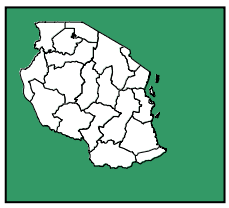
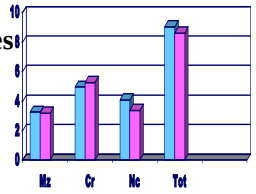


United Republic of Tanzania

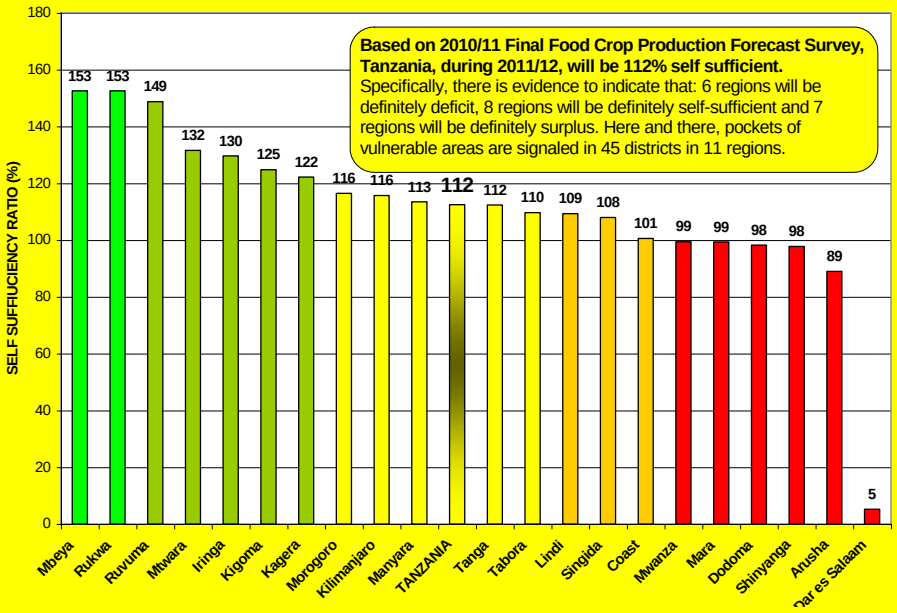
Ministry of Agriculture Food Security and Cooperatives



AGSTATS FOR FOOD SECURITY

VOLUME 1: The 2010/11 Final Food Crop Production Forecast for 2011/12 Food Security

EXECUTIVE SUMMARY



Crop Monitoring and Early Warning
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Dar es Salaam, Tanzania

Dar es Salaam **December, 2011**

Main Highlights

- ***The 2010/11 Final Food Crop Production Forecast amounts 12,972,220 tonnes grain equivalent of which 7,033,498 tonnes constitute cereals and 5,938,721 tonnes comprise non-cereals. Requirement for 2011/12 marketing year amounts 11,532,217 tonnes of which cereals make up 7,238,319 tonnes and non-cereals are 4,293,898 tonnes. Based on these availability and requirement figures, a self sufficient status of 112% is evident in terms of total food crops is attainable whereby cereals make up 97% and non-cereals make up 138%. In terms of gap surplus analysis, this is respectively, 1,440,003 tonnes surplus of total food, 204,821 tonnes gap of cereals and 1,644,824 tonnes surplus of non-cereals.***

- ***As cautioned earlier the forecast is sensitive to vuli performance. Based on this Final forecast, the 2011 Vuli normal contribution revises to 2,093,754 tonnes which is 29% Bimodal area perspective or 16% national aggregate perspective. As of current availability, it contributes 24% Bimodal areas perspective or 13% national aggregates perspective which amounts 1,695,994 tonnes. Compared to preliminary forecasts, the figures imply a 19% draw down from normal which is 397,761 tonnes vs the 450,000 tonnes draw down predicted earlier in June, 2011.***

- ***An analysis of carryover-stocks (COS) shows that, on the eve of new marketing year 2011/12 (i.e. the midnight of 1/06/11) a total of 787,908 tonnes food stock was carried over into 2011/12 marketing year of which 189,966 tonnes was held in NFRA (National Food Reserve Agency) warehouses while 203,988 tonnes was held by private stockists and 393,954 tonnes was estimated as farm retention. Added to the 1,440,003 tonnes final forecast of food surplus arrived at as above, the total food available, over and above national requirement is, 2,227,911 tonnes which is higher than the Preliminary estimate of 2,099,312 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 45 districts in 11 regions.***

- ***Compared to preliminary forecasts, total production rises by 1% mainly due to observed increase in maize (5%), rice (2%) and sorghum (1%). A decline has also been observed in pulses (3%), cassava (1%) and potatoes (1%). The changes for cereals are broadly due to stable climate that prevailed towards harvest the stage which was yet to be observed during preliminary forecast in May 2011, and predominantly favoured masika agriculture around bimodal areas. However this situation was not specifically so in North eastern regions of Arusha and Kilimanjaro which are in the forefront with negative impact of climate change in Tanzania. The local level changes see Dodoma and Coast regions swapping respective positions of Self Sufficiency and deficit status predicted earlier leaving the number of regions intact in surplus, self sufficiency and deficit status. Further down, vulnerability drops from 56 districts indicated earlier to 45.***

- ***Compared to previous season, production increase of 5% has been observed in total food (21% increase in non-cereals and 5% in cereals. Specific cases of increase were mainly notable in double digits percentage values e.g. in wheat (81%), in potatoes (39%) and in pulse (30%), while the decline was evident in millets (16%) and in rice (14%). Other single digit changes are as per Appendix 8. The 5% broad gain is due to good rains in respect of***

timely onset and a fairly appropriate distribution experienced over the season.

- ***Closer monitoring of food situation will need to be enhanced to keep food security management abreast of changing conditions that are both positively and negatively impacting on national and sub-national level food security. The monitoring in this regard should not prioritize specific areas but rather, spread over the whole country in an attempt to capture tangible opportunities and challenges accruing from market forces surrounding comprehensive food chain in Tanzania.***

The 2011/12 Forecast of Food Availability

During the month of December, 2011 the National Food Security Division (Crop Monitoring and Early Warning) carried out a regular preliminary food crop production forecast survey to ascertain food crop harvest status for 2010/11 and the corresponding availability for 2011/12. The interest was to determine the final production status concluded through capturing the effect of influential crop production factors that ruled over the growth stages from seed germination to maturity.

The exercise involved collection of the 2010/11 data and information from 18 regions including bimodal areas of Kagera, Mwanza, Mara, Kilimanjaro, Arusha, Tanga, Morogoro, Coast, Dar es Salaam, where vuli and masika crop patterns are well defined; Iringa, Kigoma, Manyara, Mtwara, Rukwa, Ruvuma and Tabora where unimodal crop patterns are well defined and Shinyanga and Mbeya where the bimodal and unimodal patterns do co-exist. While bimodal areas served to capture impacts of crop development factors over the flowering and grain filling stages towards maturity, the unimodal areas were particularly selected based on observed potentials to generate surplus and attempted to explore on tradable food availability and market challenges surrounding surpluses.

The survey was done 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 on the 2011/12 market availability of the 2010/11 food production and the 2011/12 in-field crop take-off of (msimu) as well as crop performance (vuli). Comprehensive analyses covering different retrievals were undertaken and results are presented in this report.

The 2011/12 Crop Season Onset

The survey also went beyond the 2011/12 food availability and attempted the detective work towards the 2011/12 crop season take off and the likely 2012/13 food security outlook. By the time of survey, bimodal areas had potential information regarding vuli crop while in unimodal areas msimu season was in the onset and the 2011/12 crop was adequately covered in terms of season take-off activities e.g. land preparation and seed germination stages of crop growth and development towards implementation of 2011/12 crop targets.

The results concentrate on national and regional level food status with main highlights of regions and districts bearing vulnerable areas. Further results highlight on regions where crop season onset is indicating positive signs of crop-rainfall response.

The 2010/11 Food Production Forecast

From the analysis, it has been found that **12,972,220** tonnes of food crops (in grain equivalent terms) will be available from farm production comprised of **7,033,498** tonnes of cereals[1] and **5,938,721** tonnes of non-cereals[2] (Table 1, Figure 1, Appendix 1 and Appendix 2) and will meet national food requirement amounting **11,532,270** tonnes of food by **112** percent implying a **1,440,003** tonnes of surplus food (Table 1, Appendix 2).

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 1: Tanzania Final Food Crop Production Forecast for 2010/11 Crop Season (With Cropwise Proportional Contribution)

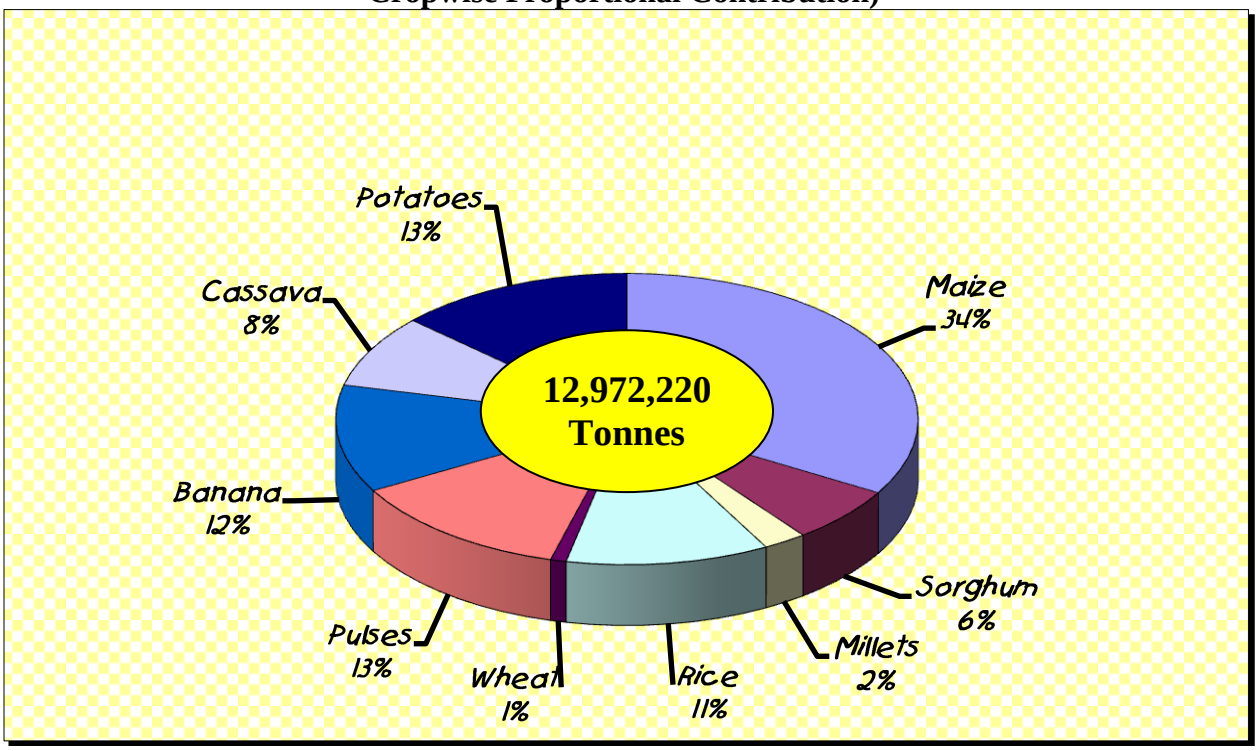


Table 1: The 2010/11 National Level Final Food Crop Production versus Requirement and gap/surplus analysis for 2011/12 (GRAIN EQUIVALENT)

Cereals	Maize	Sorghum&Millets	Rice	Wheat	Cereals
Production	**4,340,823**	**1,118,609**	**1,461,408**	**112,658**	**7,033,498**
Requirement	4,501,740	1,695,555	816,648	224,376	**7,238,319**
Gap (-)/ Surplus(+)	**-160,917**	**-576,946**	**644,759**	**-111,717**	**-204,821**

Non-cereals	Pulses	Banana	Cassava	Potatoes	Non-cereals
Production	1,632,329	1,047,945	1,548,841	1,709,606	**5,938,721**
Requirement	743,156	778,305	1,943,249	829,188	**4,293,898**
Gap (-)/ Surplus(+)	**889,174**	**269,640**	**-374,859**	**894,608**	**1,678,563**

TOTAL	*Cereals*	*Non-cereals*		*TOTAL*
Production	7,033,498	5,938,721		12,972,220
Requirement	7,238,319	4,293,898		11,532,217
Gap (-)/ Surplus(+)	**-204,821**	**1,644,824**		1,440,003

The assessment shows that cereal deficit prevails but at a lower level of 204,821 tonnes than preliminary revelation of 413,739 tonnes. Of the shortage, 160,917 tonnes is maize (**Table Na. 1 and Appendix Na. 6)**.

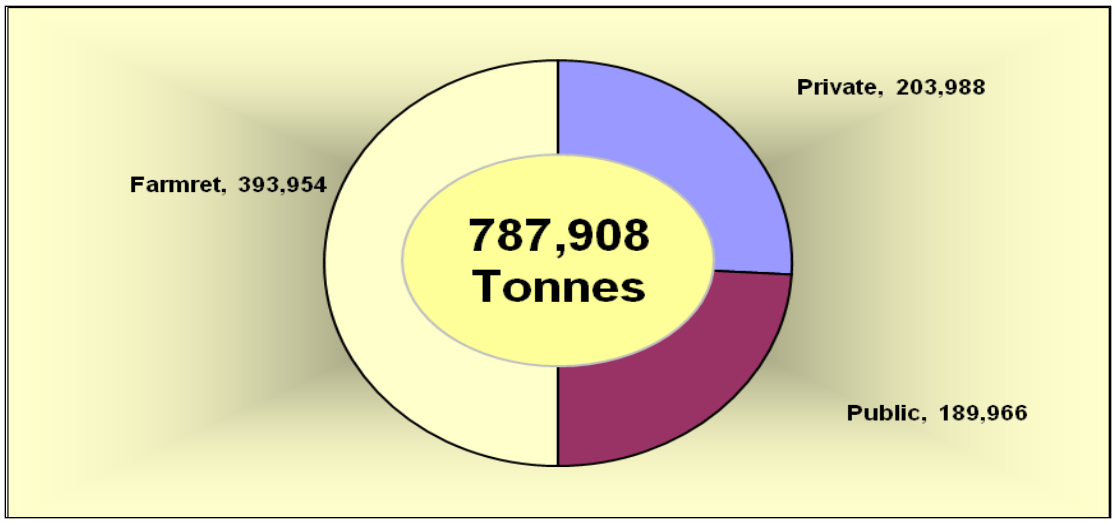
It is important to note that maize deficit is not as sounding as it appears because the carryover stocks (COS) is mainly maize (see COS analysis below). Maize stock is one of the most tradable food stocks that continues to curb shortages arising from farm failure to meet cereal requirement in the country.

Carry-over Stocks

Carry-over Stocks (COS) are all food stocks that were found in granaries, shops, farm fields, households etc either in reserve or on in passing over for business or just awaiting consumption during the eve of the accounting period as the period transits over to the next. In Tanzania this is composed of Public, Private and farm Retention.

An analysis of Carryover stocks (COS) shows that, as the outgoing marketing year 2010/11 ended (31/05/11) a total of 787,908 tonnes food stock was carried over into new marketing year, 2011/12 (01/06/11) of which 189,966 tonnes was held in NFRA premises while 203,988 tonnes was held by private stockists and 393,954 tonnes was estimated as farm retention (Figure 2). Of the total monitored stocks, which is half the total stock, maize constitutes the major share 50%, followed by wheat (46%) then pulses (3.9%), rice 0.8% and sorghum (0.002%) the minor.

Figure 2: Carryover stocks (COS) Analysis as of 31 May, 2011 –Final Forecast for 2011/12 Revision



Adding the COS to the 1,440,003 tonnes food surplus determined through final forecast as above, the total food available, over and above national requirement is 2,227,911 tonnes.

The 2011/12 Vuli Effect

Basic facts about Vuli Contribution to Food Production

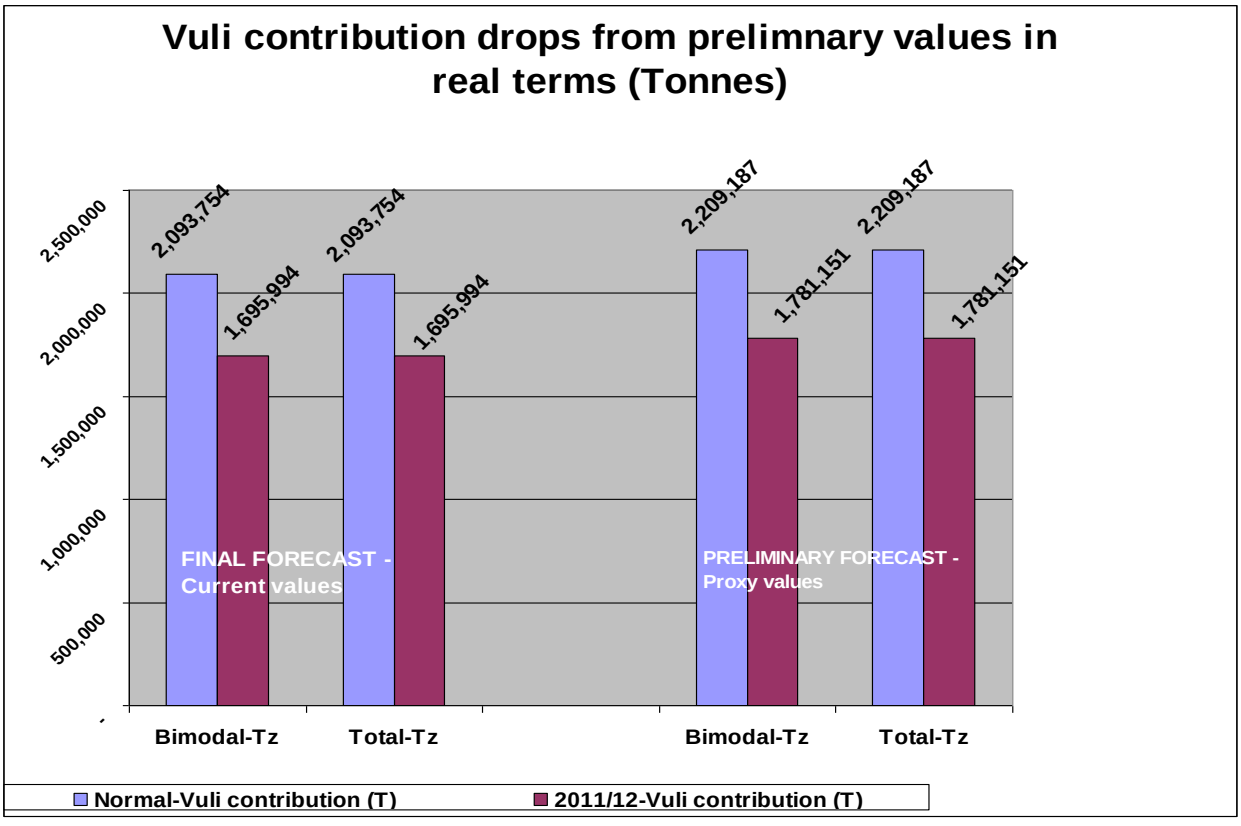
Tanzania has 2 types of rainfall patterns (Bimodal and Unimodal) with 3 cropping seasons viz. *vuli*, *masika* and *msimu*. There are regions which are totally bimodal and those which are wholly unimodal. But there are also those regions where an intermixture prevails between unimodal and bimodal regions or between unimoda and bimodal districts. Whether in partial or in wholesome the cropping seasons that follow rainfall regimes are broadly generalized as following regional

and district boundaries. On the ground, this is not strictly so but for statistical convenience guided by availability of basic data *vuli*, *masika* and *msimu* have been proportionately apportioned in these districts and later appropriately computed to give regional level estimates of normal and current vuli contributions. Overtime the norms and current year values have been changing based on the process of updating and recalculation while taking cognizance of data collected during final forecast survey.

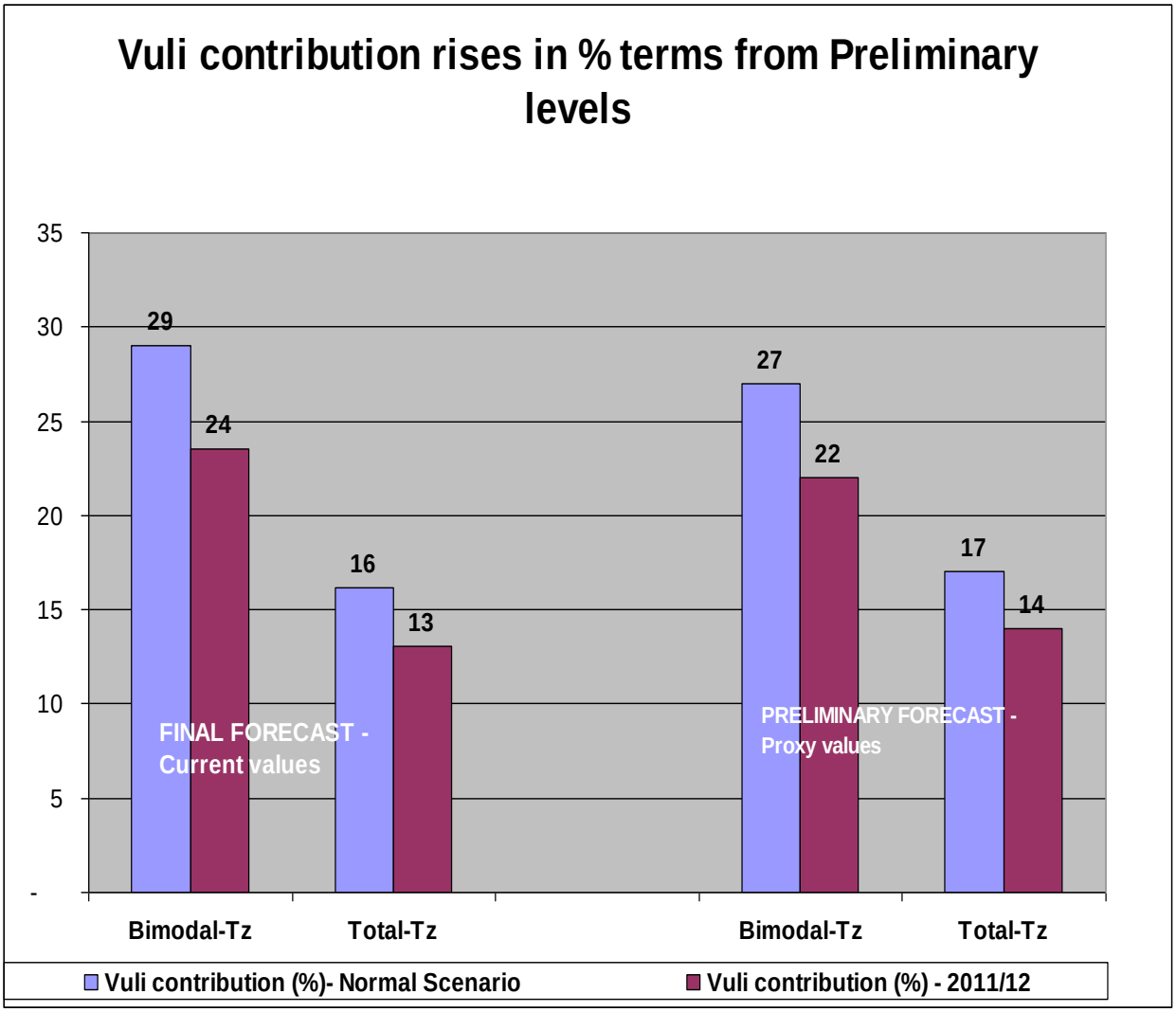
Based on these proportionate vuli contributions tonnage values have been presented alongside crop production forecast both as regional values and national values. The proportionation process has also gone further and estimated the bimodal area values which have been useful is indication appropriate food security gain/loss depending on the proximity at which additional vuli output impacts on the consumption year. When bimodal areas alone (the immediate user of vuli crop) are considered the proportion becomes bigger than when national aggregate value (which includes immediate users and other users in remote regions) due to denominator considerations. With less number of bimodal *flavored* regions (11) you get higher proportion than when you consider all national regions (21). The presence of three cropping seasons has a Risk spreading effect this is good for *strategic food security management.*

During preliminary forecast normal vuli contribution stood at 27% Bi-modal area (BMA) perspective (or 17% National aggregate (NA) perspective while current value was approximately 22% BMA or 13% NA. Correspondingly the tonnage values are 2,209,187 and 1,781,151 tonnes which are about 19% away from each other. Thereafter, following improved crop performance, final forecast reveals that, normal contribution increased to 29% BMA while the NA perspective increased to 16% or currently 24% BMA perspective and 13% NA perspective See Figures 3a and 3b below.

Figures 3a National Vuli contribution drops in tonnage terms



Figures 3b National Vuli contribution rises in Percentage terms

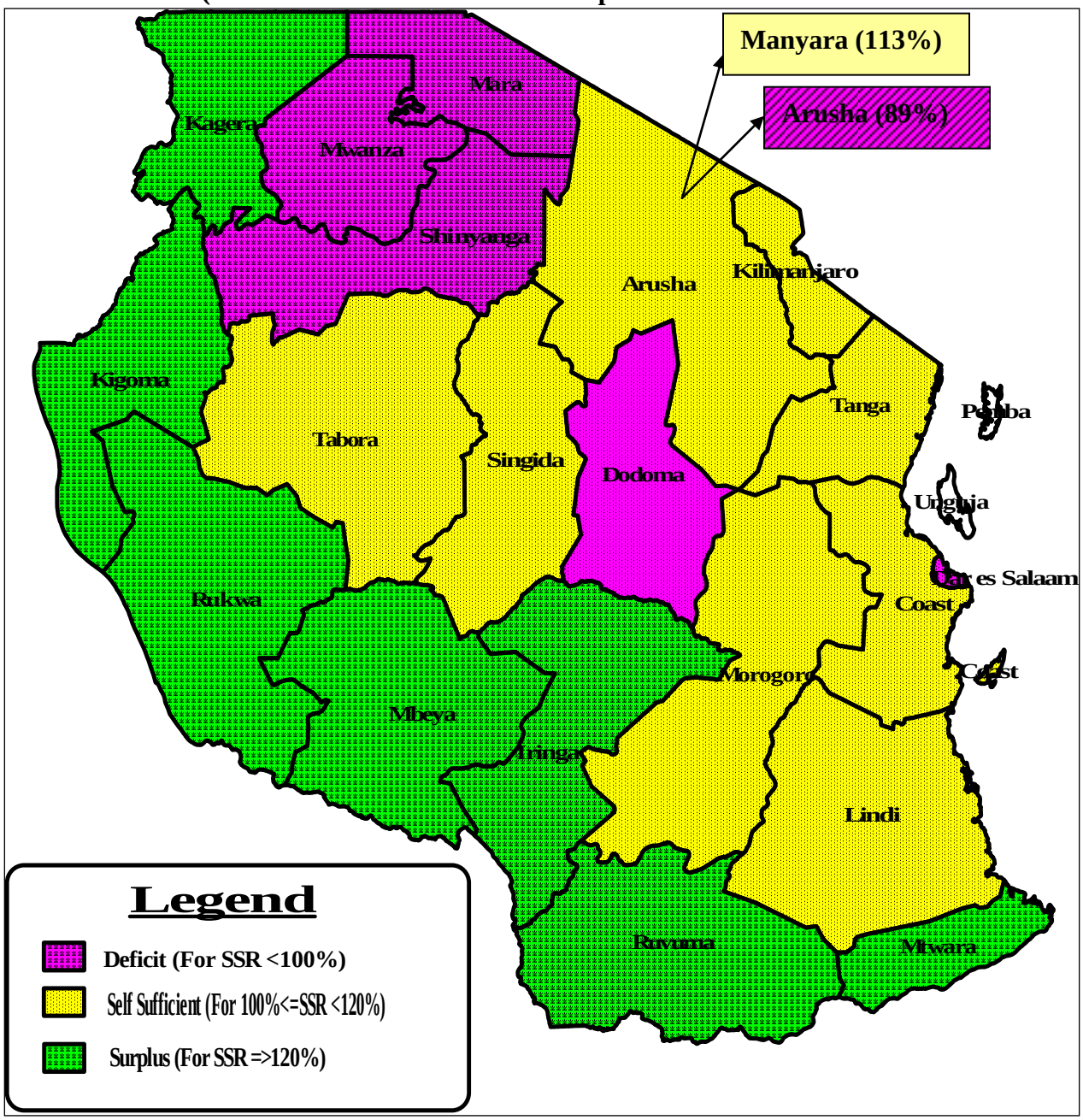


This analysis warns of rising BMA values from 27-29 normally and 22-24 currently but of falling NA values from 16% to 17% normally and 14-13% currently. While there seems to be a positive national picture there is a negative picture on the bimodal perspective. The policy towards this is to think more on national gains associated with bimodal areas than bimodal specific gains.

Sub-national level

At sub-national level, the 2010/11 production is expected to meet food requirement upto end of 2011/12 marketing year in 15 regions while deficit status is detected in 6 regions namely (with SSR levels in brackets) Dar es Salaam (5%), Arusha (89%), Shinyanga (98), Dodoma (98), Mara (99), Mwanza (99). The 15 regions okeyed in SSR status are categorized into 8 self sufficient regions with SSR level of 101%-116% and 7 surplus regions with SSR levels of 122%-153% (Figure 3, Appendix 2).

Figure 4: Total Food Supply Forecast for the 2011/2012 Marketing Year (Based on 2010/11 Final Food Crop Production Forecasts



Based on final food crop production forecast, total food supply is expected to satisfy requirements for 2011/12 in 15 regions of Mbeya, Rukwa, Ruvuma, Mtwara, Iringa, Kigoma, Kagera, Morogoro, Kilimanjaro, Manyara, Tanga, Tabora, Lindi, Singida, Coast. While Rukwa, Ruvuma, Mtwara, Iringa, Kigoma, Kagera are surplus, the rest are self sufficient. The deficit regions with respective SSRs in brackets are Dare es Salaam (5%), Arusha (89%), Shinyanga (98%), Dodoma (98%), Mara (99%), Mwanza (99%). Vulnerable areas have been detected in 20 districts in deficit regions, 22 districts in self sufficient regions and 3 districts in surplus regions.

The changes have incidentally shifted some regions in terms of status quo. For example Dodoma and Coast regions which were hitherto considered self sufficient and deficit respectively swap positions.

Time series analysis

Time series analysis shows that, compared to previous season, total production increased by 5% (81% in wheat, 39% in potatoes, 30% in pulses, 7% in banana and 6% in cassava) probably attributed to fairly good rains in respect of timely onset and a fairly appropriate distribution experienced in the areas growing these crops. Even then, a decrease of approximately 5% is notable in cereals (16% in millets, 14% in rice and 3% in maize, the national staple) (See Appendix 8).

Compared to trend values computed from 1992/93-2009/103, all food crop categories lie above whereby total tonnage is higher by 12%, cereals are higher by 17% and non-cereals lie above by 7%. Consistently, all non-cereals except cassava lie positive to trend line by a minimum of 6% (sorghum) to the maximum of 30% (rice). Trend values and other measures of time series analysis for different crops are as per Appendix 8.

Further back to 1994/95, the SSR has been recorded at national level and this is shown on Appendix 9. This record is very useful when indicative management as of where to start is been sought. For example current year SSR level was encountered in 2006/07 and this is where to start if any baseline initiatives to manage food security is to be arranged at least at national level. Other years of experience are as per the chart (Appendix 9).

Vulnerability

An analysis of monthly routine retrieval system (RRS1) and management based snapshot information (TSA), vulnerable hotspots have been detected in 45 districts in 11 regions including 4 definitely deficit regions, 5 self sufficient regions and 2 surplus regions. Vulnerability ranks highest in Arusha, Coast, Kilimanjaro and Tanga where over one third of all detected vulnerable districts are located followed by an intermixture of 3 deficit regions of Mwanza, Shinyanga and Mara, 2 self sufficient regions of Tabora and Manyara and surplus regions of Kagera and Mtwara. Categorically, vulnerable areas have been detected in 20 districts in deficit regions, 22 districts in self sufficient regions and 3 districts in surplus regions.

Compared to Preliminary forecasts, National level SSR rises by 1 unit, regional level rises by up to 9 units in 10 regions, remains unchanged in 4 regions and drops by up to 17 units in 7 regions. Vulnerability improved at national level as well as in 9 regions while it stabilized in 10 regions and worsened in 2 others (See Appendix 10).

[3] a reasonable period of reliable food crop statistics

Conclusion and Recommendations

The survey has put it clear that SSR is 112% with 1,440,003 tonnes of available which together with COS amounting 787,908 tonnes adds up to 2,227,911 tonnes. Amidst this national high-level status of self sufficiency, the sub-national levels bear a mixed status. There is an evidence to indicate that 7 regions will be definitely surplus bearers, 8 regions will be definitely self-sufficient in food and 6 regions will be definitely deficit. Here and there, pockets of vulnerable areas are signaled in 45 districts in 11 regions.

Decisions regarding management of food security over 2011/12 will depend on 3 major considerations viz. Severity of vulnerability and intervention needs in terms of food needs and probably input support in vulnerable areas, Capacity to avail market access to surplus food in surplus areas and the status of new season especially in respect of input availability.

With this big surplus over and above national food requirement any surplus areas are likely to suffer market inhibition unless some strategic interventions are deployed. Towards this strategy, the available high demand market include domestic market including Dar es Salaam, Arusha, Shinyanga, Dodoma, Mara, Mwanza regions which are definitely deficit stricken and, Tanga, Coast, Tabora and Manyara where vulnerable areas are reportedly rampant. Besides the locally available market, the external market is also looming on the neighbouhood especially in most of northern neighbouring countries where food shortage is increasingly unbridled. The regions where surpluses are high in total food include, Mbeya, Rukwa, Ruvuma, Mtwara, Iringa, Kigoma and Kagera. In terms of maize (the most popular staple both in Tanzania and across surrounding nations), surpluses are high in 9 regions namely: Mbeya, Iringa, Rukwa, Tanga Manyara, Ruvuma, Morogoro, Tabora, Kigoma.

- As to the tradable surplus that is available in these regions and perhaps others, a *Tradable Surplus Survey* has to be conducted focusing at detailed data on food availability and price trends. This can borrow from tools devised by MAFC teams and attempted during final forecast exercise.
- In view of the relatively incapable capacity for NFRA to capture all surpluses in maize and other cereals in major surplus generating regions and also incapable capacity to make available and distribute *inputs,* freer search for market access should be strategically attempted while closely monitoring food situation across the country in favour of surplus bearers in the country. This will do the needful for farmers who have started gaining from the fruitful subsidy driven initiatives in Southern highlands of Tanzania etc towards commercial orientation. They have to sell now to get money for purchasing inputs now needed for the new season. If the relatively low prices available now are not as rewarding as for later prices then farmers will need a guarantee based on surplus available. This may be well done through a warehouse receipt system which is currently being spearheaded in the country.
- In view of the notable strengths in external market it is recommended that systems are devised such that trader's access to local surpluses continues to benefit farmers. Amidst the naturally booming opportunity of the external trade, vigilance should not be overlooked. Over the foreseeable externally eased trade, a closer food situation monitoring should be enhanced and strengthened in order to operate in a more detective manner focused to markets, warehouse and cross-border activity for a quick counteraction if need be.

Appendix 1: Tanzania Final Food Crop Production Forecast by Region - 2010/11 (as of 30/11/2011)

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

Cereals

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	121,452	0.9	109,307	38,963	0.9	35,067	11,755	1.0	11,755	106,891	1.1	117,580	17,405	1.1	19,146	296,466	292,855	Arusha
Coast	135,069	0.7	94,549	81,311	0.6	48,787	-		-	262,005	1.0	262,005	-		-	478,385	405,340	Coast
Dar es Salaam	3,242	0.3	973	2	0.5	1	1	0.5	1	2,902	0.9	2,612	-		-	6,147	3,586	Dar es Salaam
Dodoma	104,282	0.6	62,569	195,518	1.1	215,070	92,362	0.8	73,889	10,741	0.7	7,519	-		-	402,903	359,048	Dodoma
Iringa	256,540	1.4	359,157	8,854	1.0	8,854	2,560	0.8	2,048	10,924	1.1	12,016	40,791	1.1	44,870	319,669	426,945	Iringa
Kagera	131,870	1.5	197,806	23,616	1.2	28,339	15,118	1.1	16,630	6,785	1.1	7,464	-		-	177,390	250,239	Kagera
Kigoma	198,627	1.6	317,803	18,148	1.1	19,963	6,075	1.1	6,682	47,208	1.6	75,533	-		-	270,058	419,981	Kigoma
Kilimanjaro	67,794	0.9	61,015	2,460	1.0	2,460	1,076	1.0	1,076	13,333	1.1	14,666	9,883	1.1	10,871	94,546	90,088	Kilimanjaro
Lindi	77,237	0.5	38,618	58,738	0.8	46,990	19,852	1.0	19,852	17,184	1.0	17,184	-		-	173,011	122,645	Lindi
Manyara	175,482	1.4	245,675	7,809	1.0	7,809	3,380	1.0	3,380	2,455	1.0	2,455	21,912	1.1	24,103	211,039	283,423	Manyara
Mara	42,874	1.5	64,311	41,516	1.2	49,819	16,676	1.0	16,676	1,607	1.4	2,249	-		-	102,672	133,055	Mara
Mbeya	330,746	1.9	628,418	35,406	1.2	42,487	17,056	1.1	18,761	54,127	2.1	113,666	5,910	1.2	7,092	443,245	810,425	Mbeya
Morogoro	172,085	1.7	292,545	8,495	1.1	9,345	5,406	0.9	4,866	114,364	1.4	160,109	145	0.5	73	300,496	466,937	Morogoro
Mtwara	211,346	0.5	105,673	55,488	0.9	49,939	22,338	1.1	24,572	59,708	1.1	65,678	-		-	348,880	245,862	Mtwara
Mwanza	147,548	1.5	221,322	17,784	1.2	21,341	6,494	1.1	7,143	86,164	1.6	137,863	-		-	257,991	387,670	Mwanza
Rukwa	165,411	2.0	330,822	45,614	1.0	45,614	20,781	1.2	24,938	63,753	1.7	108,380	11,476	0.5	5,738	307,035	515,492	Rukwa
Ruvuma	118,668	1.9	225,470	10,342	1.2	12,411	4,567	1.2	5,480	41,484	1.3	53,929	-		-	175,061	297,290	Ruvuma
Shinyanga	223,117	1.2	267,740	53,649	1.0	53,649	21,585	1.0	21,585	74,020	1.5	111,029	-		-	372,370	454,003	Shinyanga
Singida	129,559	0.6	77,735	63,430	1.0	63,430	43,291	0.8	34,633	5,812	0.7	4,069	-		-	242,092	179,867	Singida
Tabora	280,021	1.1	308,023	33,279	1.1	36,607	14,454	1.0	14,454	99,853	1.4	139,794	-		-	427,608	498,880	Tabora
Tanga	194,877	1.7	331,291	10,739	0.8	8,592	3,285	1.1	3,613	38,005	1.2	45,606	766	1.0	766	247,672	389,868	Tanga
Total	3,287,850	1.3	4,340,823	811,164	1.0	806,575	328,112	1.0	312,035	1,119,324	1.3	1,461,408	108,287	1.0	112,658	5,654,738	7,033,498	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	58,319	1.0	58,319	1,260	2.3	2,897	35,338	2.0	70,676	1,248	2.0	2,495	96,164.0	134,387	392,630	427,242	Arusha
Coast	204,338	0.6	122,603	155,389	2.1	326,317	-		-	44,422	1.8	79,959	404,148.9	528,879	882,534	934,219	Coast
Dar es Salaam	755	0.4	302	2,833	2.0	5,667	-		-	2,777	1.5	4,165	6,365	10,133	12,512	13,719	Dar es Salaam
Dodoma	173,482	0.6	104,089	29,801	1.2	35,761	-		-	30,482	1.3	39,627	233,765.0	179,477	636,668	538,525	Dodoma
Iringa	38,327	1.0	38,327	846	2.2	1,861	464	1.7	789	66,269	2.2	145,792	105,906.7	186,770	425,576	613,715	Iringa
Kagera	73,693	1.0	73,693	83,030	2.4	199,273	108,753	2.4	261,007	23,541	2.3	54,144	289,017.2	588,117	466,407	838,356	Kagera
Kigoma	118,990	1.0	118,990	16,727	2.2	36,799	124,935	1.7	212,390	35,261	2.1	74,049	295,913.3	442,228	565,971	862,209	Kigoma
Kilimanjaro	45,301	1.0	45,301	3,124	2.3	7,184	79,914	2.1	167,820	69,904	2.1	146,799	198,242.7	367,104	292,789	457,192	Kilimanjaro
Lindi	51,693	0.7	36,185	37,422	2.5	93,555	-		-	-		-	89,115	129,740	262,126	252,385	Lindi
Manyara	137,499	1.2	164,999	196	2.1	412	4,559	2.0	9,118	3,212	2.0	6,423	145,466.0	180,952	356,505	464,375	Manyara
Mara	29,468	1.1	32,415	47,871	2.2	105,315	47,578	2.0	95,157	28,496	2.1	59,842	153,413	292,729	256,086	425,784	Mara
Mbeya	46,001	1.2	55,201	6,917	2.4	16,602	32,528	2.3	74,814	74,252	2.2	163,354	159,697	309,970	602,942	1,120,395	Mbeya
Morogoro	53,271	1.0	53,271	32,693	2.1	68,655	27,752	1.5	41,627	29,663	2.1	62,293	143,379	225,847	443,875	692,784	Morogoro
Mtwara	95,005	0.8	76,004	52,494	2.6	136,485	-		-	914	1.7	1,554	148,413.1	214,043	497,293	459,905	Mtwara
Mwanza	161,418	1.2	193,702	76,605	2.1	160,871	6,056	2.0	12,112	115,266	2.1	242,058	359,345.1	608,743	617,336	996,412	Mwanza
Rukwa	66,277	1.0	66,277	13,007	2.6	33,819	10,115	2.1	21,242	24,036	2.2	52,879	113,435	174,216	420,470	689,708	Rukwa
Ruvuma	87,452	1.2	104,943	19,068	2.5	47,670	929	1.6	1,487	55,759	2.2	122,669	163,208	276,768	338,269	574,058	Ruvuma
Shinyanga	103,680	1.2	124,416	54,985	2.0	109,970	67	1.1	73	174,486	1.5	261,729	333,217.7	496,188	705,588	950,192	Shinyanga
Singida	152,932	0.6	91,759	42,168	1.5	63,253	-		-	34,304	1.3	44,595	229,404.7	199,607	471,497	379,474	Singida
Tabora	44,548	1.1	49,003	34,738	0.8	27,791	-		-	76,404	1.6	122,247	155,690.8	199,040	583,299	697,920	Tabora
Tanga	25,034	0.9	22,531	28,619	2.4	68,685	53,089	1.5	79,634	11,467	2.0	22,934	118,209.1	193,783	365,881	583,651	Tanga
Total	1,767,484	0.9	1,632,329	739,794	2.1	1,548,841	532,077	2.0	1,047,945	902,162	1.9	1,709,606	3,941,516	5,938,721	9,596,254	12,972,220	Total

Appendix 2: Tanzania Food Supply Analysis and Self Sufficiency Ratio for 2011/12

(Based on the 2010/11 Final Food Crop Production Forecasts)

REGION	Total Cereals				Total Non-cereals				Total Food				Deficit indicator (*)	REGION	COMPARED TO PRELIMINARY FORECAST			
	PROD.	REQ.	Gap/ Surplus	SSR (Cer)	PROD.	REQ.	Gap/ Surplus	SSR (Nce)	PROD.	REQ.	Gap/ Surplus	SSR (Tot)			SSR (Tot)	Deficit indicator (*)	REGION	Change from Preliminary SSR
Mbeya	810,425	486,810	323,615	166	309,970	247,463	62,507	125	1,120,395	734,273	386,122	153		Mbeya	153		Mbeya	-1
Rukwa	515,492	296,576	218,915	174	174,216	155,518	18,699	112	689,708	452,094	237,614	153		Rukwa	154		Rukwa	-1
Ruvuma	297,290	243,660	53,630	122	276,768	142,301	134,468	194	574,058	385,960	188,098	149		Ruvuma	148		Ruvuma	1
Mtwara	245,882	218,274	27,589	113	214,043	131,188	82,855	163	459,905	349,462	110,444	132		Mtwara	132		Mtwara	0
Iringa	428,945	308,562	118,383	138	186,770	164,689	22,081	113	613,715	473,251	140,464	130		Iringa	130		Iringa	0
Kigoma	419,981	434,056	-14,074	97	442,228	256,989	185,239	172	862,209	691,045	171,165	125		Kigoma	126		Kigoma	-1
Kagera	250,239	424,869	-174,630	59	588,117	261,097	327,020	225	838,356	685,966	152,390	122		Kagera	122		Kagera	0
Morogoro	466,937	379,946	86,991	123	225,847	214,763	11,084	105	692,784	594,709	98,075	116		Morogoro	114		Morogoro	2
Kilimanjaro	90,088	240,674	-150,586	37	367,104	154,446	212,658	238	457,192	395,119	62,073	116		Kilimanjaro	117		Kilimanjaro	-1
Manyara	263,423	254,166	29,257	112	180,952	154,989	25,963	117	464,375	409,156	55,220	113		Manyara	108		Manyara	5
TANZANIA	**7,033,498**	**7,238,319**	**-204,821**	**97**	**5,938,721**	**4,293,898**	**1,644,824**	**138**	**12,972,220**	**11,532,217**	**1,440,003**	**112**		Tanzania	111		Tanzania	1
Tanga	389,868	335,724	54,143	116	193,783	183,762	10,021	105	583,651	519,487	64,164	112		Tanga	106		Tanga	6
Tabora	498,880	407,400	91,479	122	199,040	229,013	-29,973	87	697,920	636,413	61,507	110		Tabora	109		Tabora	1
Lindi	122,645	143,059	-20,414	86	129,740	87,814	41,926	148	252,385	230,873	21,511	109		Lindi	109		Lindi	0
Singida	179,867	216,072	-36,205	83	199,607	135,433	64,174	147	379,474	351,505	27,969	108		Singida	116		Singida	-8
Coast	405,340	569,030	-163,690	71	528,879	359,956	168,923	147	934,219	928,986	5,233	101		Coast	94	*	Coast	6
Mwanza	387,670	613,126	-225,457	63	608,743	389,282	219,460	156	996,412	1,002,409	-5,997	99	*	Mwanza	95	*	Mwanza	4
Mara	133,055	263,956	-130,901	50	292,729	164,597	128,131	178	425,784	428,553	-2,769	99	*	Mara	98	*	Mara	1
Dodoma	359,046	341,354	17,694	105	179,477	206,987	-27,510	87	538,525	548,341	-9,817	98	*	Dodoma	115		Dodoma	-17
Shinyanga	454,003	603,250	-149,246	75	496,188	368,840	127,349	135	950,192	972,089	-21,898	98	*	Shinyanga	89	*	Shinyanga	9
Arusha	292,855	299,071	-6,216	98	134,387	180,965	-46,577	74	427,242	480,035	-52,794	89	*	Arusha	90	*	Arusha	-1
Dar es Salaam	3,586	158,686	-155,100	2	10,133	103,806	-93,672	10	13,719	262,491	-248,772	5	*	Dar es Salaam	4	*	Dar es Salaam	1

Appendix 3: Recall food situation at regional and district levels back to 2006/07

REGION	2006/07		2007/08		2008/09		2009/10		2010/11		201112			REGION
	Deficit regions (*)	Deficit Districts	*Deficit regions (*)*	Deficit Districts	*Deficit regions (*)*	Deficit Districts	*Deficit regions (*)*	Deficit Districts	*Deficit regions (*)*	Deficit Districts	*Deficit regions (*)*	Deficit Districts		
ARUSHA & MANYARA		3- Monduli, Ngorongoro, Longido	*	1-Monduli *(Later, 6: Ars M, Ars V, Longido, Meru, Monduli, Ngorongoro)*	*	3- Arusha, Longido, Monduli	*	5-Longido, Monduli, Arusha, Ngorongoro, Meru		1: Longido	Arusha	*	Arusha DC, Arusha MC, Karatu, Longido, Meru, Mondulu, Ngorongoro	ARUSHA
COAST		2-Rufiji, Kisarawe		1-Rufiji *(Later, 0)*	*	1- Mafia	*	4-Kisarawe, Bagamoyo, Kibaha (V), Mafia			Coast	Prel: "*"	Kibaha TC, Kibaha DC, Bagamoyo, Mafia, Rufiji	COAST
COAST &DSM	*	3-Kinondoni, Ilala, Temeke	*		*		*		*		Dar es Salaam	*		DAR ES SALAAM
DODOMA	*	4-Dodoma M, Dodoma V, Kongwa , Mpwapwa					*	5-Bahi, Chamwino, Kondoa, Kongwa, Mpapwa	*	5: Mpwapwa, Kongwa, Chamwino, Bahi, Dodoma M	Dodoma	* Prel: "-"		DODOMA
IRINGA		5-Iringa V, Kilolo, Makete, Njombe, Ludewa				1-Njombe		2-Iringa (V), Kilolo		1: Iringa (V)	Iringa			IRINGA
KAGERA		1-Bukoba M									Kagera	2	Muleba, Bukoba (V)	KAGERA
KIGOMA											Kigoma			KIGOMA
KILIMANJARO		2-Rombo, Moshi V	*	3-Same, Mwanga, Hai *(Later, 4: Hai, Mwanga, Same, Moshi V)*	*	2- Same, Rombo	*	6-Same, Rombo, Mwanga, Siha, Hai, Moshi		1: Mwanga	Kilimanjaro	5	Hai, Moshi (V), Mwanga, Same, Siha	KILIMANJARO
LINDI		2-Liwale, Nachingwea		2-Kilwa, Liwale *(Later, 0)*				4-Lindi(V), Ruangwa, Nachingwea, Kilwa		2: Lindi (V), Liwale	Lindi			LINDI
MANYARA		2-Simanjiro, Kiteto		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			Manyara	3	Babati DC, Mbulu, Simanjiro	MANYARA
MARA					*	1- Bunda	*	3-Rorya, Bunda, Musoma (V)			Mara	*	Musoma (V), Musoma (M), Bunda	MARA
MBEYA		3-Mbarali, Chunya, Mbozi						1-Mbarali			Mbeya			MBEYA
MOROGORO		2-Kilosa, Morogoro V		*(Later, 3: Ulanga, Morogoro V, Mvomero)*		*2- Morogoro R, Mvomero*		*3-Ulanga, Morogoro V, Kilosa*		*2: Mvomero, Morogoro (V)*	Morogoro			MOROGORO
MTWARA								2-Nanyumbu, Masasi		2: Mtwara (V), Masasi	Mtwara	1	Masasi	MTWARA
MWANZA	*	Magu, Kwimba, Misungwi, Ilemela, Nyamagana		*(Later, 1: Magu)*	*		*	*4-Magu, Misungwi, Kwimba, Ukerewe*		*1: Kwimba*	Mwanza	*	Magu, Ilemela, Nyamagana, Geita, Misungwi	MWANZA
RUKWA											Rukwa			RUKWA
RUVUMA								1-Tunduru			Ruvuma			RUVUMA
SHINYANGA	*	7-Kishapu, Meatu, Maswa, Shinyanga M, Kahama, Bariadi, Bukombe		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)	Shinyanga	*	Shinyanga (M), Shinyanga (V), Kishapu, Kahama, Meatu	SHINYANGA
SINGIDA	*	3-Manyoni, Singida M, Sin	*	4-Singida R, Iramba, Singida U, Manyoni *(Later, Wahadzabe ethnic group who are wholly hunters and gatherers)*	*		*	2-Iramba, Manyoni			Singida			SINGIDA
TABORA		3- Igunga, Tabora M, Siko	*	1-Uyui *(Later, 0)*	*			2-Uyui, Igunga		1: Nzega	Tabora	4	Nzega, Igunga, Sikonge, Tabora (M)	TABORA
TANGA		3-Mkinga, Korogwe, Lushoto				4-Kilindi, Korogwe, Lushoto, Mkinga		6-Kilindi, Handeni, Pangani, Korogwe V, Lushoto, Mkinga		1: Tanga (M)	Tanga	5	Lushoto, Mkinga, Pangani, Kilindi, Tanga TC.	TANGA
TOTAL	5	50	5	21 *(Prel2007: 17)*	9 (Prel2008: 14)	21 (Prel2008: 29)	10	57 districts (Prel2009: 61)	2	22 districts (Prel2010: 36)		6	45 (Prel2011:56)	TOTAL

NB: * means definitely deficit status of food availability

Appendix 4: Vuli contribution to total production - Current vs Normal

REGION	Production (Tonnes)	Vuli contribution (%)- Normal Scenario	Normal-Vuli contribution (T)	Vuli contribution (%) - 2011/12	2011/12-Vuli contribution (T)
Arusha	427,242	20	85,448	16	69,215
Coast	934,219	10	93,422	8	75,674
Dar es Salaam	13,719	10	1,372	8	1,111
Dodoma	538,525		-	-	
Iringa	613,715		-	-	
Kagera	838,356	80	670,684	65	543,271
Kigoma	862,209		-	-	
Kilimanjaro	457,192	35	160,017	28	129,618
Lindi	252,385		-	-	
Manyara	464,375		-	-	
Mara	425,784	45	191,603	36	155,203
Mbeya	1,120,395	5	56,020	4	45,377
Morogoro	692,784	15	103,918	12	84,176
Mtwara	459,905		-	-	
Mwanza	996,412	55	548,027	45	443,916
Rukwa	689,708		-	-	
Ruvuma	574,058		-	-	
Shinyanga	950,192	7	66,513	6	53,878
Singida	379,474		-	-	
Tabora	697,920		-	-	
Tanga	583,651	20	116,730	16	94,554
Bimodal-Tz	**7,215,305**	29	**2,093,754**	24	**1,695,994**
Total-Tz	**12,972,220**	16	**2,093,754**	13	**1,695,994**
Bimodal-Tz	**8,036,307**	27	2,209,187	22	1,781,151
Total-Tz	**12,810,818**	17	2,209,187	14	1,781,151

While Normal Vuli contribution revises to 29% Bimodal perspective or 16% national perspective which amounts 2,093,754 tonnes it currently stands at 24% Bimodal areas perspective or 13% national aggregates perspective which amounts 1,695,994 tonnes. Compared to preliminary forecasts, the figures update from the values in small table below predicted earlier in June, 2011 (See Appendix)

Appendix 5: Vulnerable Areas, 2011/12 *(based on the 2010/11 Final Forecast).*

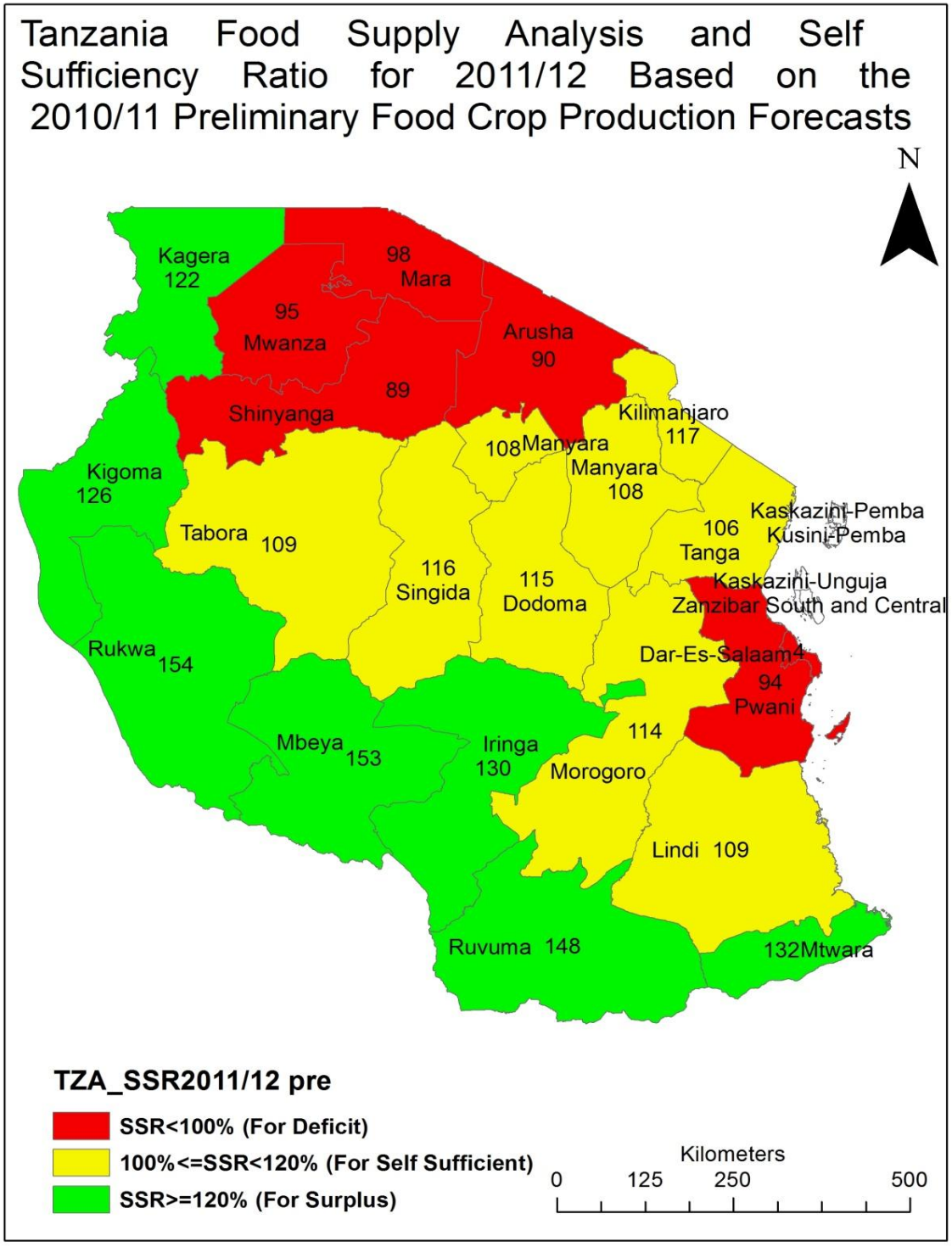
S/N	Region	SSR Status	No of Dist.	Districts
1	Arusha	89	7	Arusha DC, Arusha MC, Karatu, Longido, Meru, Monduli, Ngorongoro
2	Tanga	112	5	Lushoto, Mkinga, Pangani, Kilindi, Tanga TC
3	Shinyanga	98	5	Shinyanga M, Shinyanga V, Kishapu, Kahama, Meatu
4	Mwanza	99	5	Magu, Ilemela, Nyamagana, Geita, Misungwi
5	Kilimanjaro	116	5	Hai, Moshi V, Mwanga, Same, Siha
6	Coast	101	5	Kibaha TC, Kibaha DC, Bagamoyo, Mafia, Rufiji
7	Tabora	110	4	Nzega, Igunga, Sikonge, Tabora M
8	Mara	99	3	Musoma V, Musoma M, Bunda
9	Manyara	113	3	Babati DC, Mbulu, Simanjiro
10	Kagera	122	2	Muleba, Bukoba V
11	Mtwara	132	1	Masasi
	TANZANIA SSR=112%: VA in 11 regions, 45 districts.	**Regions** 11 regions bear VAs: 2 green, 5 yellow, 4 red.	**Districts** 45 districts bear VAs: 3 green, 22 yellow, 20 red.	**While national self sufficiency status (SSR) is 112%, 11 regions contain vulnerable areas (VA) in 45 districts.**

Appendix No. 6: The 2010/11 National Level Preliminary Food Crop Production versus Requirement and gap/surplus analysis for 2011/12 (GRAIN EQUIVALENT TONNAGES)

Cereals	**Maize**	**Sorghum&Millets**	**Rice**	**Wheat**	**Cereals**
Production	**4,122,602**	**1,112,288**	**1,439,054**	**112,658**	**6,786,602**
Requirement	4,465,952	1,694,885	815,128	224,376	**7,200,341**
Gap (-)/ Surplus(+)	**-343,350**	**-582,597**	**623,925**	**-111,717**	**-413,739**
Non-cereals	**Pulses**	**Banana**	**Cassava**	**Potatoes**	**Non-cereals**
Production	1,684,086	1,047,945	1,568,390	1,723,795	**6,024,217**
Requirement	748,331	778,305	1,943,249	829,188	**4,299,073**
Gap (-)/ Surplus(+)	**935,755**	**269,640**	**-374,859**	**894,608**	**1,725,143**

TOTAL	**Cereals**	**Non-*cereals***	***TOTAL***
Production	6,786,602	6,024,217	12,810,818
Requirement	7,200,341	4,299,073	11,499,414
Gap (-)/ Surplus(+)	**-413,739**	**1,725,144**	1,311,404

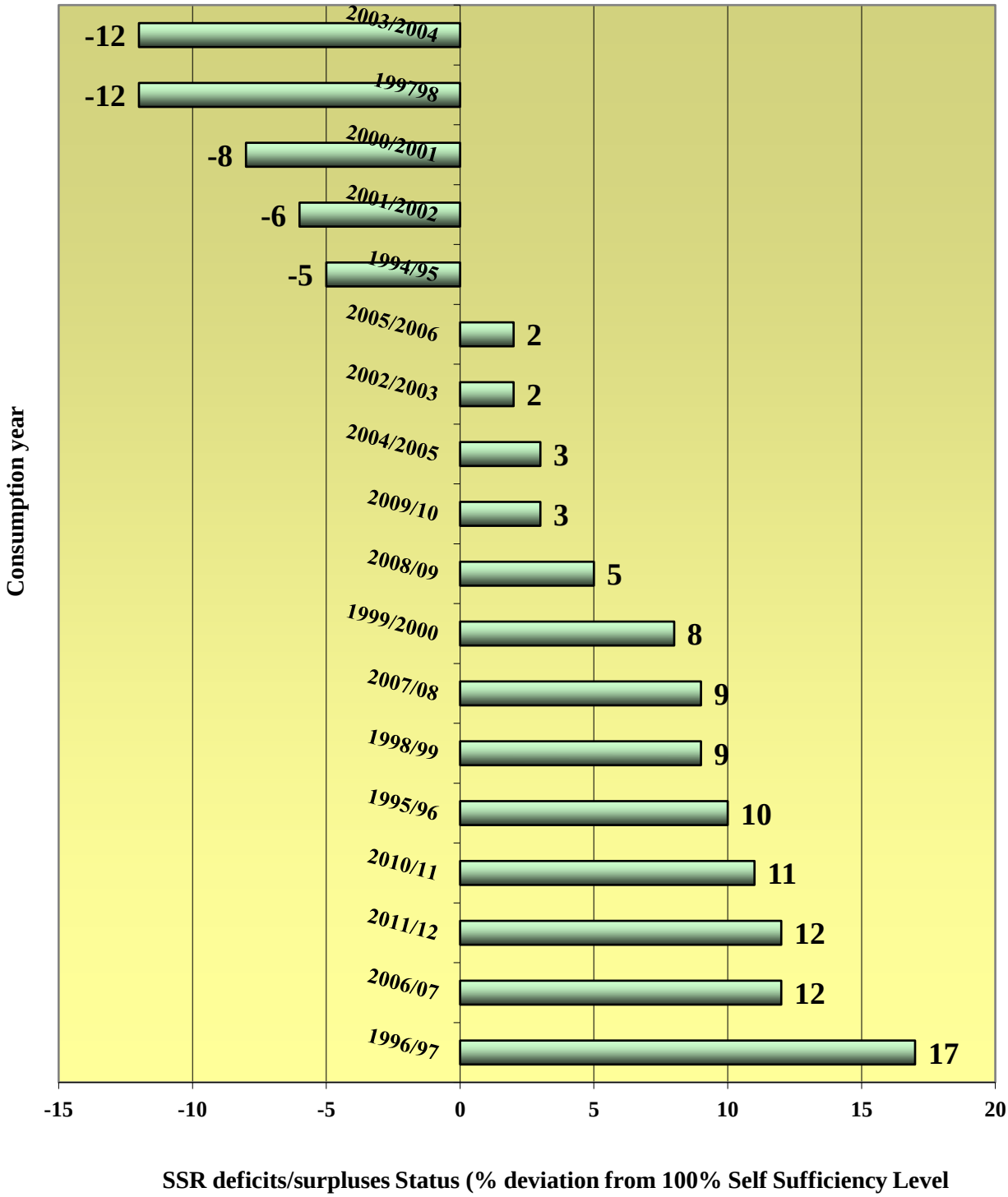
Appendix No. 7:



Appendix 8: A Comparison of the 2010/11 Final Forecast Thousand Tonnages vis-à-vis Preliminary Forecast, Last Year, Average and Trend Values of Food Crop Production in Tanzania based on 1986/87 - 2010/11

Year	Maize	Sorghum	Millets	Rice	Wheat	Cereals	Pulses	Cassava	Bananas	Potatoes	Non-cereals	Total	Year
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
Prel2010/11 (Recall)	4,123	801	311	1,439	113	6,787	1,684	1,568	1,048	1,724	6,024	12,811	Prel2010/11 (Recall)
2009/10 (Recall)	4,475	789	372	1,700	62	7,398	1,254	1,464	975	1,231	4,924	12,322	2009/10 (Recall)
24yaverage	2,731	722	181	614	80	4,328	640	1,690	775	716	3,867	8,195	24yaverage
5yaverage	3,617	808	243	1,024	88	5,781	1,140	1,804	823	1,344	5,334	11,115	5yaverage
TrVt	3,772	763	249	1,121	90	5,995	1,292	1,756	816	1,482	5,571	11,566	TrVt
%age change from 24y-average	59	12	72	138	40	63	155	-8	35	139	54	58	%age change from 24y-average
%age change from 5y-average	20	0	28	43	27	22	43	-14	27	27	11	17	%age change from 5y-average
%age change from Trvt	15	6	25	30	25	17	26	-12	28	15	7	12	%age change from Trvt
%age change from year t-1	-3	2	-16	-14	81	-5	30	6	7	39	21	5	%age change from year t-1
%age change from Preliminary Forecasts	5	1	0	2	0	4	-3	-1	0	-1	-1	1	%age change from Preliminary Forecasts

Appendix 9: Self Sufficiency Variations Overtime in Tanzania, 1994/95-2011/12 (Deviation from 100%)

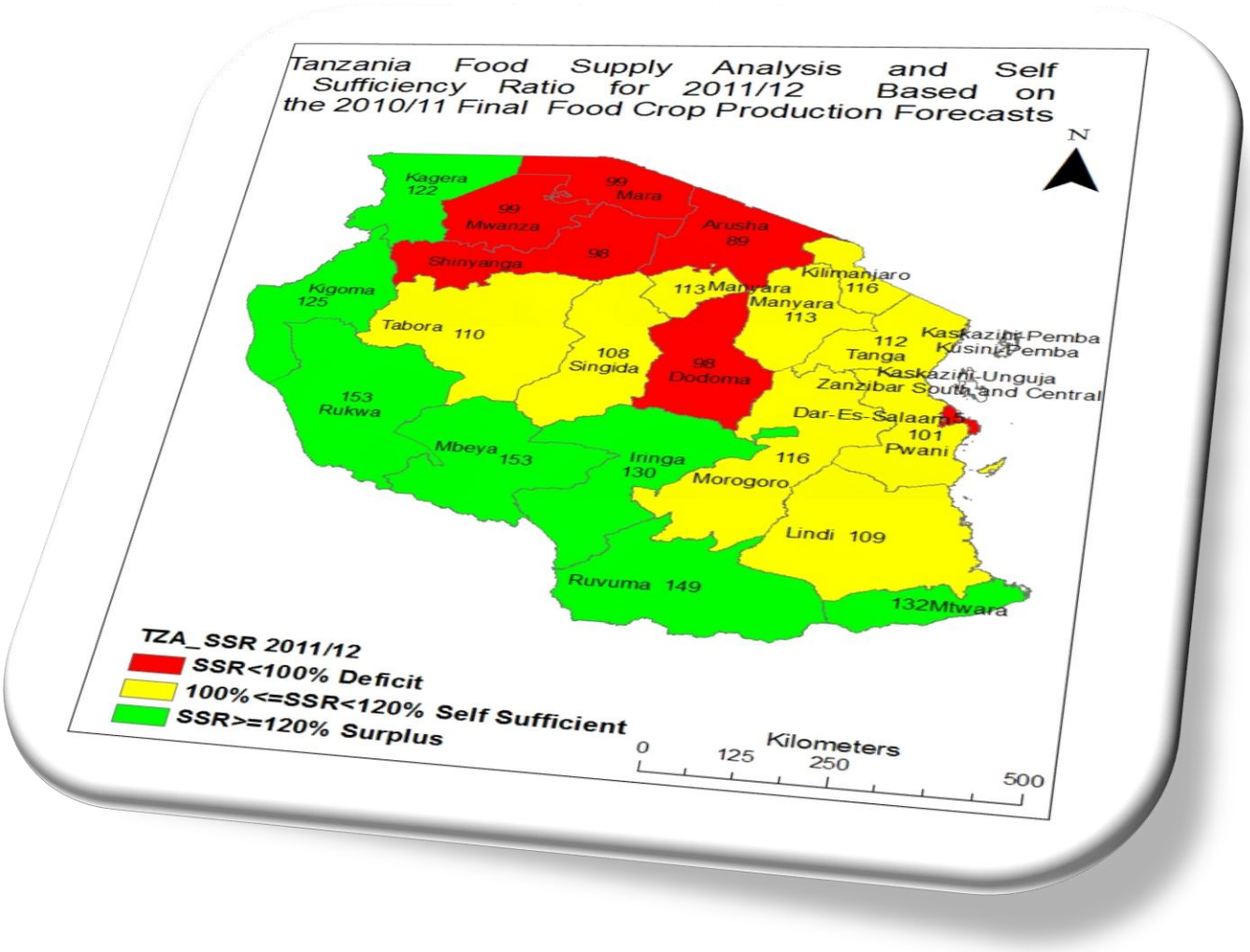


Appendix 10: Final Food 2011/12 Self Sufficiency and Associated Vulnerability vs Preliminary Predictions

REGION	Final Forecast		Preliminary Forecast		change		Status Interpretation	
	SSR (%)	VA districts	SSR (%)	VA districts	SSR	VA	Self sufficiency	Vulnerability
Arusha	89	7	90	7	-1	0	Declined	Stabilized
Coast	101	5	94	2	6	3	Improved	Tightened
Dar es Salaam	5		4	3	1	-3	Improved	Eased
Dodoma	98		115	2	-17	-2	Declined	Eased
Iringa	130		130	2	0	-2	Stabilized	Eased
Kagera	122	2	122	2	0	0	Stabilized	Stabilized
Kigoma	125		126		-1	0	Declined	Stabilized
Kilimanjaro	116	5	117	5	-1	0	Declined	Stabilized
Lindi	109		109		0	0	Stabilized	Stabilized
Manyara	113	3	108	4	5	-1	Improved	Eased
Mara	99	3	98	4	1	-1	Improved	Eased
Mbeya	153		153	2	-1	-2	Declined	Eased
Morogoro	116		114		2	0	Improved	Stabilized
Mtwara	132	1	132	1	0	0	Stabilized	Stabilized
Mwanza	99	5	95	6	4	-1	Improved	Eased
Rukwa	153		154		-1	0	Declined	Stabilized
Ruvuma	149		148		1	0	Improved	Stabilized
Shinyanga	98	5	89	8	9	-3	Improved	Eased
Singida	108		116	3	-8	-3	Declined	Eased
Tabora	110	4	109	4	1	0	Improved	Stabilized
Tanga	112	5	106	1	6	4	Improved	Tightened
TANZANIA	**112**	**45**	**111**	**56**	**1**	**-11**	**10,4,7**	**9,10,2**

Note: Colours in status columns: Green is improvement, yellow means unchanged (stabilization) and red means worsening(tightening/declining).

While self sufficiency status improved at national level, it did same in 10 regions, stabilized in 4 regions and worsened in 7 regions. Vulnerability improved at national level as well as in 9 regions while it stabilized in 10 regions and worsened in 2 regions.



In summary:

Based on the 2010/11 Final Food Crop Production Forecast Survey, Tanzania during 2011/12 will be 112% self sufficient. With 1,440,003 tonnes of available surplus which together with carry-over stocks amounting 787,908 tonnes available from public, private and household retention adds up to 2,227,911 tonnes. Amidst this national high-level status of self sufficiency, the sub-national levels bear a mixed status. There is evidence to indicate that 7 regions will be definitely surplus bearers, 8 regions will be definitely self-sufficient in food and 6 regions will be definitely deficit. Here and there, pockets of vulnerable areas are signaled in 45 districts in 11 regions.

Maeneo Tete, 2011/12 - kulingana na Tathmini ya Uvunaji 2010/11 (*Final Forecast).*

Na.	Mkoa	Kiwango cha Utoshelev	Idadi ya Halmashauri	Orodha ya halmashauri zenye maeneo tete
1	Arusha	89	7	Arusha DC, Arusha MC, Karatu, Longido, Meru, Monduli, Ngorongoro
2	Tanga	112	5	Lushoto, Mkinga, Pangani, Kilindi, Tanga TC
3	Shinyanga	98	5	Shinyanga M, Shinyanga V, Kishapu, Kahama, Meatu
4	Mwanza	99	5	Magu, Ilemela, Nyamagana, Geita, Misungwi
5	Kilimanjaro	116	5	Hai, Moshi V, Mwanga, Same, Siha
6	Pwani	101	5	Kibaha TC, Kibaha DC, Bagamoyo, Mafia, Rufiji
7	Tabora	110	4	Nzega, Igunga, Sikonge, Tabora M
8	Mara	99	3	Musoma V, Musoma M, Bunda
9	Manyara	113	3	Babati DC, Mbulu, Simanjiro
10	Kagera	122	2	Muleba, Bukoba V
11	Mtwara	132	1	Masasi
	TANZANIA Utoshelevu (SSR=112%), maeneo tete (Mikoa 11, Halmashauri 45)	Mikoa yenye maeneo tete 11: 2 kijani, 5 njano, 4 nyekundu	Wilaya zenye maeneo tete 45: 3 kijani, 22 njano, 20 nyekundu.	**Wakati nchi ina SSR ya 112%, mikoa 11 ina maeneo tete katika Wilaya 45**

Wakati nchi inajitosheleza kwa chakula kwa viwango vya 112%, mikoa 11 itakuwa na maeneo tete. Kati yake, mikoa 2 ni ile yenye chakula cha ziada, 5 inajitosheleza na 4 inakabiliwa na uhaba dhahiri. Wakati huo huo, taarifa za kuwepo kwa maeneo tete zinaainisha kwamba halmashauri 45 zitaathirika na hali tete ya chakula kwa viwango mbalimbali. Kati yake, halmashauri 3 ziko katika mikoa yenye ziada, halmashauri 22 ziko katika mikoa inayojitosheleza kwa chakula na halmashauri 20 ziko katika mikoa yenye uhaba dhahiri.

Ikilinganishwa na Tathmini ya Awali, hali ya kujitosheleza kwa chakula iliimarika kitaifa, hali ambayo pia ilitawala katika mikoa 10. Hali ya chakula ilibakia bila mabadiliko katika mikoa 4 na kudorora katika mikoa mingine 7. Hali tete (Vulnerability) iliendelea kuwa nafuu kitaifa na hali kadhalika katika mikoa 10. Hali tete ilibakia bila mabadiliko katika mikoa 9 na kudorora zaidi katika mikoa 2.