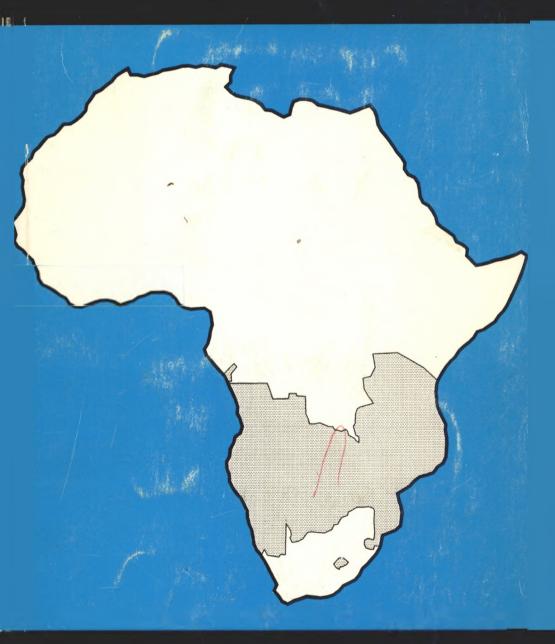
# Market Reforms, Research Policies And SADCC Food Security



Edited by

Mandivamba Rukuni & J.B.Wyckoff

University of Zimbabwe UZ/MSU Food Security Research in Southern Africa Project

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# Food Access And Nutrition Policy/Programme Linkages In Mainland Tanzania

Festo P. Kavishe<sup>1</sup>

#### INTRODUCTION

Food access is an important component of food security. Food security has little meaning unless food is available, accessible, consumed and meets the basic nutritional needs of the individual and community. Nutritional security is a logical component of food security.

Food and nutrition security implies availability of food, access and consumption by the individual. Adequate individual consumption requires that the total food available and accessible to the family consistently cover basic requirements and be equitably distributed within the family according to individual needs. Food and nutrition security means access by all people, at all times to enough food for an active healthy life (World Bank, 1986).

This paper discusses the question of food access and nutrition policy/programme linkages in mainland Tanzania. It assesses the nature and magnitude of the problem the linkages between nutrition and food security, the knowledge gaps that exist and how to fill such gaps.

#### THE NATURE AND MAGNITUDE OF THE FOOD PROBLEM

Tanzania is predominantly an agricultural country. FAO (1990) estimates that the agricultural sector (including livestock, forestry and fisheries) contributes, on average, 51 percent of the gross domestic product (GDP); accounts for over 72 percent of export earnings; provides employment for over 80 percent of the labour force; and provides raw materials for over 85 percent of the country's industrial production. Apart from being the backbone of the country's economy, the agricultural sector plays a major role in food self-sufficiency.

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## Food Sufficiency in Tanzania

Tanzania, since independence in 1961, has put a lot of emphasis on food selfsufficiency (TANU 1967, 1971; URT 1964, 1969, 1976, 1982a, 1982b and 1984). Food self-sufficiency is defined as "supplying staple food requirements from domestic production". Food self-sufficiency is not a necessary condition for food security if enough money, including foreign exchange, is available to purchase food. However, the economic problems facing Tanzania and the risk inherent in the present international economic (dis)order make national food sufficiency an essential element in Tanzania's food security goal. But the determination of food selfsufficiency in Tanzania is difficult because of inadequate data and definitional problems.

The types of food eaten by different population groups in a particular area constitute the "food basket". The food basket can be determined by looking at consumption patterns. The consumption pattern in Tanzania consists mainly of one staple food, supplemented with beans or peas, green leafy vegetables and occasionally meat. In some areas, fish and milk contribute substantially to the energy and protein content of the diet. Sufficiency of energy requirements from the mixture of the foods consumed usually meets the requirements of the other nutrients (protein, minerals and vitamins). Food sufficiency is usually an expression of energy sufficiency from the major staples.

The major sources of energy in Tanzania are derived from the consumption of:

- ٥ maize, contributing on average more than 60 percent of the energy from the staple foods;
- cassava, rice and sorghum/millet contending for second place in energy 0 supply with variations from year to year, with rice of greater importance in urban than rural areas;
- wheat, the least important of the "preferred staples";
- ٥ potatoes (sweet and round), yams and bananas are much lower in food energy per kilogram than other staples but consumed in large quantities: and.
- beans, which are becoming increasingly important (Kavishe, 1990b). ٥

This discussion of food sufficiency will focus on the production of these "foods", and will focus on two levels -- National and Household.

# National Food Sufficiency

Except during drought years, Tanzania was largely self-sufficient in food production until the mid 1970s.

During the 1961-66 period, food self-sufficiency was taken for granted. Tanzania was the only independent African state achieving a growth trend in food production higher than that of population (Amani et al., 1988:72).

The situation changed following the two year drought of 1973-74 and 1974-75. Food imports, necessary for relief during the crisis years, continued to provide a substantial part of food requirements, particularly for maize. The average annual rate of growth in food supply was 2,6 percent for the period 1970-71 to 1983-84 lagging behind the increase in national food consumption estimated at 5,9 percent (Mushi, 1989).

Good rains since 1984-85 and price incentives resulting from structural policy reforms have resulted in a significant increase in food production. This has highlighted the critical problem of the geographical distribution of production being remote from the main consumer markets. National food adequacy computations indicates that Tanzania's food production has provided more than enough to meet theoretical overall food and energy requirements. Subtracting 15 percent from production for seeds and post harvest losses, the balance available for food needs is around 120-140 percent of estimated requirements while that for nutritional energy requirements stand very close to 100 percent, Table 1.

Contrary to current thinking that aggregate national food availability in Tanzania, since the advent of good weather and economic recovery, is that of plenty, in reality, it is a flimsy balance between production and needs. The fragility of the situation stems from the post harvest losses. Estimates of post harvest food loss range from five percent to 40 percent (FAO 1990, quoted in Kavishe, 1982).

These computations do not take into account the energy intake originating from animal products (livestock and fisheries). The Livestock Development Programme in the Ministry of Agriculture and Livestock Development estimated the following for 1988: 457 million litres of milk; 184 000 tonnes of beef; 28 000 tonnes of sheep and goat meat; 290 million units of eggs; 15 000 tonnes of poultry and 8 000 tonnes of pig meat. For fisheries, in 1987, it was estimated that 303 000 tonnes of fresh water fish were caught, 53 percent from Lake Victoria.

Table 1						
Tanzania: National aggregate food balance for 1984-85 to 1988-89	)					

Years	Total Pro	Total Production		Total Requirements		Available Balance	
	Food (000mt)	Energy (m kcal	Food (000mt)	Energy (m kcal)	Food (%)	Energy (%)	
1984-85	7 026	24 261	4 543	21 047	131	98	
198 <b>5-8</b> 6	6 972	24 100	4 670	21 637	127	95	
1986-87	7 048	24 499	4 801	22 243	125	94	
1987-88	6 780	23 598	4 935	22 865	117	88	
1988-89	7 919	27 355	5 073	23 506	133	99	
Notes:							
	llance assu <mark>mes</mark> a	-	eduction of t	otal producti	on due to	seeds and	
	equirements rela		ction to the r	opulation us	ing 1988 cc	nsus data.	

- Initial production data derived from Food Security Bulletin, June 1989, 3. Ministry of Agriculture and Livestock Development (MALD).
- Food and energy requirement computations were based on 1985 FAO/WHO recommendations of 600g of food per person per day and FAO/WHO/UNU recommendations of 2780 kcal per person per day respectively.
- 5. The following figures were used for the mean energy content of the food products per 100g of edible portion: 350 kcal (=0,6 processing coefficient for paddy), 325 kcal for beans, 330 kcal for wheat, 385 kcal for bananas, 320 kcal for cassava and 460 kcal for sweet potatoes and yam.

# Regional Food Sufficiency

The year 1988-89 is acknowledged as a bumper harvest year for Tanzania. Although it was a bumper harvest year, it appears that about 40 percent of the Tanzania population lived in food deficit regions. Another 20 percent just reached a tight balance, leaving 40 percent who could be described as self-sufficient in food production.

Dar es Salaam is the main food deficit region followed by Kigoma, Dodoma and Mara with a production of only 50-60 percent of their energy requirements. The main surplus regions are Kager (bananas, beans and cassava), Ruvuma (maize), Shinvanga (maize and paddy) and Rukwa (maize) producing more than 150 percent of the food energy they actually require. The importance of traditional staples is highlighted by the case of Kagera which is often considered a food deficit region.

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#### **Household Food Security**

Most households in rural Tanzania consume the food they produce. In a particular household, food security is determined by what the household is able to produce, store, process and prepare. In turn, these are determined by the agricultural productive resources available, such as the amount and quality of land, the amount and division of labour, the health and motivation of the household members, the level of available technology, as well as climatic and ecological conditions. Available female labour is a critical factor because more than 80 percent of household food production is done by women.

Table 2
Tanzania: Proportion of households in Miwara and Morogoro regions reporting inadequate harvests to meet food needs, 1987-88 and 1988-89.

Region		1987-1	1987-1988		
	District	n	%	n	%
MTWA	RA				
	Masasi	398	67,7	398	67,7
	Newala	135	76,7	135	76,7
	Newala Rural	137	71,0	137	71,0
MORO	GORO				
	Kilosa	1 098	60,5	1 084	62,2
	Killombero	291	64,2	281	63,5
	Ulanga	206	50,0	203	46,8
	Morogoro Rural	282	63,8	282	72,7
	Morogoro Urban	60	63,3	60	61,7

Source: Kingamkono R. 1987 (20), 1989 (43), and Ntebe et al, 1989 (44).

The process and extent to which available food reaches household members throughout the whole year defines the access to food, i.e., who eats what, how often and how much, Table 2. A rapid assessment of 400 households from 21 villages in Mtwara Shinvanga and Zanzibar revealed that food grains lasted for six to eight months after harvest in 80 percent of the households (Seenapa and Mlingi, 1988). Marked differences were noticed between cassava growing regions and non-cassava growing areas. Food grains harvested in the cassava growing areas (Mtwara and Zanzibar) lasted two to three months longer than those in non cassava growing areas (Shinyanga). The better household food security situation in Mtwara and Zanzibar was attributed to the cultivation of the drought resistant cassava as both a food and cash crop. The keeping of livestock also seemed to improve the food

security situation and may explain the generally low rates of malnutrition observed in livestock keeping areas.

#### NUTRITIONAL STATUS AND FOOD SECURITY

Tanzania suffers from four major endemic nutritional deficiencies:

- 0 protein energy undernutrition (PEU);
- nutritional anaemia;
- iodine deficiency disorders (IDD); and,
- vitamin A deficiency (VAD).

Other deficiencies occur sporadically causing pellagra, beriberi, scurvy and rachitis.

#### Extent and General Pattern of Malnutrition

The estimated magnitude of the major nutritional deficiencies is shown in Table 3. These 1987 estimates are crude and based on nutrition information which is not nationally representative. For example, Iringa Region, which has the longest data series on under five nutritional status, indicates an overall decline of total underweight children (<80% weight for age) from 55,9 percent in 1984 to around 36 percent in 1989. For severe underweight (<60% weight for age), the decline was from 6,3 percent to just under two percent for the respective years.

Declines in the rate of malnutrition have occurred in the two districts of Kagera region implementing the UNICEF supported Child Survival and Development (CSD) programmes. Ngara and Biharamulo districts, which had total underweight rates of 60 percent in 1985, were reporting rates of 44 percent and 40 percent respectively in 1989. Incidence of severe underweight has been reduced from 12 percent and ten percent to below four percent and one percent for Ngara and Riharamulo districts, respectively. For Kilimanjaro Region, Hai district, which has been operating a community based information system since 1987, the prevalence of underweight children dropped from 34 percent to 18 percent by the end of 1989. For severe underweight, the drop was from 3,5 percent to 1,5 percent. Table 3 shows that the four major nutritional problems affect children under five years of age and pregnant or lactating women. Malnutrition is not limited only to these 'vulnerable groups'. Older children and adult males are also affected.

Analysis of the pattern of child growth indicates that children grow normally to the age of 6 months presumably due to breastfeeding. Growth retardation appears with an increase in the prevalence of all types of Protein Undernutrition (PEU). The highest rate of growth retardation occurs between 6 and 24 months resulting in high levels of undernutrition between one to three years. The critical period seems to

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be between 6 and 36 months, an age that coincides with the weaning period and the period of the severest childhood diseases. Poor feeding, weaning foods, and diseases appear to causes of undernutrition.

Table 3
Tanzania: Prevalence of nutritional problems for age/group, 1987.

Age Group	Protein Energy Undernutrition (PEU)	Anaemia	Iodine Deficiency Disorders (IDD)	Vitamin A Deficiency (VIT.DEF)
		% 1	Affected	
Children under 5 years	52,0	45,0	13,0	30,0
Pregnant/lactating women	13,0	80,0	52,0	0,7
School children and other adults	20,0	20,0	40,0	0,1
All age groups	28,0	32,0	25,0	6,1

Source: Kavishe, F.P., 1987. The Food and Nutrition Situation in Tanzania in 1987, TFNC Report No 1215.

Acute forms of malnutrition (wasting) leads to adaptation (stunting). This decreases the physiological nutrition requirements for stunted children helping them meet their nutritional requirements. Wasting generally increases with age and has its peak prevalence during the second year of life together with diseases like diarrhoea. Stunting increases with age as children accumulate height deficits due to repeated episodes of disease accompanied by inadequate feeding. The result is that stunting becomes the commonest form of malnutrition seen in Tanzania. Catch up growth in height seldom takes place and people in Tanzania generally are shorter than their genetic potential (Kavishe *et al.* 1990). The persistence of high levels of chronic undernutrition (stunting) reflects a chronic problem of food insecurity at the household level.

## The Paradox of Nutrition and Food Security

Despite considerable regional differences in food production and wealth among various areas of the country, global malnutrition does not vary in the same proportion nor in the same direction. The problem of PEU has been described as constant over time and geographical location with the possibility that nearby villages have greater variation than regions (URT/UNICEF, 1985). This pattern of variation is similar to that described for food sufficiency. In fact, the most striking feature is that per capita global food production and regional wealth do not seem to relate directly to levels of malnutrition, nor to infant and child mortality rates. Inadequate intake of food is not necessarily correlated with low levels of food production.

Table 4 illustrates this paradox, with data from the seven regions implementing UNICEF supported CSD programmes, where there is satisfactory community based data on nutritional status. Kilimaniaro, the region where the available energy from food crops is the lowest (2415 kcal/capita), has the lowest rate of overall prevalence of child undernutrition (29 percent) perhaps because they are animal keepers. An analysis of the geographical pattern of Protein Energy Undernutrition in relation to the various agricultural production and consumption systems, illustrates the paradox between food availability from own production and the rates of PEU.

production/consumption developed The simple agricultural system USAID/TFNC (Bryceson et al., 1986) assists in differentiating between the causes and the types of malnutrition. Food availability, malnutrition and food insecurity (particularly the reaction capacity in times of acute food crisis) appear as three different concepts. The areas which seem to have the greatest food insecurity have pastoralist and millet/sorghum/livestock production systems with the latter having the most severe problems. The cassava growing areas are also considered to be food deficit. The most severe food deficit, though not food insecure, region is Dar es Salaam.

Table 4 Tanzania: Food availability from production and malnutrition, 1988-89.

Region	Food Balance (Kcal/cap/day)	Prevalence of Malnutrition (1989) (%)		
	1988-89	Severe	Total	
Iringa	4 060	2,4	40,3	
Kagera	<b>5</b> 530	1,7	38,7	
Mtwara	<b>3 92</b> 0	9,2	56,1	
Ruvuma	5 530	3,8	38,9	
Kilimanjaro	2 415	1,9	29,0	
Morogoro	3 255	5,2	49,4	
Shinyanga	5 530	3.0	37,1	

Source: Kavishe and Yambi, 1990.

Cereal deficit areas with higher milk consumption have somewhat lower malnutrition rates. This relationship may be due to the higher energy density of fresh milk and ease of consumption. (Bryceson et al. 1986).

Food deficit areas contained between 40 to 60 percent of the mainland population in recent years, yet many of these food deficit areas have lower malnutrition rates than the food surplus areas (maize surplus regions). Malnutrition in relation to household income may be a key element in explaining this variation. But practical

strategies of farmers do not clearly show whether a food safety margin is providing for more than survival, using reserve crops such as cassava or cash activities to complement food needs. There may also be a real gap between what farmers consider to be sufficient food for proper nutrition and the figures set by nutritional scientists. Some studies done in the food surplus areas suggest, that on average, about one third of the rural population have to rely on working for food and/or cash to buy food despite adequate harvests. For example, the proportion of food insecure households in Rukwa region in 1988-89 was estimated to be 80 percent despite being a bumper harvest year (FAO 1990). It was because of such discrepancies that TFNC developed a Household Food Security Card to enable families to estimate the number of bags of their staple or legumes needed to sustain the households until the next harvest season considering the number of people in the household. The TFNC household food security card is based on two quantitative models. The first is a household food production model, where the amount of food harvested is calculated on the basis of average yield per area cultivated. The second is a household nutrient requirement model where household energy and protein requirements per annum are estimated on the basis of moderate activity and transformed into the whole household agricultural output. It was estimated that the average annual food requirement for a household of six people is three bags of cereal and half a bag of legumes (therefore called the "bag model").

# Policies Affecting Food and Nutrition Security

The Party and the Government have made several policy declarations and carried out a number of campaigns with the objective of attaining food security. Some specific policies with regard to food and nutrition have been declared and a series of macrolevel policies which affect food security have been developed. With the possible exception of these macro-economic policies, there has not been any monitoring of progress or evaluation of the implementation of the various policies or campaigns. A way of filling this gap would be the creation of a special unit dedicated to the monitoring of food security policies and measures. Such a unit would not interfere with existing services managing the different food and nutrition security sectors, but would provide support to decision makers by keeping a comprehensive view on the many dimensions of food security. This would facilitate consistency in the policy framework which might otherwise be over sensitive to pressure from international financial organisations, and would eventually lead to appropriate alteration of policy decisions. Generation of information for the proposed unit could come from existing information systems with the gap closed by appropriate research.

## Food and Nutrition Programmes

The varied nature of the food and nutrition problem in Tanzania allows different intervention paths to be taken. Actions may be directed towards ensuring production of adequate food supplies; maximizing stability in the flow of supplies; and securing access to available supplies, particularly for the vulnerable groups (children under five, pregnant and lactating women, and the at risk households).

Another intervention measure would be to ensure that accessible food is consumed in adequate and balanced amounts. Many intervention measures comprehensively cover all the elements, necessitating intersectoral coordination and cooperation.

Consistency between the policies and programmes exists, but the linkages between the different programmes is very weak. The formation in 1989 of a national steering committee for Child Survival and Development (NSC/CSD) within the Planning Commission, has greatly facilitated programme linkages. When the Food and Nutrition Policy is declared, a National Food and Nutrition Technical Committee will further strengthen programme linkages.

On the basis of a recent analysis of the Food and Nutrition Security situation in Tanzania (FAO 1990, Kavishe et al. 1990) food and nutrition security measures should focus on four priority points, i.e.:

- access to food consumption at the household level with particular emphasis 0 on the role and situation of women as key agents for feeding the household;
- monitoring of the process, progress and impact of specific macro-economic policies affecting food flows through the geographical redistribution of food crops and of economic accessibility to food;
- the transport and communication systems; and,
- the operation of the cooperative societies.

An important component of food and nutrition security is the whole question of community participation. Present food security strategies do not take full advantage of this opportunity. There are too many technologically based "magic bullet" approaches recommending solutions which have been successful in other settings without adequate adaptation. Communities should be helped to assess their own food security problems, identify and analyze the causes and take appropriate action based on available resources. This "Triple A" cycle of assessment, analysis and action seems to be a generalisable key component of successful food and nutrition programmes (Yambi et al. 1989).

# CONCLUSION

Tanzania is faced with an extensive problem of food and nutrition insecurity. Nearly 40 percent of the population is prone to food insecurity. Household food insecurity is reflected in high rates of child malnutrition.

Several policy and programmatic steps have been taken to improve food security. However, because of inadequate linkages between and among the policies and programmes and the lack of monitoring of their implementation, it is difficult to evaluate their impact. Casual observation indicates improvement and the nutrition situation seems to be improving where specific nutrition programmes have operated for at least two years. Research is needed to determine:

- the causes of the discrepancy between food availability and malnutrition;
- the mechanisms by which farmers cope with fluctuations in food supply;
- the relationship between nutritional status and household security;
- o community participation and mobilisation in household food security; and,
- the critical factors which are responsible for the success or failure of food and nutrition programmes.

#### REFERENCES

- Amani H.K.R. et al. 1988. Impact of Market Liberalisation on Household Food Security in Tanzania. In Mudimu G.D. and R.H. Bernsten eds. Household and National Food Security in Southern Africa. University of Zimbabwe/Michigan State University Food Security Research Project. Department of Agricultural Economics. Harare.
- Bryceson, J.; N. Metcalf; A. Shriver; J. Strauss; F.P. Kavishe and A. Petit. 1986. A review of the state of food and nutrition in Tanzania and its programming implications. Prepared for USAID/Tanzania. TFNC Report. No. 1019.
- FAO. 1990. Assessment and issue paper: The Nature of the Food Security Problem in Mainland Tanzania. Assistance for the Formulation of a Comprehensive National Food Programme. Revised draft Report No. 2.
- Kavishe, F.P. 1982. The Need for Increased Technical Assistance for Post-harvest Grain Conservation in Tanzania. Submitted as a Technical Report to London School of Hygiene and Tropical Medicine. University of London.
- Kavishe, F.P.; W. Lorri and O. Yambi. 1990a. Malnutrition and Household Food Security in Tanzania. A consultancy report for the World Bank and FAO. TFNC Report. No. 1309.
- Kavishe, F.P. 1990b. Malnutrition in Tanzania: a Situational Analysis in 1990. A consultancy report for UNICEF. TFNC Report. No. 1322.
- Mushi, S.S. 1989. The political economy of food and nutrition in Tanzania. A consultant report submitted to TFNC, Department of Political Science and Public Administration. University of Dar es Salaam.
- Sen, A. 1982. Poverty and Famines. Oxford Clarendon Press.
- Seenapa, M; and N. Mlingi. 1988. Household food security and the role of cassava. A case study from Tanzania. In: Proceedings of the 3rd African Food and Nutrition Congress. ;734-763.
- Tanganyika African National Union (TANU). 1967. The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance. Government Printer. Dar es Salaam.
- TANU. 1971. 'Mwongonzo wa TANU'. Government Printer Dar es Salaam.

- United Republic of Tanzania (URT). 1964. First Five Year Development Plan. Dar es Salaam.
- URT. 1969. Second Five Year Plan. Dar es Salaam.
- URT. 1976. Third Five Year Plan. Dar es Salaam.
- URT. 1982a. Long Term Perspective Plan 1981-2000. Government Printer. Dar es Salaam.
- URT. 1982b. Ministry of Agriculture. The Agricultural Policy of Tanzania. Government Printer. Dar es Salaam.
- URT. 1984. Tanzania National Food Strategy. Vol. I. Dar es Salaam.
- URT/UNICEF. 1985. Situation analysis of the problem of children and women and plans of operation and action, 1987-91. Dar es Salaam,
- World Bank. 1986. Poverty and Hunger: Issues and options for food security in developing countries. Washington. D.C.
- Yambi O; U. Johnson; and B. Ljunggvist. 1989. The role of government in promoting communitybased nutrition programmes. Experience from Tanzania and lessons for Africa. PEW/Cornell lecture series on Food and Nutrition Policy. October 24, 1989.



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