-cereals																	
	Pulses			Cassava			Banana			Potatoes			Non-cereals		Food		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Production	Area	Production	
Arusha	79,874	0.8	63,899	1,446	2.1	3,036	34,381	1.9	65,324	1,104	1.9	2,097	116,804.2	134,356	378,071	451,940	Arusha
Coast	13,535	0.5	6,767	83,738	2.0	167,476	-			39,529	1.7	67,199	1.7 136,801.4	241,442	251,309	303,968	Coast
Dar es Salaam	2,107	0.3	632	4,094	1.9	7,779	494	1.6	791	4,427	1.4	6,197	11,122	15,399	18,677	20,914	Dar es Salaam
Dodoma	226,674	0.5	113,337	35,064	1.1	38,570	-			28,752	1.2	34,503	290,490.3	186,410	777,190	570,134	Dodoma
Iringa	46,324	0.9	41,692	929	2.1	1,950	395	1.6	631	60,346	2.1	126,726	107,993.0	170,999	662,491	871,299	Iringa
Kagera	191,712	0.9	172,541	90,780	2.3	208,794	128,596	2.3	295,770	20,683	2.2	45,503	431,771.1	722,608	628,253	1,074,888	Kagera
Kigoma	153,200	0.9	137,880	18,361	2.1	38,558	116,264	1.6	186,022	32,116	2.0	64,232	319,940.3	426,691	650,878	1,041,112	Kigoma
Kilimanjaro	52,510	0.9	47,259	3,422	2.2	7,527	76,379	1.8	137,483	23,154	1.8	41,677	155,464.7	233,946	298,460	381,554	Kilimanjaro
Lindi	65,770	0.6	39,462	42,844	2.3	98,541				3,358.0	0.9	3,182.0	111,971	141,184	293,901	240,630	Lindi
Manyara	162,121	1.1	178,333	216	2.0	431	4,142	1.9	7,869	2,941	1.9	5,588	169,419	192,222	452,148	406,715	Manyara
Mara	32,859	1.0	32,859	84,526	2.1	177,504	5,010	1.9	9,520	25,146	2.0	50,292	147,541	270,175	286,597	534,506	Mara
Mbeya	54,230	1.1	59,654	7,863	2.3	18,085	29,223	2.2	64,290	69,374	2.1	145,685	160,690	287,713	657,206	1,150,853	Mbeya
Morogoro	64,606	0.9	58,145	35,968	2.0	71,935	23,802	1.4	33,323	26,176	2.0	52,352	150,552	215,756	640,585	655,929	Morogoro
Mtwara	80,512	1.0	80,512	173,229	1.9	329,135	331	1.2	1,211	2,743	1.6	4,388	256,814.3	415,246	370,051	488,406	Mtwara
Mwanza	91,343	1.1	100,477	102,691	2.0	205,382	5,103	1.9	9,696	101,715	2.0	203,429	300,851.4	518,984	693,157	1,055,027	Mwanza
Rukwa	79,647	0.9	71,682	14,174	2.5	35,435	8,502	2.0	17,004	21,162	2.1	44,440	123,485	168,561	496,502	827,563	Rukwa
Ruvuma	63,921	1.1	70,314	71,265	1.9	135,403	793	1.5	1,190	21,193	2.1	44,505	157,172	251,412	387,239	729,101	Ruvuma
Shinyanga	105,165	1.0	105,165	62,644	1.7	106,495	59	1.0	59	163,115	1.3	212,049	330,983.2	423,769	903,757	927,104	Shinyanga
Singida	161,084	0.9	144,976	48,339	1.4	67,675	13	1.5	20	32,232	1.2	38,678	241,668.2	251,348	526,403	432,006	Singida
Tabora	47,247	1.0	47,247	41,629	0.7	29,140	-			69,565	1.3	90,435	158,441.0	166,822	534,145	606,119	Tabora
Tanga	317,935	0.8	254,348	31,290	2.3	71,967	8,704	1.4	12,185	70,832	1.9	134,581	428,760.3	473,080	528,851	574,313	Tanga
Total	2,092,376	0.9	1,827,180	954,509	1.9	1,820,818	442,190	1.9	842,387	819,661	1.7	1,417,739	4,308,736	5,908,124	10,435,871	13,344,081	Total

Appendix 2: Total Food Supply Forecast at Regional level for the 2012/13 Marketing Year
(Based On 2011/12 Final Food Crop Production Forecasts)

REGION	Total Cereals				Total Non-cereals				Total Food					REGION
	PROD.	REQ.	Gap/ Surplus	SSR (Cer)	PROD.	REQ.	Gap/ Surplus	SSR (Nce)	PROD.	REQ.	Gap/ Surplus	SSR (Tot)	Deficit indicator (*)	
Ruvuma	477,689	279,615	198,074	171	251,412	142,175	109,237	177	729,101	421,790	307,311	173		Ruvuma
Rukwa	659,002	333,096	325,906	198	168,561	161,516	7,046	104	827,563	494,611	332,952	167		Rukwa
Iringa	700,300	357,846	342,453	196	170,999	167,456	3,543	102	871,299	525,303	345,997	166		Iringa
Mbeya	863,140	502,244	360,896	172	287,713	253,786	33,927	113	1,150,853	756,030	394,823	152		Mbeya
Kagera	352,280	454,241	-101,961	78	722,608	278,970	443,638	259	1,074,888	733,211	341,677	147		Kagera
Mtwara	73,160	199,821	-126,661	37	415,246	133,758	281,487	310	488,406	333,579	154,827	146		Mtwara
Kigoma	614,421	485,447	128,974	127	426,691	270,930	155,761	157	1,041,112	756,377	284,736	138		Kigoma
Singida	180,658	220,881	-40,223	82	251,348	143,692	107,656	175	432,006	364,573	67,433	118		Singida
Mara	264,331	289,267	-24,936	91	270,175	168,727	101,448	160	534,506	457,994	76,512	117		Mara
Tanga	101,232	297,268	-196,036	34	473,080	210,241	262,840	225	574,313	507,509	66,804	113		Tanga
Tanzania	7,435,957	7,528,462	-92,505	99	5,908,124	4,439,171	1,468,953	133	13,344,081	11,967,632	1,376,448	112		Tanzania
Coast	62,526	168,139	-105,614	37	241,442	106,973	134,469	226	303,968	275,112	28,856	110		Coast
Morogoro	440,173	387,867	52,306	113	215,756	220,768	-5,012	98	655,929	608,634	47,295	108		Morogoro
Lindi	99,446	142,751	-43,305	70	141,184	89,329	51,855	158	240,630	232,080	8,550	104		Lindi
Dodoma	383,724	351,482	32,242	109	186,410	212,485	-26,075	88	570,134	563,967	6,167	101		Dodoma
Mwanza	536,043	651,744	-115,701	82	518,984	391,988	126,996	132	1,055,027	1,043,732	11,295	101		Mwanza
Manyara	214,493	250,473	-35,980	86	192,222	161,687	30,535	119	406,715	412,160	-5,445	99	*	Manyara
Tabora	439,297	408,495	30,801	108	166,822	237,053	-70,231	70	606,119	645,548	-39,430	94	*	Tabora
Kilimanjaro	147,609	253,910	-106,301	58	233,946	157,060	76,886	149	381,554	410,969	-29,415	93	*	Kilimanjaro
Shinyanga	503,335	631,134	-127,799	80	423,769	378,873	44,896	112	927,104	1,010,007	-82,903	92	*	Shinyanga
Arusha	317,584	308,225	9,359	103	134,356	188,669	-54,313	71	451,940	496,894	-44,954	91	*	Arusha
Dar es Salaam	5,515	554,516	-549,001	1	15,399	363,036	-347,636	4	20,914	917,551	-896,637	2	*	Dar es Salaam

Note: * General food deficit indicator

Appendix 3: Vuli contribution to total production - Normal and Current Based on Final Forecast 2011/12

REGION	2011/12 Production (T)	Normal Vuli contribution (%)	Normal-Vuli contribution (T)	Current-Vuli contribution (%)	Current-Vuli contribution (T)
Arusha	451,940	20	90,388	31	140,101
Coast	303,968	10	30,397	8	25,677
Dar es Salaam	20,914	10	2,091	27	5,577
Dodoma	570,134		-	-	
Iringa	871,299		-	-	
Kagera	1,074,888	80	859,910	49	529,766
Kigoma	1,041,112		-		-
Kilimanjaro	381,554	35	133,544	29	109,016
Lindi	240,630		-	-	
Manyara	406,715		-	-	
Mara	534,506	45	240,528	49	263,435
Mbeya	1,150,853	5	57,543	4	46,615
Morogoro	655,929	15	98,389	13	82,880
Mtwara	488,406		-	-	
Mwanza	1,055,027	55	580,265	46	489,262
Rukwa	827,563		-	-	
Ruvuma	729,101		-	-	
Shinyanga	927,104	7	64,897	6	52,373
Singida	432,006		-	-	
Tabora	606,119		-	-	
Tanga	574,313	20	114,863	16	93,717
Bimodal-Tz	7,130,996	32	2,272,815	26	1,838,419
Total-Tz	**13,344,081**	17	**2,272,815**	14	**1,838,419**

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Appendix 4: Vulnerable Areas for 2012/13 Based on 2011/12 Final Forecast

S/N.	Region *(Ranked by extent of districts containing vulnerable areas)*	SSR Status	Districts (Number in list)	Districts *(Listed in order of dicreasing vulnerability)*
1	Shinyanga		7	Bariadi, Kishapu, Meatu, Maswa, Kahama, Shinyanga M, Shinyanga (V)
2	Arusha		7	Karatu, Monduli, Meru, Ngorongoro, Longido, Arusha MC, Arusha DC
3	Kilimanjaro		6	Hai, Mwanga, Moshi DC, Moshi TC, Rombo, Same
4	Tabora		6	Nzega, Igunga, Tabora (M), Uyui, Sikonge, Urambo
5	Dodoma		6	Bahi, Chamwino, Dodoma (M), Kondoa, Kongwa, Mpwapwa
6	Tanga		6	Tanga (M), Mkinga, Pangani, Korogwe(M), Korogwe (V), Handeni
7	Manyara		5	Babati DC, Hanang, Kiteto, Mbulu, Simanjiro,
8	Singida		4	Manyoni, Iramba, Singida (V), Singida (M)
9	Mwanza		3	Magu, Kwimba, Misungwi
10	Coast		3	Kibaha (M), Mafia, Rufiji
11	Mara		2	Musoma V, Rorya,
12	Lindi		2	Kilwa, Lindi
13	Morogoro		2	Morogoro (V), Mvomero
14	Iringa		1	Kilolo
15	Kagera		1	Chato
16	Mbeya		1	Mbozi
17	Mtwara		1	Masasi
18	Dar es Salaam	*	-	
19	Kigoma		-	
20	Rukwa		-	
21	Ruvuma		-	
	Total		63	Total
	TANZANIA: Food Security Status: Self Sufficient (SSR=112%), Vulnerability 17 regions, 63 districts	**Regions** containing Vlnerable areas 17: 5 Deficit, 8 Self Sufficient, 4 Surplus	**Districts** containing Vulnerable areas 63: 31 deficit, 28 self sufficient, 4 Surplus	**In general,** While at national level Tanzania during 2012/13 will be 112% food self sufficient, 17 regions contain vulnerable areas in 63 districts....=>=> **Hence an early warning against likely misfortunes!!**

Appendix 5: Recall food situation at regional and district levels back to 2007/08

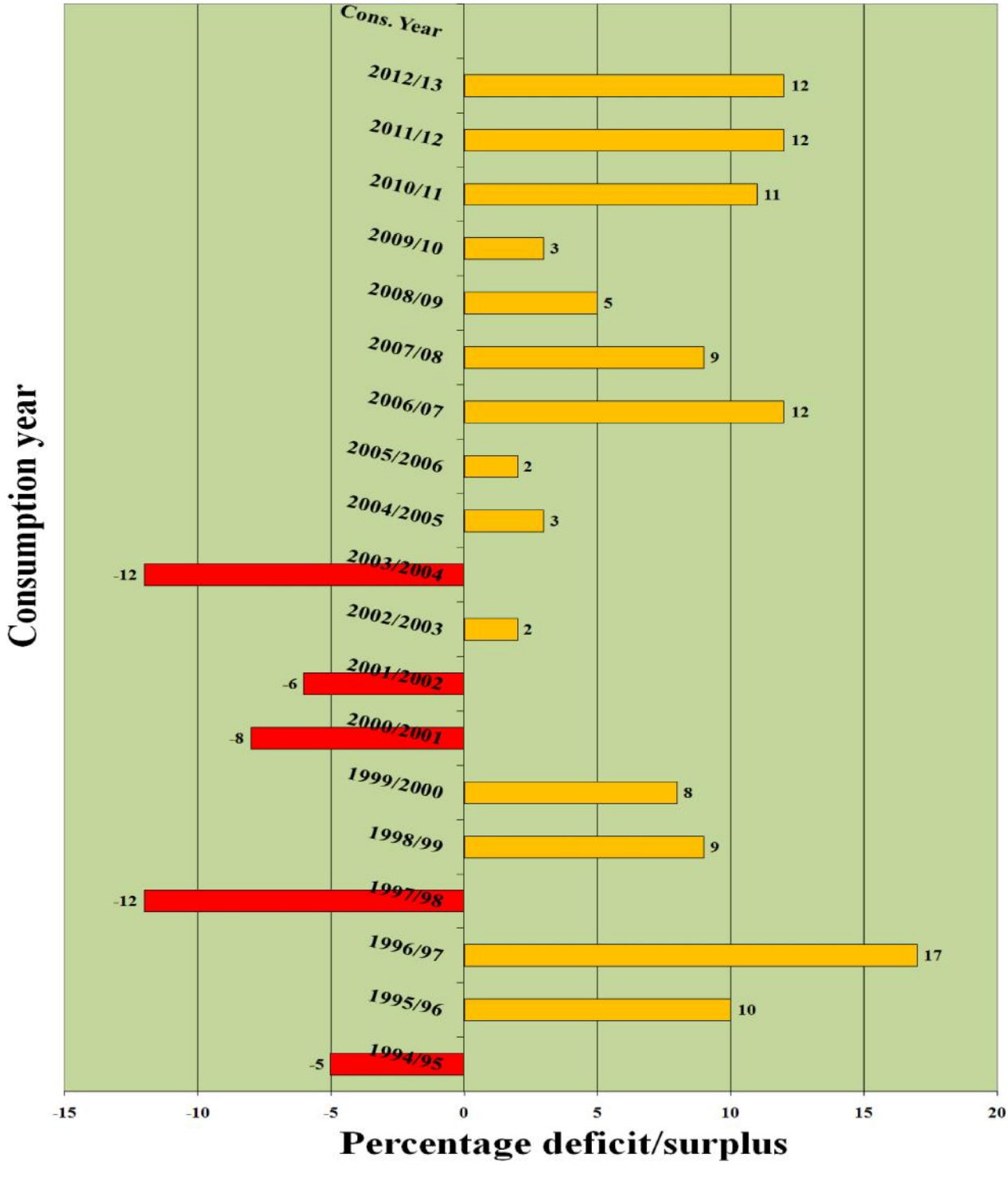
REGION	2007/08		2008/09		2009/10		2010/11		2011/12		2012/13		REGION
	Deficit regions (*)	Districts with Vulnerable areas	*Deficit regions (*)*	Districts with Vulnerable areas	*Deficit regions (*)*	Districts with Vulnerable areas	*Deficit regions (*)*	Districts with Vulnerable areas	*Deficit regions (*)*	Districts with Vulnerable areas	*Deficit regions (*)*	*Districts with Vulnerable areas*	
ARUSHA & MANYARA	*	1-Monduli *(Later, 6: Ars M, Ars V, Longido, Meru, Monduli, Ngorongoro)*	*	3- Arusha, Longido, Monduli	*	5-Longido, Monduli, Arusha, Ngorongoro, Meru		1: Longido	*	7: Arusha DC, Arusha MC, Karatu, Longido, Meru, Monduli, Ngorongoro	*	7: Karatu, Monduli, Meru, Ngorongoro, Longido, Arusha MC, Arusha DC	ARUSHA
COAST		1-Rufiji *(Later, 0)*	*	1- Mafia	*	4-Kisarawe, Bagamoyo, Kibaha (V), Mafia				5: Kibaha TC, Kibaha DC, Bagamoyo, Mafia, Rufiji		3: Kibaha (M), Mafia, Rufiji	COAST
COAST &/DSM	*		*		*		*		*		*		DAR ES SALAAM
DODOMA					*	5-Bahi, Chamwino, Kondoa, Kongwa, Mpapwa	*	5: Mpwapwa, Kongwa, Chamwino, Bahi, Dodoma M				6: Bahi, Chamwino, Dodoma M, Kondoa, Kongwa,	DODOMA
IRINGA				1-Njombe		2-Iringa (V), Kilolo		1: Iringa (V)				1: Kilolo	IRINGA
KAGERA										2: Muleba, Bukoba V		1: Chato	KAGERA
KIGOMA													KIGOMA
KILIMANJARO	*	3-Same, Mwanga, Hai *(Later, 4: Hai, Mwanga, Same, Moshi V)*	*	2- Same, Rombo	*	6-Same, Rombo, Mwanga, Siha, Hai, Moshi		1: Mwanga		5: Hai, Moshi V, Mwanga, Same, Siha	*	6: Hai, Mwanga, Moshi DC, Moshi TC, Rombo, Same	KILIMANJARO
LINDI		2-Kilwa, Liwale *(Later, 0)*				4-Lindi(V), Ruangwa, Nachingwea, Kilwa		2: Lindi (V), Liwale				2: Kilwa, Lindi	LINDI
MANYARA		2-Mbulu, Simanjiro *(Later, 5: Bbt M, Bbt V, Hanang, Mbulu, Simanjiro)*		5- Babati, Hanang, Kiteto, Mbulu, Simanjiro	*	5-Simanjiro, Kiteto, Babati V, Mbulu, Hanang				3: Babati DC, Mbulu, Simanjiro,	*	5: Babati DC, Hanang, Kiteto, Mbulu, Simanjiro,	MANYARA
MARA			*	1- Bunda	*	3-Rorya, Bunda, Musoma (V)			*	3: Musoma V, Musoma M, Bunda		2: Musoma V, Rorya,	MARA
MBEYA						1-Mbarali						1: Mbozi	MBEYA
MOROGORO		*(Later, 3: Ulanga, Morogoro V,*		*2- Morogoro R, Mvomero*		*3-Ulanga, Morogoro V, Kilosa*		*2: Mvomero, Morogoro (V)*				2: Morogoro V, Mvomero	MOROGORO
MTWARA						2-Nanyumbu, Masasi		2: Mtwara (V), Masasi		1: Masasi		1: Masasi	MTWARA
MWANZA		*(Later, 1: Magu)*	*		*	*4-Magu, Misungwi, Kwimba, Ukerewe*		*1: Kwimba*	*	5: Magu, Ilemela, Nyamagana, Geita, Misungwi		3: Magu, Kwimba, Misungwi	MWANZA
RUKWA													RUKWA
RUVUMA						1-Tunduru							RUVUMA
SHINYANGA		3-Bariadi, Kishapu, Meatu *(Later, 2: Kishapu, Meatu)*	*	2- Bariadi, Meatu	*	6-Maswa, Shinyanga(M), Kishapu, Kahama, Shinyanga(V), Meatu		4: Shinyanga (V) Kishapu, Meatu, Shiyanga (M)	*	5: Shinyanga M, Shinyanga V, Kishapu, Kahama, Meatu	*	7: Bariadi, Kishapu, Meatu, Maswa, Kahama, Shinyanga M,	SHINYANGA
SINGIDA	*	4-Singida R, Iramba, Singida U, Manyoni *(Later, Wahadzabe ethnic group who are wholly hunters and gatherers)*	*		*	2-Iramba, Manyoni						4: Manyoni, Iramba, Singida V, Singida M	SINGIDA
TABORA	*	1-Uyui *(Later, 0)*	*			2-Uyui, Igunga		1: Nzega		4: Nzega, Igunga, Sikonge, Tabora M	*	6: Nzega, Igunga, Tabora M, Uyui, Sikonge, Urambo	TABORA
TANGA				4-Kilindi, Korogwe, Lushoto, Mkinga		6-Kilindi, Handeni, Pangani, Korogwe V, Lushoto, Mkinga		1: Tanga (M)		5: Lushoto, Mkinga, Pangani, Kilindi, Tanga TC		6: Tanga M, Mkinga, Pangani, Korogwe M, Korogwe V, Handeni	TANGA
TOTAL	5	21 *(Prel2007: 17)*	9 (Prel2008: 14)	21 (Prel2008: 29)	10	57 districts (Prel2009: 61)	2	22 districts (Prel2010: 36)	5	45 (Prel2011: 56)		63 districts:17 regions	TOTAL

Appendix 6: Time Series Production of Major Food Crops in Tanzania, 1986/87 - 2011/12

(Thousand Tonnes - *GRAIN EQUIVALENT* - and Percentages as indicated)

Year	Maize	Sorghum	Millets	Rice	Wheat	Cereals	Pulses	Cassava	Bananas	Potatoes	Non-cereals	Total	Year
1986/87	2,359	779	175	419	72	3,804	251	1,709	792	336	3,088	6,892	1986/87
1987/88	2,339	557	125	400	76	3,497	379	1,736	812	319	3,246	6,743	1987/88
1988/89	3,125	656	148	468	97	4,494	385	1,948	743	337	3,413	7,907	1988/89
1989/90	2,445	464	104	481	106	3,600	388	1,724	823	1,023	3,958	7,558	1989/90
1990/91	2,332	612	138	406	84	3,572	425	1,566	750	291	3,032	6,604	1990/91
1991/92	2,226	694	156	256	64	3,396	312	1,778	794	257	3,141	6,537	1991/92
1992/93	2,282	758	171	417	59	3,687	406	1,708	800	260	3,174	6,861	1992/93
1993/94	2,159	568	128	399	59	3,313	187	1,802	834	267	3,090	6,403	1993/94
1994/95	2,567	1,020	230	470	75	4,362	378	1,492	651	451	2,972	7,334	1994/95
1995/96	2,663	1,012	228	477	84	4,463	475	1,498	641	420	3,034	7,497	1995/96
1996/97	1,831	690	155	357	78	3,112	374	1,426	603	372	2,776	5,888	1996/97
1997/98	2,685	652	147	676	111	4,271	462	1,758	836	644	3,700	7,972	1997/98
1998/99	2,452	617	139	506	82	3,796	528	1,795	752	570	3,645	7,440	1998/99
1999/2000	2,009	667	150	508	33	3,368	674	1,781	703	798	3,955	7,322	1999/2000
2000/01	2,579	742	167	564	89	4,141	733	1,445	779	596	3,553	7,695	2000/01
2001/02	2,705	834	206	640	77	4,462	683	1,725	752	950	4,111	8,572	2001/02
2002/03	2,322	488	139	713	74	3,735	850	1,321	706	761	3,638	7,373	2002/03
2003/04	3,157	757	201	688	67	4,871	879	1,480	734	874	3,967	8,838	2003/04
2004/05	3,219	714	221	759	102	5,015	886	1,846	991	931	4,654	9,669	2004/05
2005/06	3,423	712	228	805	110	5,277	1,050	2,053	1,169	1,396	5,668	10,945	2005/06
2006/07	3,302	971	194	872	83	5,422	1,156	1,733	1,028	1,322	5,238	10,660	2006/07
2007/08	3,556	861	203	875	92	5,588	1,126	1,797	982	1,379	5,285	10,872	2007/08
2008/09	3,326	709	220	868	95	5,219	1,116	1,972	1,073	1,392	5,554	10,773	2008/09
2009/10	4,475	789	372	1,700	62	7,398	1,254	1,464	975	1,231	4,924	12,322	2009/10
2010/11	4,341	807	312	1,461	113	7,033	1,632	1,549	1,048	1,710	5,939	12,972	2010/11
2011/12 (Final)	**5,104**	**839**	**214**	**1,170**	**109**	**7,436**	**1,827**	**1,821**	**842**	**1,418**	**5,908**	**13,344**	**2011/12 (Final)**
2011/12 (Preliminary)	**5,240**	**843**	**244**	**1,128**	**103**	**7,558**	**1,824**	**1,857**	**897**	**1,436**	**6,014**	**13,573**	**2011/12 (Preliminary)**
25yaverage	2,795	725	186	647	82	4,436	680	1,684	831	755	3,950	8,386	25yaverage
5yaverage	3,800	827	260	1,155	89	6,132	1,257	1,703	1,021	1,407	5,388	11,520	5yaverage
Trend Values	3,992	774	268	1,239	96	6,368	1,422	1,721	1,065	1,601	5,808	12,176	Trend Values
%age change from 25y-average	83	16	15	81	33	68	169	8	1	88	50	59	%age change from 25y-average
%age change from 5y-average	34	1	-18	1	22	21	45	7	-18	1	10	16	%age change from 5y-average
%age change from Trend Values	28	8	-20	-6	14	17	28	6	-21	-11	2	10	%age change from Trend Values
%age change from year t-1	18	4	-31	-20	-3	6	12	18	-20	-17	-1	3	%age change from year t-1
%age change from Prel2012	-3	-1	-12	4	6	-2	0.16	-2	-6	-1	-2	-2	%age change from Prel2012

APPENDIX 7: Self Sufficiency Variations Overtime in Tanzania, 1994-2013 (Percentage deviation from 100%)



Appendix 8: Methodological Considerations-I.

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 Requirement per capita	Other uses (% removed from Production)				
			Seed[2]	Feed[2]	Losses[2]	Trade[2]	Total
		Kilograms	Percent	Percent	Percent	Percent	% removed
Cereals	Maize[3]	86	1.3	2	8.7	4.4	16.4
	Millet[5]	18	2.3	0.6	7.7	0	10.6
	Rice[4]	16	2.5	0	2.5	1.8	6.8
	Sorghum	18	1.5	0.6	8.5	0	10.6
	Wheat	5	2.5	0	2.5	0	5
Non-Cereals	Bananas[7,8]	18	0	0	0	0	0
	Cassava[7]	44	0	0	0	0	0
	Potatoes[7,9]	19	0	0	0	0	0
	Pulses[6]	13	5	0	2.5	2.5	10
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 Cooperatives, Dar es Salaam, Food Security Bulletin, July 14, 1993

Appendix 9: Methodological Considerations-II.

As highlighted in the Foreword to this report, the early warning system has been increasingly worked around subjectivity towards Objectivity, absence or late availability of data towards timeliness and inability to access data sources towards a staunch ability to address urgency and ad hoc data needs. While sample surveys using FSQ1 is now 20 years old addressing subjectivity problems the routine reporting system using WRS1-5 and RRS1 has prevailed for 10 years addressing ad hoc data needs for generating food security reports for decision making amidst stringent budgetary constraint common in Tanzania.

In a nutshell, the functions of the Field forms vary but resemble in that they are used by field MAFC staff to record, validate and prepare data for retrieval by Headquarter supervisors as follows:

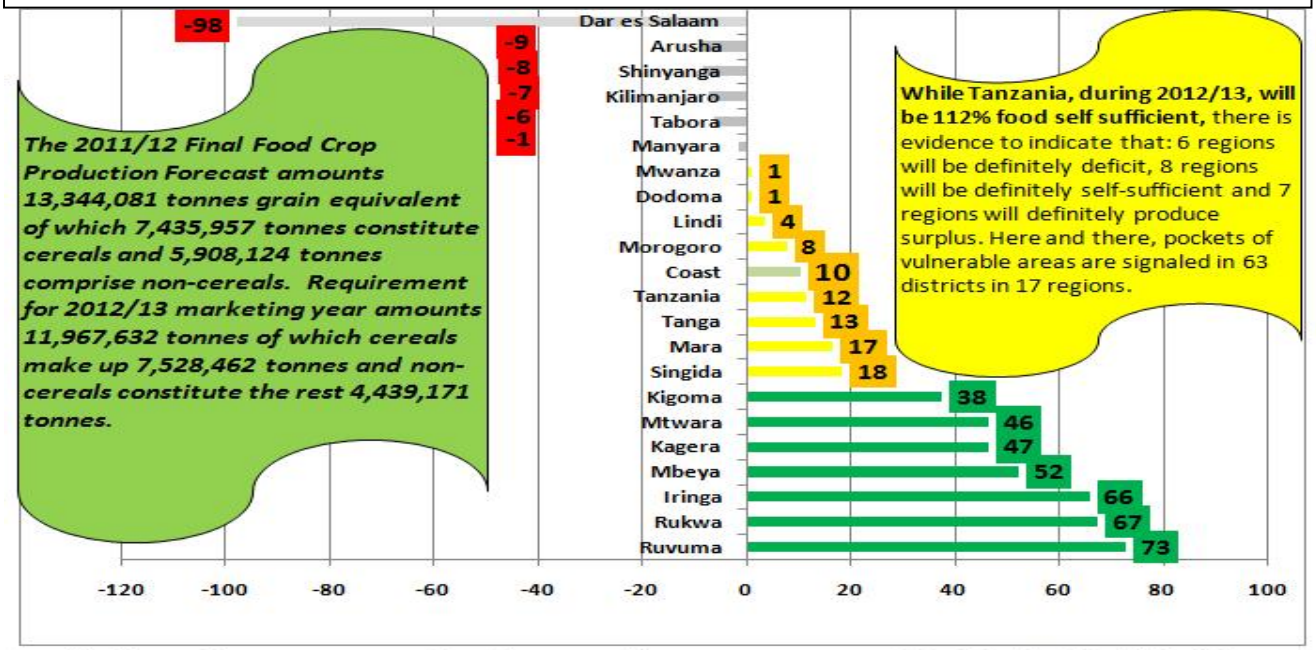
1. *targets and implementation of crop cultivation at field level (**WRS1:** Weekly Retrieval System 1);*
2. *phenological phases applying Kobechakuota principle at field crops (**WRS2:** Weekly Retrieval System 2);*
3. *crop pests both at pre-harvest and post harvest phases (**WRS3:** Weekly Retrieval System 3);*
4. *food availability at local market (**WRS4:** Weekly Retrieval System 4);*
5. *rainfall precipitation as locally perceived (**WRS5:** Weekly Retrieval System 5);*
6. *various food security variables and principally area change per crop from previous season (**FSQ1:** Food Security Questionnaire 1 applied in NBS based sample villages);*
7. *various agricultural and food security variables on monthly basis (**RRS1:** Routine Reporting System 1);*
8. *conventionally reported information by local authority as guided by CMEW short list (**TSA:** TSA=Tripple S Analysis =SSS Analysis = Snap-Shot Stories);*
9. *average monthly prices at local markets (**Jed6:** Price table No. 6);*
10. *monthly rainfall mm and days as received per local station (**Jed7:** Rainfall table No. 7);*

The National Early Warning System has been instrumental in producing regular information to inform on crop target implementation, field crop progress along phenological phases, pest threat afield and aware houses, food availability and market forces, rainfall prevalence amidst drought/water stressed agriculture in Tanzania, detection of vulnerable areas as locally perceived by experts and improving on objectivity through a village sample survey.

With this system we have been able to produce on annual basis, preliminary forecast and final forecast reports and trigger a vulnerability assessment that zooms into detected hotspots at district level towards household level. The system has also been instrumental in preparing monthly food security updates and other ad hoc reports in response to management needs. The other unique contribution has been that of populating and updating national food balance sheets and sharing with the process of integrating regional food security situation in this respect with EAC and SADC along regional food balance sheet approach.

Total Food Supply Forecast at Regional level for the 20120/13 Marketing Year

(Based On 2011/12 Final Food Crop Production Forecasts)



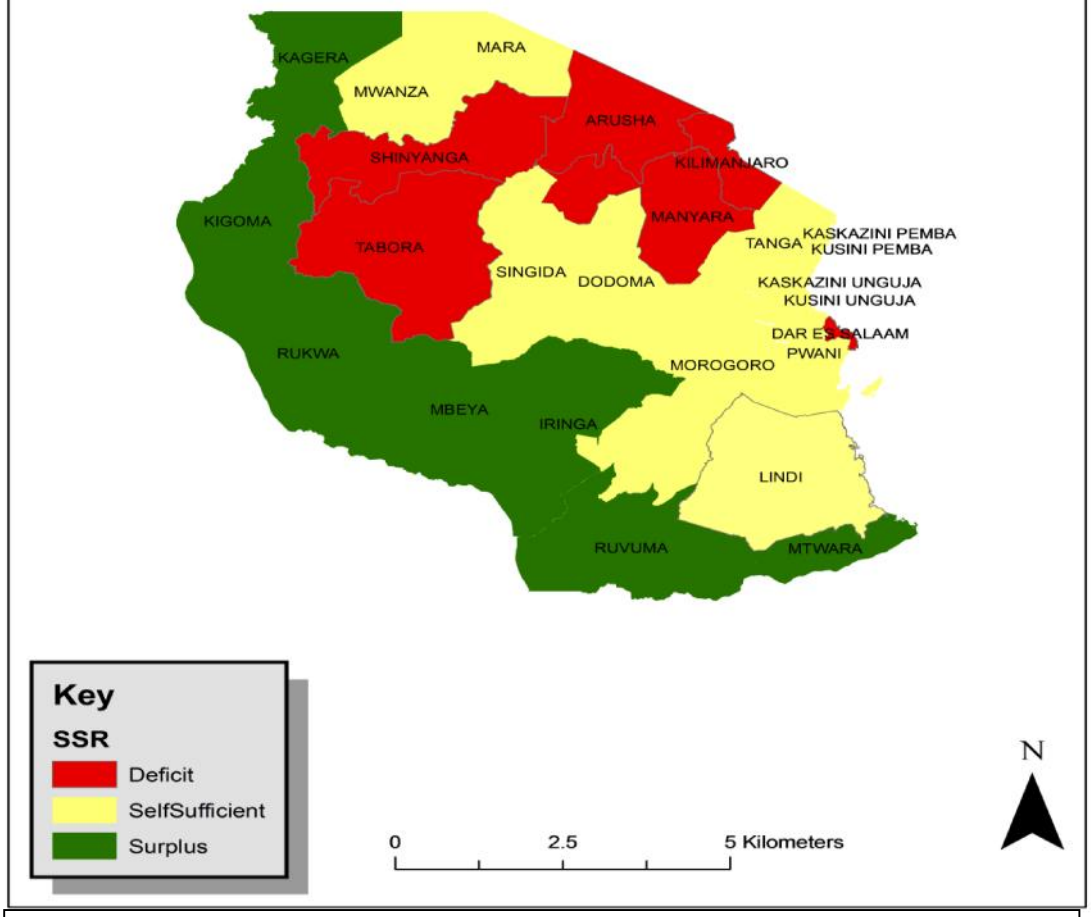
Vulnerable Areas 2012/13

According to the 2011/12 Final Forecast

S/N.	Region *(Ranked by extent of districts containing vulnerable areas)*	SSR Status	Districts (Number in list)	Districts *(Listed in order of dicreasing vulnerability)*
1	Shinyanga		7	Bariadi, Kishapu, Meatu, Maswa, Kahama, Shinyanga M, Shinyanga (V)
2	Arusha		7	Karatu, Monduli, Meru, Ngorongoro, Longido, Arusha MC, Arusha DC
3	Kilimanjaro		6	Hai, Mwanga, Moshi DC, Moshi TC, Rombo, Same
4	Tabora		6	Nzega, Igunga, Tabora (M), Uyui, Sikonge, Urambo
5	Dodoma		6	Bahi, Chamwino, Dodoma (M), Kondoa, Kongwa, Mpwapwa
6	Tanga		6	Tanga (M), Mkinga, Pangani, Korogwe(M), Korogwe (V), Handeni
7	Manyara		5	Babati DC, Hanang, Kiteto, Mbulu, Simanjiro,
8	Singida		4	Manyoni, Iramba, Singida (V), Singida (M)
9	Mwanza		3	Magu, Kwimba, Misungwi
10	Coast		3	Kibaha (M), Mafia, Rufiji
11	Mara		2	Musoma V, Rorya,
12	Lindi		2	Kilwa, Lindi
13	Morogoro		2	Morogoro (V), Mvomero
14	Iringa		1	Kilolo
15	Kagera		1	Chato
16	Mbeya		1	Mbozi
17	Mtwara		1	Masasi
18	Dar es Salaam	-	-	
19	Kigoma		-	
20	Rukwa		-	
21	Ruvuma		-	
	Total		63	Total
	TANZANIA: Food Security Status: Self Sufficient (SSR=112%), Vulnerability 17 regions, 63 districts	**Regions** containing Vlnerable areas 17: 5 Deficit, 8 Self Sufficient, 4 Surplus	**Districts** containing Vulnerable areas 63: 31 deficit, 28 self sufficient, 4 Surplus	**In general,** While at national level Tanzania during 2012/13 will be 112% food self sufficient, 17 regions contain vulnerable areas in 63 districts....=>=> **Hence an early warning against likely misfortunes!!**

Tanzania Food Supply Analysis and Self Sufficiency Ratio for 2012/13

(Based on the 2011/12 Final Food Crop Production Forecasts)



- In general, while at national level Tanzania during 2012/13 sustains 112% food self sufficient, 17 regions are wary of vulnerable areas in 63 districts **….**
  =>=> Hence an early warning against likely misfortunes!!

Maeneo Tete 2012/2013

Kulingana na Tathmini ya Mwisho (Final Forecast)

Na.	Mkoa *(orodha kulingana na wingi wa wilaya zilizoathirika)*	SSR Status	Wilaya (idadi)	Wilaya *(orodha kulingana na viwango vya athari)*
1	Shinyanga		7	Bariadi, Kishapu, Meatu, Maswa, Kahama, Shinyanga M, Shinyanga (V)
2	Arusha		7	Karatu, Monduli, Meru, Ngorongoro, Longido, Arusha MC, Arusha DC
3	Kilimanjaro		6	Hai, Mwanga, Moshi DC, Moshi TC, Rombo, Same
4	Tabora		6	Nzega, Igunga, Tabora (M), Uyui, Sikonge, Urambo
5	Dodoma		6	Bahi, Chamwino, Dodoma (M), Kondoa, Kongwa, Mpwapwa
6	Tanga		6	Tanga (M), Mkinga, Pangani, Korogwe(M), Korogwe (V), Handeni
7	Manyara		5	Babati DC, Hanang, Kiteto, Mbulu, Simanjiro,
8	Singida		4	Manyoni, Iramba, Singida (V), Singida (M)
9	Mwanza		3	Magu, Kwimba, Misungwi
10	Pwani		3	Kibaha (M), Mafia, Rufiji
11	Mara		2	Musoma V, Rorya,
12	Lindi		2	Kilwa, Lindi
13	Morogoro		2	Morogoro (V), Mvomero
14	Iringa		1	Kilolo
15	Kagera		1	Chato
16	Mbeya		1	Mbozii
17	Mtwara		1	Masasi
18	Dar es Salaam	*	-	
19	Kigoma		-	
20	Rukwa		-	
21	Ruvuma		-	
	Jumla		63	Jumla
	TANZANIA: Hali ya Chakula: Utoshelevu (SSR=112%), Utete mikoa 17, wilaya 63	**Mikoa** yenye maeneo tete: 5 Uhaba, 8 Utoshelevu, 4 Ziada	**Wilaya** zenye maeneo tete 63: 31 Uhaba, 28 Utoshelevu, 4 Ziada	**Kwa ujumla, wakati hali ya chakula kitaifa inaendelea kuwa ya utoshelevu (SSR ya 112%), mikoa 17 ina maeneo tete katika wilaya 63 (takriban nusu ya nchi)....=>=> Hivyo tahadhari inatolewa dhidi ya njaa inayoweza kujitokeza!!**