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ISBN: 978 - 9987 - 615 - 38 - 4



Special Paper 09.31

Institutional Analysis of Nutrition in Tanzania

By Valerie Leach and
Blandina Kilama

RESEARCH ON POVERTY
ALLEVIATION

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Published for: Research on Poverty Alleviation (REPOA)
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By: Total Identity Ltd.

Suggested Citation:

Valerie Leach and Blandina Kilama.
'Institutional Analysis of Nutrition in Tanzania'
Special Paper 09.31, Dar es Salaam, REPOA

Suggested Keywords:

Tanzania, malnutrition, nutrition, institutional analysis, growth & development, health, children, childcare, pregnant women, immunisation, breastfeeding, stunting, education, supplements

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ISBN: 978-9987-615-38-4

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List of Abbreviations

ANC	Antenatal Care
ARI	Acute Respiratory Infection
HMIS	Health Management Information System
JAST	Joint Assistance Strategy
IMCI	Integrated Management of Childhood Illness
MCH	Maternal and Child Health
MKUKUTA	Mkakati wa Kukuza Uchumi na Kuondoa Umaskini Tanzania (Swahili for the National Strategy for Growth and Reduction of Poverty)
MOHSW	Ministry of Health and Social Welfare [Tanzania], formerly the Ministry of Health [Tanzania] (MOH)
NBS	National Bureau of Statistics [Tanzania]
NCHS	National Centre for Health Statistics [Tanzania]
PMO-RALG	Prime Minister's Office – Regional and Local Government
REPOA	Research on Poverty Alleviation
TDHS	Tanzania Demographic and Health Survey
TEHIP	Tanzania Essential Health Interventions Project
TFNC	Tanzania Food and Nutrition Centre
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Foreword and Acknowledgements

This special paper includes information from a report commissioned by the World Bank, Tanzania in 2005-06 as one of a series of studies undertaken to strengthen interest and action to improve nutrition in Tanzania. The report highlighted the need for research on the institutional structures needed for scaling-up nutrition interventions. We are grateful to the World Bank for permission to include the substance of that report in this special paper.

Several people provided information for the World Bank study, and others offered constructive comments. We should particularly like to record our appreciation to Godwin Ndossi, the Managing Director, and the management team of the Tanzania Food and Nutrition Centre (TFNC). Hans Hoogeveen, World Bank Tanzania, was also supportive throughout the study. The review and comments of Michael Latham (Cornell University), Olivia Yambi (UNICEF) and Urban Jonsson were especially helpful. A draft of the report was discussed with a group of nutrition staff of TFNC, UNICEF, the World Food Programme and USAID, and the valuable feedback from participants was appreciated.



Disclaimer

Analytical work for this publication was funded by the World Bank as part of economic and sector work on nutrition in Tanzania. The report is disseminated by its authors to encourage the exchange of ideas about development issues. The report carries the names of the authors and should be cited accordingly. The findings, interpretations and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Executive Summary

This special paper provides a summary of the situation of nutrition in Tanzania, and an institutional analysis of the principal actors in nutrition nationally and locally. The paper argues the need to focus on prevention of malnutrition by protecting, promoting and sustaining improved nutrition in children under two years of age. This strategy implies the need to strengthen care and services, especially health services, for pregnant women and young children, and to increase attention on advocacy and communication for improved nutrition, with special support for improvements in child care and feeding. There needs to be a deeper understanding by all key actors in nutrition – parents, communities and service providers – of the underlying and basic causes for inadequate care and feeding of young children. Research, improved information systems, and training will be needed.

The following priority interventions are highlighted by this report:

- Improvement of health and care of pregnant and lactating women, especially young women and girls;
- Promotion and support of exclusive breastfeeding of babies for six months, and extended breastfeeding with complementary foods for children up to two years;
- Helminth control through the regular deworming of children;
- Rehydration for diarrhoea – carers of children must know to increase, or at least maintain, regular fluid and food intake;
- Malaria alleviation – provision of impregnated mosquito nets for pregnant women and young children, and early treatment of malaria with artesimin-based combination therapy;
- Immunisation – sustained high vaccination rates, especially against measles; and
- Micronutrient supplementation, particularly vitamin A supplementation.

Each council's integrated development plan should specifically incorporate nutrition with implementation coordinated by a designated focal point for nutrition. In areas of the country with high rates of child malnutrition, it is likely that additional staffing and financing for local authorities will be needed.

The national institution for nutrition, the Tanzanian Food and Nutrition Centre, needs to drive this focused strategy forward, in conjunction with emphasis upon the Centre's own strategic plan, including strengthened analytic work, increased technical support for sound information systems, and improved communication networks with national and community-based nutrition interventions. Above all, strong advocacy for nutrition and effective coordination of interventions under national leadership are urgently required to raise the profile of nutrition and improve nutrition outcomes in Tanzania. The "silent"

emergency of chronic malnutrition which so negatively affects the growth and development of nearly half the child population of Tanzania – and, in turn, the development of the country – should command much greater attention, at the very least the same levels of attention and resources which are accorded emergency response to alleviate temporary food shortages caused by drought or flooding.

Lastly, the paper recommends the establishment of a National Committee for Nutrition to ensure that child nutrition is prioritised in national planning and monitoring systems, with strong emphasis on promoting the importance of nutrition for the achievement of MKUKUTA's goals and on ensuring regular monitoring within the MKUKUTA monitoring system. The committee could also provide for effective national oversight of external support for nutrition.



Introduction

Tanzania has been at the forefront in promoting a conceptual framework for nutrition through its peak national institution, the Tanzania Food and Nutrition Centre (TFNC). Good nutrition is both a desired outcome for ensuring optimal human health, as well as a key determinant of development, for the individual and for society in general. Malnourished people are not as productive as they could otherwise be: a malnourished child does not have the same attention in school as a well-nourished peer and will not gain the same education; and malnourished adults cannot work as productively as well-nourished peers, with consequences for their incomes and, in turn, the national income (Mkenda, 2004; Alderman, Hoogeveen & Rossi, 2005).

Internationally, increasing recognition that targets and goals for development will not be achieved if those for nutrition are not met, has resulted in stronger advocacy for efforts towards improving nutrition (World Bank, 2006). In Tanzania too, goals for improving nutrition have been included in national development plans and strategies, notably in the National Strategy for Growth and Reduction of Poverty, commonly known by its Swahili acronym, MKUKUTA.

However, the inclusion of nutrition targets does not, in itself, guarantee that they will be met. In addition, all key actors in nutrition must have a thorough understanding of issues which determine nutrition outcomes, and work together effectively. Recognising the critical importance of information and coordination, TFNC, in collaboration with national and international partners, developed a strategic plan for nutrition.

This special paper outlines institutional implications flowing from that strategic plan, and seeks to inform priorities for nutrition work nationally. The paper highlights the main areas of action to be taken forward by key actors in nutrition, however, more detailed assessments of specific institutional arrangements will be needed to ensure that the priorities of the strategic plan are fulfilled.

The paper begins with a synopsis of the current status of nutrition in Tanzania (Section 2) and the key determinants of nutrition security in the country (Section 3). Section 4 identifies priority areas and groups for nutrition interventions nationally, followed by the description of key interventions to improve nutrition outcomes (Section 5). Section 6 then describes the principal actors in nutrition from the local level through to national institutions. Finally, Section 7 outlines an organisational strategy for nutrition in Tanzania, followed by recommendations for next steps to effectively strengthen nutrition planning and action (Section 8).

Status of Nutrition in Tanzania

Lack of nutrition security is reflected in malnutrition affecting many Tanzanians in different forms. Child malnutrition is indicated through the use of three anthropometric indices of nutritional status – height-for-age, weight-for-age, and weight-for-height. Micronutrient deficiencies are also common, notably anaemia, and vitamin A and iodine deficiencies. Undernutrition among Tanzanians is manifested at an early age, therefore, great emphasis is placed on monitoring child nutrition to avoid or minimise the adverse consequences of malnutrition.

Data from the three demographic and health surveys conducted in Tanzania in the 1990s show a consistent pattern in nutritional status among children: growth falters at a very early age, and then stabilises when children are 18-24 months of age (see Figures 1a, 1b and 1c).¹

Figure 1a: Z-Scores for Height-for-Age, by Age in Months, 1991-1999

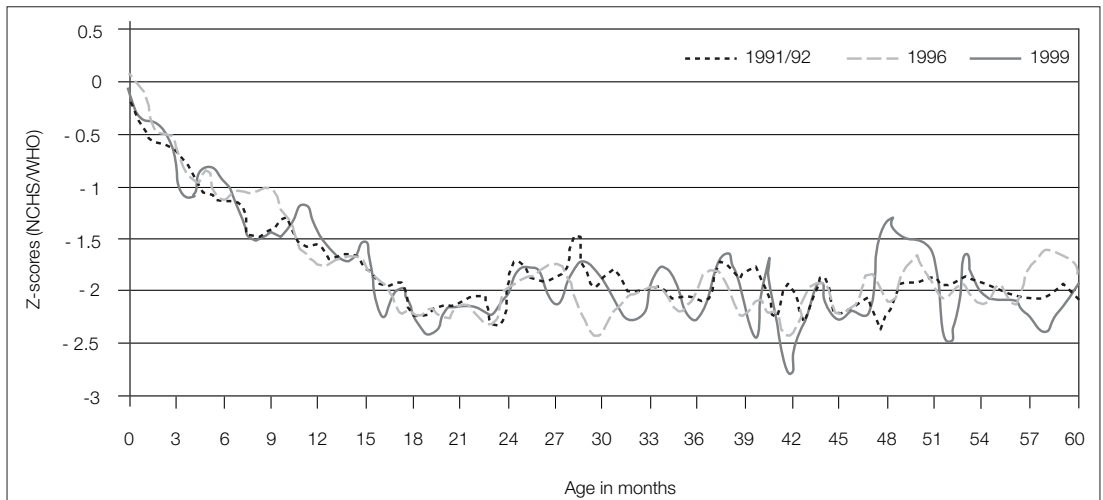
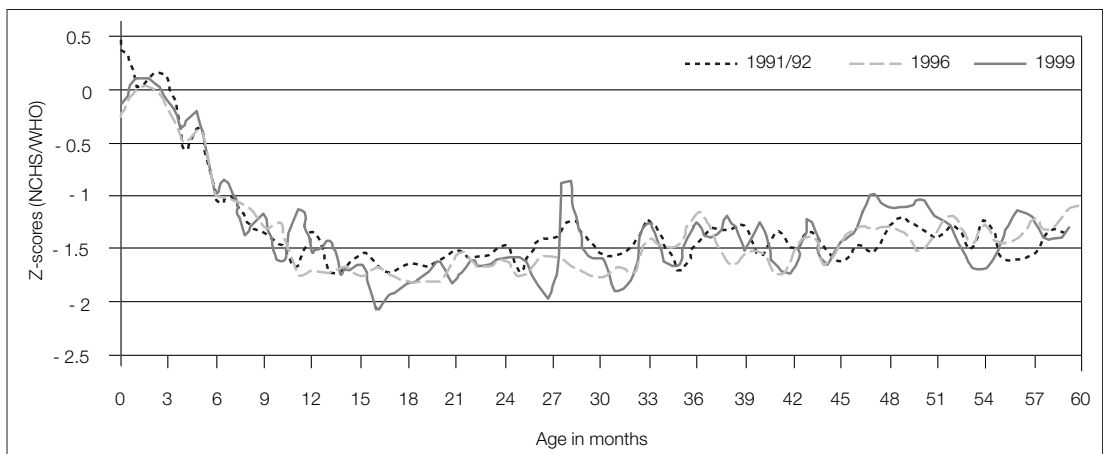
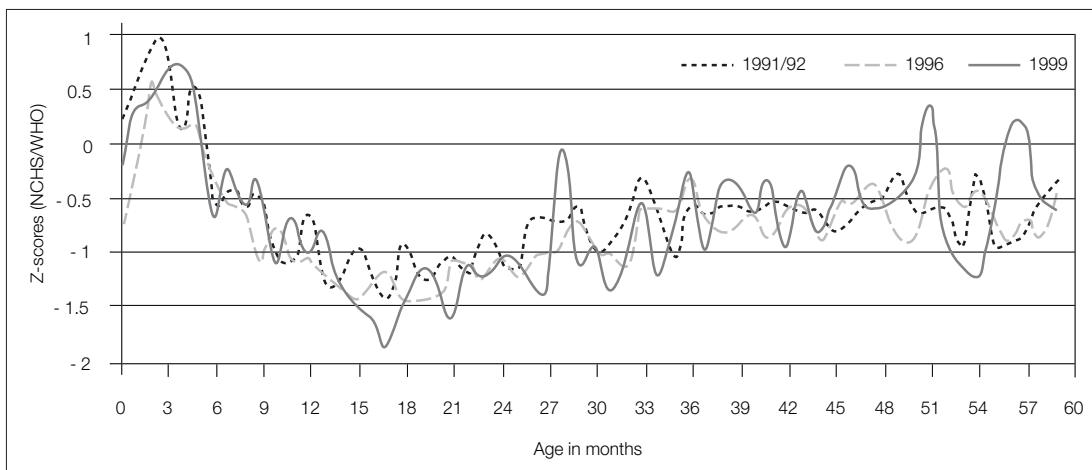


Figure 1b: Z-Scores for Weight-for-Age, by Age in Months, 1991-1999



¹ The Tanzania Demographic and Health Survey 2004-05 shows a similar pattern.

Figure 1c: Z-Scores for Weight-for-Height. by Age in Months, 1991-1999

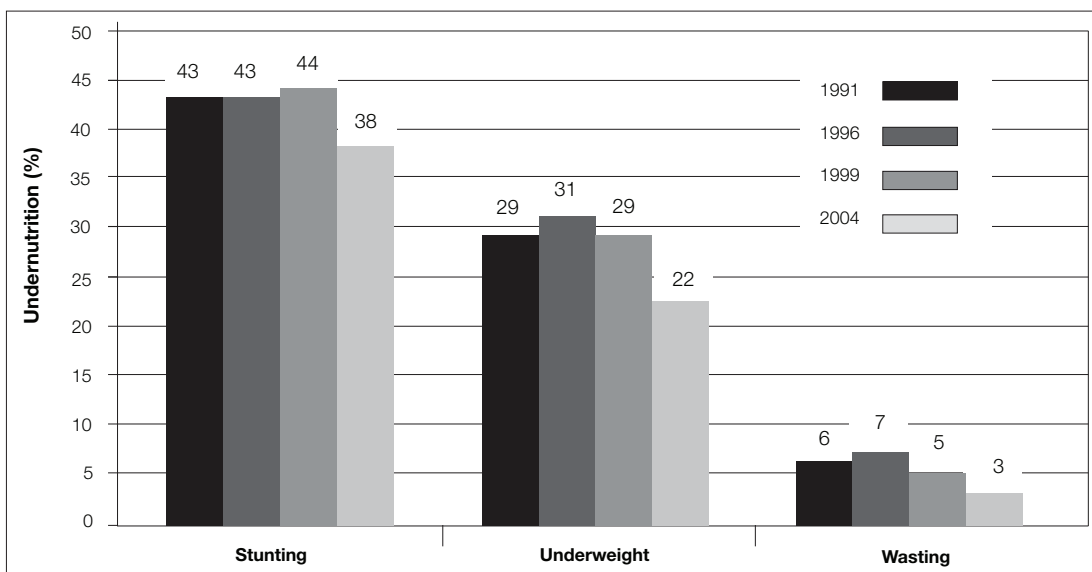


Source of three figures: Lindeboom and Kilama (2005), calculations based on data from Tanzania Demographic and Health Surveys, 1991, 1996 and 1999.

Extensive research has shown that loss of stature at an early age has long-lasting negative implications for a person’s physical and cognitive development which are extremely difficult to overcome. One study, for example, demonstrated that early malnutrition can reduce the height of an adolescent by 4.6 cm, schooling by 0.7 grades, and lifetime earnings by 7-12% (Alderman, Hoddinott & Kinsey, 2003).

Not only is there early onset of malnutrition in Tanzania but the rates of child malnutrition are high. According to data from the Tanzania Demographic and Health Survey (TDHS) 2004/05, about 40% of children under five years of age are stunted, i.e., they are short for their age, which is an indicator of chronic undernutrition, and about 3% are wasted, i.e., low weight for height, which is an indicator of acute undernutrition (National Bureau of Statistics (NBS) [Tanzania] & ORC Macro, 2005). Approximately 22% of children are underweight (low weight for age), which is a composite measure of long- and short-term undernutrition (see Figure 2). This last indicator is one of the Millennium Development Goals (MDG) indicators.

Figure 2: Percentage of Undernourished Children Under Five Years, 1991 -2004/5

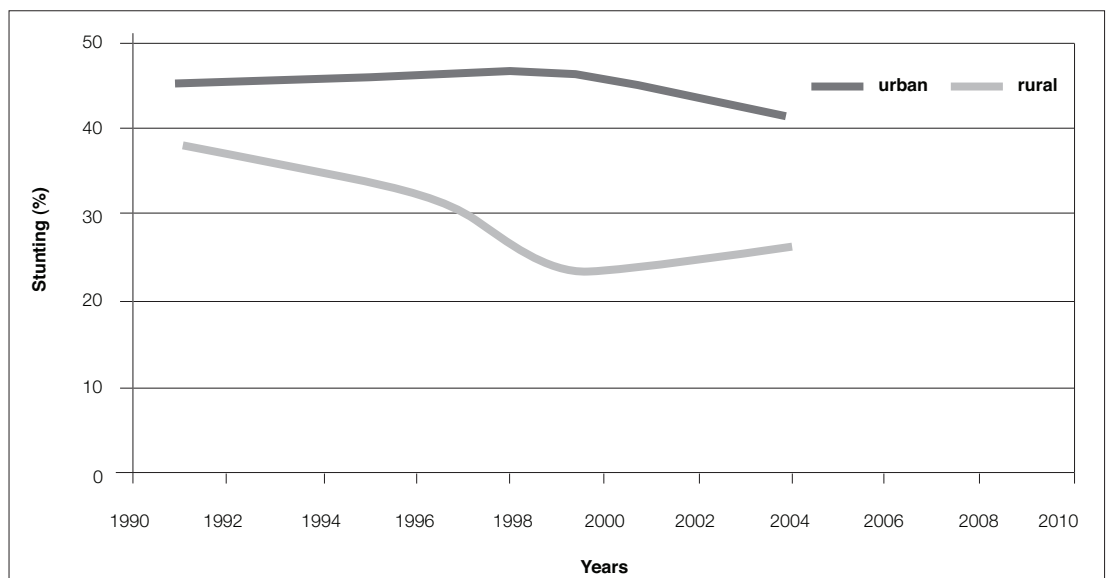


Source: TDHS 1991 & 1996, TRCHS 1999, TDHS 2004/05

Overall, urban children are more likely to enjoy better nutrition than rural children; according to the TDHS 2004/05, 26% of urban children under five years of age were stunted, compared with 41% of rural children.

Data from the TDHS indicate some improvements in nutrition. The prevalence of stunting fell in the 2004/05 survey after a period in the 1990s when there was no change. The percentage of children underweight for age and the percentage wasted has also declined since 1996. The declining rate of stunting among rural children accounts for the recent improvements observed at national level. Between 1999 and 2004, the prevalence of stunting in urban areas increased slightly to 26%. Rural rates, on the other hand, declined from 48% to 41% over the same period (see Figure 3). Nonetheless, given the high rates of malnutrition which are prevalent among rural children, it is unlikely that Tanzania will reduce stunting among children under five years to 20% by 2010, which is the target set under MKUKUTA.

Figure 3: Prevalence of Stunting in Urban and Rural Children, 1991-2004



Source: Lindeboom and Kilama (2005), using data from TDHS 1991/92-2004/05

Nutrition rates are worst amongst the poor. According to the 1999 Tanzania Reproductive and Child Health Survey (TRCHS), 50% of children in the poorest 40% of households were stunted, compared with 23% of children from the least poor 20% of households (NBS & Macro International, 1999).

Micronutrient disorders are also prevalent in Tanzania, particularly iron deficiency (anaemia), and vitamin A and iodine deficiencies. According to the TDHS 2004/05, approximately two-thirds of children and 43% of women are anaemic. The same survey reported that 73% of households were consuming iodated salt, and that the adequacy of the iodation varied considerably, with higher levels reported among urban households than among rural households. There has been a substantial increase in the availability of vitamin A supplementation. An assessment by Helen Keller International and TFNC in July 2004, shortly after the Vitamin A Supplementation Campaign, indicated that 85% of children aged 6-59 months received vitamin A supplements.

Low birth weight (below 2.5 kg) has changed little in the past few years. The TRCHS 1999 recorded that 9% of babies who had been weighed at birth had weights under 2.5 kg. In the TDHS 2004/05, the corresponding figure was 7%. Of note, about half of all births take place at home, hence, birth weights are recorded for only about half of all births. Low birth weight is a reflection of poor maternal health and nutritional status. There is evidence from a survey of low birth weight that adolescent mothers are more likely to be anaemic and undernourished than their older peers (TFNC, UNICEF (Tanzania) and Centre for International Child Health, 2002). Anaemia is associated with the high prevalence of malaria and parasitic infestations.



Key Determinants of Nutrition Security in Tanzania

Generally, nutrition status is affected by food intake, health, and caring practices.

Food intake is determined by the amount and quality of food available. From birth to six months, exclusive breastfeeding is recommended. Data from recent demographic and health surveys indicate that the percentage of babies under 6 months who are exclusively breastfed has been increasing, from 29% in 1996 to 32% in 1999 to 41% in 2004. However, exclusive breastfeeding is not common after a baby has reached two months of age; the practice tapers off quickly, and by the age of 4 to 5 months only 13.5% of babies are still being exclusively breastfed. Breastfeeding typically continues while infants are being weaned. For infants between 6 and 9 months, 91% are fed complementary foods along with breast milk (NBS, *et al.*, 2005).

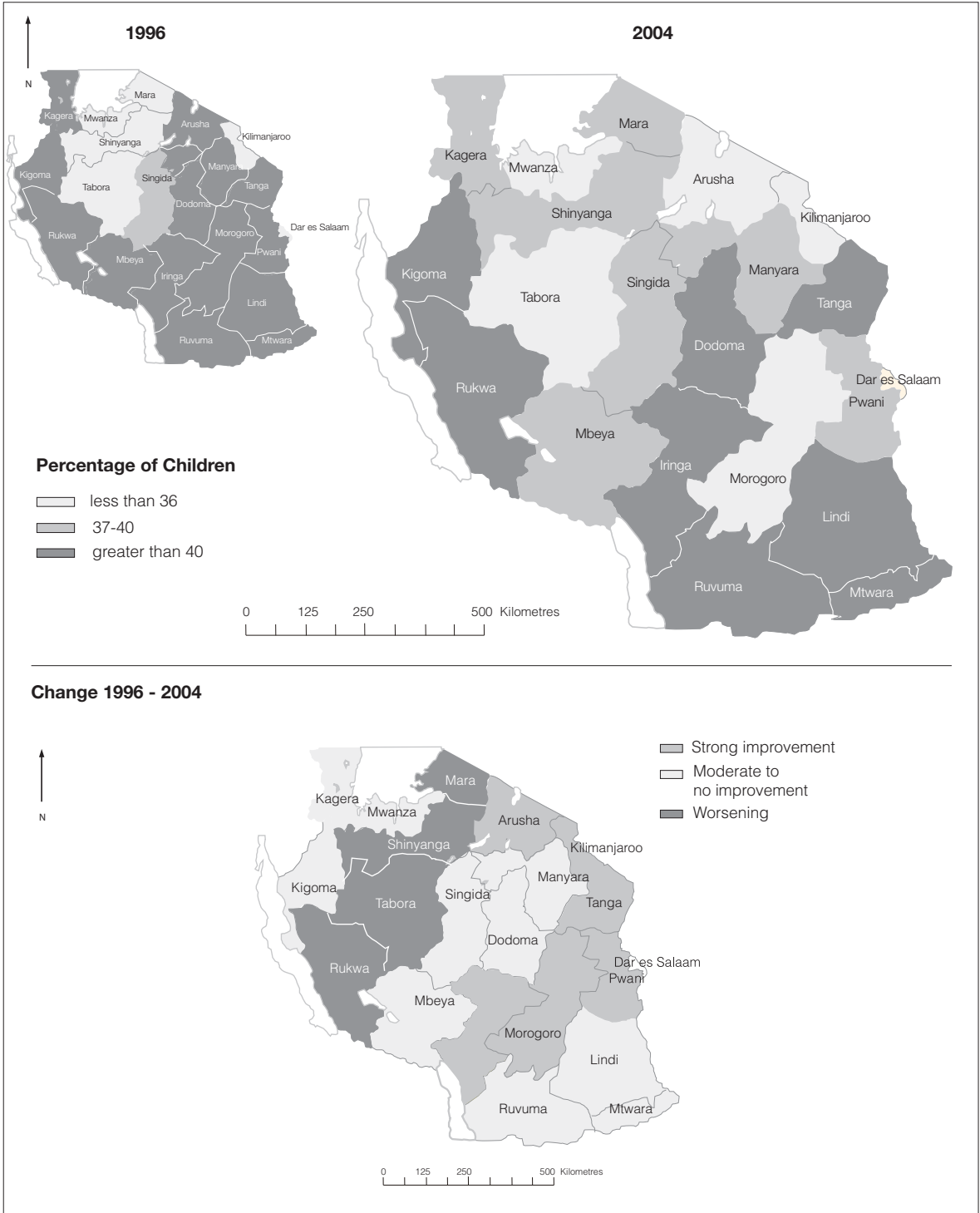
During the most critical nutritional period for children, i.e., under two years of age, the absolute amount of food in the household is unlikely to be the critical determinant of food intake. Children at this age consume little compared to older children and adults in the household. For such young children, food intake is more dependent upon the number of times per day they are able to eat – their small stomachs cannot absorb large quantities of food at one time – and the energy and nutrient density of their diets. The predominant diet in Tanzania is cereal-based with low energy and nutrient density. Food security, *per se*, is not the most critical determinant of the high prevalence of undernutrition in children in Tanzania. In times of critical food shortages, children suffer along with other family members in affected households, but food shortages typically do not determine undernutrition in young children.

The geographic pattern of malnutrition in Tanzania suggests that areas of the country which are the source of cereal surpluses, mainly in the south and west, are also the areas with relatively high rates of malnutrition. Food security, therefore, in the limited sense of cereal crop production, does not seem to be strongly associated with nutrition security.

Clearly, a broader perspective on food security is necessary, which is accepted in the Food Security Policy (Ministry of Agriculture and Food Security (MAFS) [Tanzania], 2004). Access to food and availability of food are the key determinants of food security, which, in turn, are strongly influenced by household income levels and food prices. Poverty is pervasive in Tanzania, and rural households are disproportionately poor. Not surprisingly, therefore, undernutrition in children is most prevalent among rural households and in the poorest households.

Thus the relationship between income and nutrition is a complex one, within and among households, and nationally. It is only in the least poor 20% of households where the percentage of children who are stunted falls substantially. According to the TDHS 2004/05, 15.7% of children in these households – which are predominantly urban – are stunted. In contrast, in households in the bottom four wealth quintiles, i.e., from the poorest to the less poor quintile, the percentage of children who are stunted is 45, 43, 41 and 38% respectively. There is a pattern of declining malnutrition with higher income, but several analysts have pointed out that increasing income accounts for only part of the decrease in malnutrition rates. Similar results have been found in analyses of the relation between higher national income (GDP) and rates of child malnutrition (Mkenda, 2004; Alderman, *et al.*, 2005). Factors other than income alone are clearly at play.

Figure 4: Percentage of Children Stunted, by Region, 1996 and 2004



Source: TDHS 1996 and TDHS 2004/05 Preliminary Report.

Parents' education affects children's nutrition. The children of mothers with secondary education are much less likely to be stunted, but the difference in nutrition between the children of mothers with no education and children of mothers with only primary education is not significant (Research on Poverty Alleviation (REPOA), 2004). Currently, very few mothers have secondary education. Much greater investment in the education system will be required before higher levels of schooling are common.

Health factors are critical for nutrition. Fevers, diarrhoeal diseases and acute respiratory infections (ARIs) are all common among children in Tanzania, and they affect appetite – hence, food intake – as well as the body's use of energy and other nutrients. During the two weeks prior to the TDHS 2004/05, 24% of all children under five years had fever, 13% had diarrhoea, and 8% had symptoms of acute respiratory infection (coughing accompanied by short rapid breathing). Children aged 6-23 months old were most affected. In this age bracket, 35% had a fever, one-quarter had diarrhoea, and 11% had symptoms of acute respiratory infection.

Recent improvements in prevention and treatment of malaria may explain in part the reduction in child malnutrition. More effective drug treatment has been introduced, and more children are sleeping under mosquito nets.

Systems to deliver health and other services, especially for poor and rural children, are critical, especially for young children and pregnant women. The capacity of health workers and administrators who are responsible for service delivery need to be strengthened. Increased financial allocations to local authorities through basket funding and budget support are supporting improvements in healthcare. However, people in poor and rural households do not have the same access to health services as their less poor and urban peers, both in distance to service providers and in the costs of obtaining healthcare (NBS, et al. 2005). Moreover, while districts have prepared comprehensive health and development plans, there is little mention of nutrition in these plans, even though malnutrition is recognised as a problem and some of the strategies in the district plans will indeed help to reduce rates of malnutrition.

Access to health services is one key aspect of care for children. **Caring practices** also affect patterns of breastfeeding and the number of times a child is given anything to drink or eat during the day. Caregivers who must spend most of their time provisioning households – farming, fetching water and fuel for cooking, washing, etc. – have little time to devote solely to caring for young children. Care for the youngest children is, therefore, commonly provided by older siblings, especially girls. And cooking is usually done only once per day. Snack foods could provide additional intake to reduce malnutrition, but such foods are not commonly given to young children, especially in rural communities and poor households.

In addition to feeding practices, care also includes hygiene practices and psychosocial stimulation. Sound hygiene practices are hampered by shortages of water and soap, unsanitary latrines, and inadequate waste disposal systems. As a result young children suffer frequent bouts of diarrhoeal diseases. Psychosocial stimulation is limited by the amount of time carers are able to devote to their children.

A particular group of children who need special care and feeding are those children who are so severely malnourished that they have been admitted to hospital. Provision of food for hospital patients is frequently inadequate, and is often left to the responsibility of families. In cases of severely malnourished children, the circumstances of families are likely to have contributed to the condition of the children who are in hospital. Hospitals, therefore, need to be able to provide the food and healthcare to ensure that children are well nourished and recover.

The effective communication of information plays a critical role in influencing caring and feeding practices. Normally this information comes from families and communities through informal means. However, health staff also have opportunities to provide information to almost all mothers of young children during antenatal visits. The TDHS 2004/05 found that 97% of pregnant women visit a health facility for at least one antenatal check-up, and almost all of them for two or more. In addition, at the time of the first visit to the health facility after the birth of the baby, 91% of infants are immunised with BCG which is given at that time. Community health days offer other possibilities for communicating sound nutrition practices. Throughout Tanzania, health days are organised at least twice a year when children are provided with vitamin A supplementation. These events are usually organised to coincide with the Day of the African Child on June 16, and World AIDS Day on 1 December. Schools are other venues for communication, both for siblings of young children who can share the information with their families, and for older pupils, especially adolescent girls, to gain greater understanding of nutrition.

Fundamental to all of the processes which influence nutritional outcomes is the importance that society places on good nutrition and on supporting those who are most likely to suffer from poor nutrition – children and pregnant women. Much more needs to be done to raise the level of importance attached to policies and strategies affecting nutrition and vulnerable groups, which, in turn, will significantly impact social and economic development more generally.

The “silent” emergency of chronic malnutrition which so negatively affects the development of nearly half the child population of Tanzania should command much greater attention, and be accorded at the very least the same priority and resources which are provided to emergency response to alleviate temporary food shortages caused by drought or flooding.

4

Priority Areas and Groups for Nutrition Interventions

Evidence from the TDHS 2004/05 indicates a reduction in child malnutrition, and it will be important that further analysis is undertaken to investigate the possible causes of this reduction, especially among rural children. Factors responsible for the decline could include increased coverage of vitamin A supplementation, stronger malaria control, increased exclusive breastfeeding, and more effective health services.

Nonetheless, a high proportion of Tanzanian children are stunted and, since malnutrition sets in at a very early age, a strong focus is needed on the reduction and prevention of malnutrition in children under two years, with concomitant attention paid to the health of women, especially young women, from pre-conception through to lactation.

It is clear that rates of malnutrition vary widely across different geographic areas of Tanzania, but more in-depth analysis is needed. In the TDHS 2004/05, Lindi, Mtwara, Ruvuma, Rukwa, Kigoma, Iringa, Dodoma and Tanga regions all recorded stunting in more than 40% of children under five years, and in several of these regions there had been little or no improvement since the DHS in 1996.

Some aspects of health services delivery may differ across regions and districts, but more basic determinants of child malnutrition may also differ by locality. It will be important that these localised determinants are known and understood so that focused action can be taken by households and communities, as well as by service providers and planners. Important factors will likely include the economic base of the household and divisions of labour, as well as child care, feeding practices and social practices more generally, particularly those concerning early marriage and gender relations.

Appropriate Nutrition Interventions

Appropriate nutrition interventions may be judged against their likely coverage, effectiveness and sustainability. Much has been learned in Tanzania over many years about the potential of different strategies. These lessons need to be considered in light of a focus on young children and women, especially those in rural areas, and on the understanding that much still needs to be done to reduce the high rate of chronic malnutrition.

Prevention of Low Birth Weight

Antenatal care (ANC) can improve the nutritional status of pregnant women as well as birth outcomes. ANC should include treatment to prevent anaemia: provision of iron/folic acid supplementation during pregnancy; prevention of malaria with increased use of impregnated mosquito nets and presumptive treatment of malaria; and treatment with mebendazole/albendazole during the second trimester of pregnancy. Workload reduction, and syphilis screening and treatment in women also have significant benefits for both the mother and the baby. However, evidence from the TDHS 2004/05 suggests that some of these components of antenatal care are not commonly provided, especially to rural women.

Since low birth weight is more prevalent among young mothers, especially those in their adolescence, raising the age of marriage and of sexual debut, especially among girls in rural communities with poor access to quality healthcare, would help reduce the incidence of low birth weight. Increasing the proportion of rural girls attending school, especially secondary school, will help, but this and the conscientisation of communities about the dangers of early marriage and the need to avoid pregnancy in girls will take time to effect change.

Breastfeeding

Almost all Tanzanian babies are breastfed, but the practice of exclusive breastfeeding for six months is rare. Much more needs to be done to support mothers to start breastfeeding within an hour of birth, to encourage them to continue breastfeeding exclusively for six months, and to prolong the period during which babies and infants are breastfed along with complementary foods. Breast milk would provide much needed additional energy and nutrients lacking in the common diet of young children.

Control of Micronutrient Deficiencies

Interventions to control micronutrient deficiencies can lead to substantial improvements in health, education and income. The Copenhagen Consensus illustrates the power of such interventions. Improving the vitamin A status of children aged 6-59 months reduces mortality; control of iodine deficiency disorders reduces incidence of low birth weight as well as infant and young child mortality; and reducing iron deficiency reduces incidence of low birth weight, improves schooling outcomes, and increases productivity in adult workers (Behrman, Alderman & Hoddinott, 2004).

The control of micronutrient deficiencies through supplementation helps to balance the common diet in Tanzania, which is deficient in micronutrients, though vegetables and fruits rich in vitamin A are available, and dietary practices can change to promote better iron absorption. Increased public awareness is needed on the importance of diet, which, in turn, will require greater understanding of the constraints facing rural households, in particular their access to information and their capacity to implement lessons learned.

Vitamin A Supplementation

Guidelines for routine health services provide for vitamin A capsules to be given to women and children. Lactating women are prescribed a single dose of vitamin A capsules immediately after delivery or any time within four weeks after delivery. The aim is to increase the concentration of vitamin A in breast milk for the benefit of the baby. The mother also benefits as it replenishes her body's store of vitamin A. In addition, all children up to 24 months of age are to be supplemented with vitamin A at nine months (during measles vaccination), 15 months and 21 months. Furthermore, children suffering from diseases that deplete vitamin A – diarrhoea, measles, ARIs, TB and severe clinical protein energy malnutrition (PEM) – are supplemented with vitamin A. This last strategy is referred to as “disease-targeted vitamin A supplementation”. However, service guidelines are inadequately implemented. In addition, supplies of vitamin A in health facilities are frequently insufficient to needs, and children do not routinely attend maternal and child health (MCH) services after their courses of vaccinations have been completed.

In recognition that routine supplementation was not achieving universal coverage, a twice-yearly campaign strategy has been instituted. During the commemoration of the Day of African Child in June and World AIDS Day in December, children aged 6-59 months are given vitamin A supplementation. Since 2001, coverage through these campaigns has been over 90%. By the end of 2004, 94% of children had been covered. The total annual cost per child of supplementation through the twice-yearly programme has been estimated at \$0.71, comprising \$0.22 for the cost of inputs for supplementation; \$0.42 for personnel costs; and the remainder for vehicles and other capital costs (MOST, 2005).

Anaemia Control

Activities to control anaemia include supplementing pregnant women with iron and folic acid, promoting production and consumption of iron/vitamin rich foods, and strengthening public health measures for the control of malaria and helminth infestation. Primary and secondary level health facilities receive monthly supplies of iron and folic acid through the essential drug kits. Slightly over 60% of pregnant women receive iron tablets or syrup (NBS, et al., 2005).

For children, prevention and control of malaria as well as deworming strategies help reduce the prevalence of anaemia. There is evidence of increasing use of mosquito nets by young children, and deworming has been added to activities associated with the twice-yearly vitamin A supplementation.

Salt Iodation

Universal iodation of edible salt is the strategy adopted in Tanzania for the control of iodine deficiency disorders (IDD). Legislation prohibiting trading in non-iodated salt earmarked for human consumption became effective on 1 January 1995. A national survey carried out by TFNC in 2003 indicated that goitre prevalence was 8.1% (down from 25% in 1980s), and that 83.8% of households were consuming iodated salt. The recommended goal of the World Health Organisation (WHO) is 90% or above. Median iodine excretion level was 203µg/l, well above the WHO cut-off point of 100µg/l (TFNC, 2004).

The TDHS 2004/05 also recorded a high coverage of iodated salt; 74% of households had salt which had been iodated. However, the survey revealed a lack of adequately iodated salt in several regions; for example, Zanzibar, Mtwara and Lindi have much lower percentages of households with iodated salt than other parts of the country. To increase coverage, greater monitoring of salt trading is required, as well as stronger measures to support small-scale salt producers, especially in areas identified with low iodation. There are about 4500 small-scale salt producers in Tanzania and they are largely responsible for the non-iodated salt in the market.

Food Fortification

Apart from salt iodation, fortification of common foods as a strategy to address micronutrient deficiencies is in its infancy and lessons still need to be learned before large-scale implementation in Tanzania is feasible. Pilot projects in Iringa, Handeni and Korogwe are aimed at demonstrating the feasibility of reducing micronutrient deficiencies through fortification of maize flour at hammer mill level. If successful the activity will be scaled-up to cover most parts of the country that consume maize and/or other starchy staples that are mill processed. Fortification of centrally processed foods is being tested by a company based in Arusha which is fortifying cereal flour.

Health Interventions

Common illnesses have an impact on the health and nutrition of young children and pregnant women. The prevention and treatment of malaria is particularly important. Malaria control programmes in Tanzania have been strengthened and more resources allocated to them. However, far fewer numbers of poor, rural children sleep under mosquito nets than their less poor and urban peers, fewer poor and rural women receive anti-malarial drugs during pregnancy, and fewer poor and rural children with fever are given anti-malarial drugs (NBS, et al., 2005).

Diarrhoeal Diseases are also common among young children, and small differences exist between treatment among rural and poor children compared with the least poor and urban children. While most mothers know about the importance of oral rehydration, about half still give children suffering from diarrhoea less food than usual (NBS, et al., 2005).

Almost all pregnant women visit health services for antenatal care. This is a critical opportunity for health service staff to provide advice and information about health and nutrition for the woman and for the baby. Encouragement for early and exclusive breastfeeding is especially important. In addition, almost all young children are seen by health services during their first year of life. Usually these visits are associated with **vaccination** services, but MCH staff are also expected to assess a child's general health and nutrition through **growth monitoring and promotion**, and to provide information and advice to the child's carers.

Assessments of the quality of health services suggest that the time spent by health service staff with clients and the information provided by them is inadequate. Moreover, the age at which routine vaccinations are scheduled to be complete – around 9 months of age – is the age at which children's nutrition is greatly compromised. Many children are not brought to MCH services after vaccinations are completed. For rural carers in particular, distances to

services preclude visits which are not essential for treatment of illness. For this population, outreach services would be helpful but implementation is compromised by reluctance of health staff to visit communities as well as lack of incentives and transport.

Evidence from the Tanzanian component of the Multi-Country Evaluation of Integrated Management of Childhood Illness (IMCI) and from the Tanzania Essential Health Interventions Project (TEHIP) indicates that improved management practices around those diseases which form the highest burden of disease – most importantly, malaria and diarrhoeal diseases – can reduce malnutrition in children as well as child mortality. In the TEHIP case, approximately \$1 per person was added to the district health budget (de Savigny, Kasale, Mbuya & Reid, 2004). In the analysis of IMCI, the costs of child healthcare with IMCI were similar or lower than those for case management without IMCI (Armstrong Schellenberg, Adam, Mshinda, Masanja, Kabadi & Mukasa, et al., 2004).

Rehabilitation of Severely Malnourished Children

An effective focus on preventing malnutrition will result in fewer children being so severely malnourished that they need rehabilitation. Nonetheless, there must be provision for the care of these children.

Community-based nutrition rehabilitation stresses that severely malnourished children can be rehabilitated in their communities using resources available at home and in the community, and that such a strategy is likely to have much more sustainable success than a strategy in which children are taken out of their normal environment. In the Iringa nutrition programme, where this strategy was practiced, severe underweight dropped from 6.3% in 1984 to 1.3% in 1988 (URT, WHO & UNICEF, 1988). Similar success was also observed in Hai and Serengeti districts. Because of these successes, the Government plans to implement this strategy as part of its National Strategy on Infant and Young Child Nutrition (Ministry of Health [Tanzania], 2004b).

Such a strategy depends on the early identification of a child in need of rehabilitation as well as provision of advice and support to the child's carers to ensure that the child's condition is properly treated. This will have to be done through a community structure and/or through regular health outreach services. In extremely severe cases when children need to be admitted to health facilities as in-patients, appropriate institutional feeding and healthcare services will be needed, as well as follow-up when children are discharged to avoid recurrence.

School Health

Poor school achievement, repetition of grades, and dropouts may be symptoms of poor nutrition status. Heavy parasite load combined with low food intake precipitates malnutrition in school children, with consequences for poor attention and performance. Programmes for deworming of school-age children would help. Provision of school meals can be costly, so alternative approaches for improving the availability of local snack foods and for increasing the frequency of meals for school-age children merit exploration. With greater focus on improving the nutrition of very young children, the nutritional deficits of school-aged children will be significantly reduced.

Schools provide an opportunity for communication of information about sound nutrition practice, which can valuably serve the children as well as their households. For girls in upper primary especially, health programmes in schools could provide an effective means of communicating important nutrition information.

Information and Communication

Effective implementation of nutrition interventions involves the communication of information. Communication is, therefore, a critical intervention in its own right. While the provision of accurate technical information is important, the communicators must also understand the social and economic circumstances of the people with whom they are working and the likely constraints in implementing advice provided. For example, advice to a mother to feed her children with foodstuffs which are not available to her cannot be adhered to. Similarly, directives to district councils to implement ambitious outreach programmes that exceed their budgets and staffing are likely to go unheeded until additional resources are available. Communication is also more likely to be effective if there is learning on the part of those involved in the process, and if feedback is possible.

In general in Tanzania, there is a lack of information – especially in rural communities and among district-based staff – about nutrition, its common causes, and strategies to improve the situation. Personal communication remains the most common way in which rural women in particular receive information, which reinforces the need for health workers and others who advise women about the health and nutrition of their children to be able to communicate sympathetically and effectively. Unfortunately, this is usually not the case. Radios are commonly owned, and they too provide a useful vehicle for communicating information about nutrition directly, and through on-air discussion forums in which people can discuss their situation, problems and potential solutions. Schools, teachers and students can also be engaged in teaching and communicating about nutrition.

Community-Based Nutrition Programming

Personal contact with children and their caregivers is essential in providing the information and support which is needed in promoting and sustaining nutrition. This is one of the rationales for the twice-yearly child health days in which micronutrient supplementation and other nutritional services are provided. This direct style of communication may be particularly important in rural areas, where access to information and services is more problematic than in urban areas and programming through organised community support can help.

The key elements of community-based programming are animation/social mobilisation approaches to community-based problem-solving, monitoring of children's nutrition status, and an effective chain of reporting so that essential services and support can be provided which are outside the capacity of communities themselves.

Improving childcare is critical, including encouragement of more frequent feeding of children, either with help from adults in the family, neighbours or through the establishment of child-feeding posts or early childhood development centres, depending on the resources and customs of the community.

Results of an analysis of children's nutrition in Kagera suggest that the existence of a "feeding post" in the community was a significant determinant of improved nutrition in children, and not only among the children who were being fed at the post (Alderman, et al., 2005). This indicated that the presence of the "feeding post" had significantly raised community awareness of children's nutrition and the need to feed children.

Such programming was a strong feature of nutrition work in Tanzania in the 1980s, but its momentum faltered in the 1990s. One important reason for this reversal was the loss of coherence in government reporting, monitoring and support systems due to the preoccupation of government and its partners with restructuring, especially of central planning functions. The level of social mobilisation was not maintained – children's nutrition was given less critical attention by the planners in the national government system and a strengthened local government system was not yet in place. Without incentives to report regularly, districts neglected the collection, compilation and use of information to provide the services which were most critically needed for improving nutrition. In communities, there was turnover among village health workers, partly caused by movement out of communities, and partly due to lack of incentives. For example, there was little demand for the information that village health workers were collecting, no refresher training, and little compensation for the services they were providing within communities.

Economic, social and political changes have been significant in the past few years. Multi-party politics and economic liberalisation have inevitably led to changes in the role of the state and the ways in which communities are organised and supported. The restructuring of government now involves strategies for decentralisation by devolution, strengthening capacities of local government authorities, including their management information systems, and streamlining the flow of information from local entities to institutions responsible for policy-setting and support. Information about children's nutrition needs to play a much more important role in these information and support systems than it does currently. Responsive governance structures rely on information and on information-sharing. Therefore, stronger links are needed between the basic tier of government – the village and the ward – and service providers, between service providers and district and urban council management structures, and between local authorities and national planners.

Above all the political profile of children and their nutrition needs to be given greater importance.



Key Actors in Nutrition

The interventions described in Section 5 highlight **what** needs to be done to improve nutrition. Implicit in the identification of interventions is a set of responsible actors, i.e., **who** needs to act. However, it is not evident that all those who bear responsibility for nutrition outcomes either fully understand the implications of those responsibilities, or possess the requisite knowledge, understanding or capacity to discharge their responsibilities. Therefore, in order to improve nutritional outcomes, it will be important not only to identify the key actors, but also assess the extent of their understanding and capacity to act effectively.²

Community Resources and Local Authorities

Parents/Households

The most important actors are those in the immediate household: parents/guardians of babies, infants and young children; partners of pregnant and lactating girls and women; and older relatives. Adults have caring responsibilities, but they face constraints on their time which may limit the care they provide for their children, and they may also lack information on public health and nutrition. Poor rural adults tend to live at greater distances from health and other service providers, and lack funds for essential commodities including medicines, mosquito nets and other items which can prevent illnesses that contribute to malnutrition.

Communities

Communities are organised within the system of local government. In rural areas, hamlet leaders work with households in their area and report to the Village Executive Officer and the Village Chair and Council. Urban areas are organised in wards. This basic level of local government in rural and in urban areas is organised with committees. The committee that deals most directly with nutrition is the social services committee.

Some rural communities have designated community resource people, who operate within the structures of village governments, report through the appropriate hamlet leaders and committees, and work closely with the Village Executive Officer and the Village Council. Many villages have experience with village health workers, and several evaluations have been undertaken into their effectiveness. Much depends on the selection of the village health workers/resource persons and their commitment. Specification of roles and responsibilities is critical, as are sound systems of training, support and supervision. Remuneration is also needed. Experience suggests that it could be modest compensation.

The network of resource people, committees and leaders within the community is critical for the mobilisation of support which may be needed in identifying and supporting children and families in need.

Teachers and Students

Almost all children of primary school age are enrolled in school, where their health can be assessed and nutrition information can be taught which can, in turn, be passed on to their homes. Every community in Tanzania has a school – a facility with staff – that provides a useful resource for community-based nutrition work.

² A human rights based approach emphasises that rights entail claims on duty bearers. Duty bearers must first acknowledge their responsibility. Then they must have the capacity to discharge that responsibility. They must have authority and resources.

Health Staff

There are shortages of health staff, especially in rural and isolated areas. Adequate staffing of facilities must be a priority if health services are to provide more effective care for nutrition. Moreover, health staff will require better training and information, transport, and greater incentives for outreach, and will need to spend more time with children and their carers, both within their facilities and in outreach work. Additional resources will be required to ensure that outreach work incorporates nutrition, with advice on feeding, hygiene practices, and malaria prevention and control. Health workers' practice of growth monitoring and promotion, and their communication skills also need to be strengthened.

Currently, health staff are centrally employed, with priority being given to posting staff in rural facilities. A programme to provide additional financial incentives for health workers posted in more remote areas is being considered.

Community Development Workers

About 40% of wards in Tanzania have community development workers and so they are well placed to support community-level nutrition work. However, it is likely that a renewed cadre of community development workers may be needed. Many older community development workers have been trained with curricula which do not equip them to adequately address nutrition. In addition, older staff have typically been associated with an outmoded form of community mobilisation. Renewing this cadre of staff would be a significant undertaking, and one which would not be warranted by a focus on nutrition alone. The same skills and experience, however, which are needed for effective nutrition work, are also needed for other development work, for example, participatory planning processes within local government and the Tanzania Social Action Fund (TASAF). The Ministry of Community Development, Gender and Children is responsible for training institutions for community development workers, while local government authorities are responsible for their employment and remuneration.

Agricultural Extension Personnel

Agricultural extension staff have training in nutrition and are employed by local authorities. However, their predominant focus is on increasing crop production and reducing post-harvest losses, and their general awareness and integration of nutrition in their work is weak. Nonetheless, they could play a greater role, especially in encouraging greater diversity of crop production which can lead to greater dietary diversity.

Local Government Authorities

Institutions and staff of local government – ***Village Governments, Ward Development Officers and the Ward Development Committees*** – are constrained by inadequate data about nutrition, and a lack of understanding about the groups most affected by malnutrition and appropriate actions for addressing the problem. All local authorities should receive and review reports on nutrition as part of their regular responsibilities, and nutrition should be – as health, education, water, roads are now – part of the regular agenda of their deliberations, planning and budgeting.

Local government authorities at district level receive the bulk of their financing through subventions from central government.³ A district development plan is prepared as part of the planning and budget process. Assessments of plans in several districts have revealed that nutrition is occasionally mentioned as a development problem, but no specific plans for action are included to address the issue.

Discussions with council staff and officials also indicated that no one in the council management teams understood how the different strategies highlighted in council plans might lead to improved nutrition outcomes – even though several may well do so – for example, improvement in water and sanitation, and improved community health programmes. In addition, neither the health management information system nor the local government management information system are used to report, or to assess the nutrition situation in the different parts of the district, and how this may have changed over time. In short, nutrition concerns are not on the agenda.

If nutrition is to be addressed more seriously as a multifaceted outcome, there must be a focal point on the council management team who champions this cause. This person could come from one of several different sectors/cadres, but must be in a position to report directly to the District Executive Director. Otherwise, reporting responsibilities through a particular sector – health, for example, or community development – would make it extremely difficult to command attention and resources, or to coordinate the work of staff from other sectors.

Given the importance of nutrition work in the council management team, claims could be made for greater allocations of funding and staffing, especially in districts with relatively high rates of child malnutrition. Administratively, the necessary resources could be added through application of the formula which now determines allocations for the health basket, with additional weighting for under-five mortality rates. However, reliable anthropometric data by district are not currently available, but health management information systems could be strengthened to provide these data. The TDHS provides regional disaggregations only.

National Institutions

Tanzania Food and Nutrition Centre

The TFNC is the national institution responsible for nutrition research and for advocating, advising, monitoring, evaluating, harmonising and facilitating nutrition activities. It currently has a staff of around 200. TFNC staff have been extensively engaged in research, survey, training, information and communication activities. TFNC receives financing from the central government through the Ministry of Health and Social Welfare (MOHSW), Preventive Services. For financial year 2005/06, this subvention was around \$2.5 million, about one-third of which was for staff costs. Several external partners have provided project funding – the official Government budget papers show a project budget for 2005/06 of about \$0.5 million – though more financing may be provided via direct funding from partners which is not reflected in the Government budget.

³ The Public Expenditure and Financial Accountability Review in 2006 calculated that on average only 7% of local authorities' revenue was from their own sources.

The Centre's Strategic Plan 2005/06 – 2009/10 (issued December 2005) recognises that it has been losing experienced professional staff. The Centre has been subject to demands from external agencies, which have important agendas for nutrition, determined leadership, and potential additional project funding under direct control. As a consequence of these factors, there has been a loss of coherence, momentum and visibility in nutrition programming, and inadequate support for nutrition in regions and with local authorities.

TFNC's Strategic Plan, has 16 "key results areas" and 30 objectives over the plan's five-year implementation period. The plan was developed internally, according to the guidance of the Government's Public Service Management. Nonetheless, there are questions about strategic focus and about coordination and integration with activities of other organs of government which warrant further review.

Ministry of Health and Social Welfare

The MOHSW plays a critical role in nutrition. Not only is it the parent ministry for TFNC with responsibilities for the Centre's Board, plans and budgets, but it is also the national body responsible for many policies and strategies which directly affect nutrition outcomes. The MOHSW chairs several committees which are responsible for control of micronutrient deficiencies: the National Vitamin A Consultative Group, the National Anaemia Consultative Group, and the National Council for the Control of Iodine Deficiency Disorders. The Ministry is also the parent organ for the Medical Stores Department through which drugs and medical supplies are provided – including those needed for control of micronutrient deficiencies and curative services of health facilities.

Staff trained by the Ministry are responsible for provision of ANC, MCH services, IMCI, preventive services, outreach, as well as communication and support for public health activities in communities. Health services are determined by the National Package on Essential Health Interventions, which includes nutrition as one of its interventions. However the delivery of essential interventions is based in health facilities, with limited outreach and community-based work.

Strengthening facility-based health services has been the priority for the health sector. There are staff shortages, and motivation and deployment are recognised as problematic. Urban areas fare better than rural, and poor people commonly are not able to access healthcare services because of distance and costs. Systems to exempt poor people from paying user fees for services are not being universally implemented. Thus, preventive outreach services which would most directly help prevent malnutrition in young children are not adequately resourced. Nor are they in local authorities' health plans, as has been pointed out above. Outreach services are limited, and when they are provided, they are often in the context of project-financed community work, such as the twice-yearly vitamin A supplementation, special survey work, or support for training community resource people.

Facility-based health services are being strengthened, with more systematic planning and with service provision more focused on burden of disease. The example of the Tanzania Essential Health Interventions Project (TEHIP) is promising (de Savigny, et al., 2004). Nonetheless, more public, community work by health personnel will require more resources, greater acceptance of the useful role community workers can play, and greater integration of this work within local authority health plans.

Other Key Ministries

The **Ministry of Community Development, Gender and Children** has responsibility for training community development workers who are subsequently employed by local authorities. This cadre of staff could potentially provide strong support for community work to prevent malnutrition. Training curricula incorporate nutrition.

The **Ministry of Agriculture and Food Security** has a nutrition unit which promotes the production of foods rich in iron and vitamins. The Ministry has responsibility for training agricultural extension staff. Agricultural training takes place in Uyole, Uyonge, and Sokoine University of Agriculture. The Ministry also has a Food Security Unit which works closely with the Disaster Preparedness Unit of the Prime Minister's Office and the managers of the Strategic Grain Reserve in times of critical national food shortages.

The **Ministry of Education and Vocational Training** approves the curriculum of primary schools and the certification of teachers.

Other Sectoral Ministries are responsible for the setting of norms and standards in the delivery of services which affect nutritional outcomes. The Ministry of Water is one such important ministry.

The delivery of most public services which affect nutritional outcomes is the responsibility of local government authorities, and the central ministry to which they report, the **Prime Minister's Office - Regional Administration and Local Government**. Staffing of local authorities has been decentralised. LGA staff now report to the District Executive Director who, in turn, reports to the Council. However, in practice, it is still the central **President's Office – Public Service Management** which hires staff and determines wage structures and other terms of service. Public service reform is addressing this anomaly.

The Ministry of Finance not only plays a critical role in determining public budgets and financial management, but is also the focal point in Government for external assistance in Tanzania. The Ministry has coordinated the development of the Joint Assistance Strategy (JAST) based on principles of national leadership and harmonisation of development assistance within national processes.

The National Strategy for Growth and Reduction of Poverty, commonly known by its Swahili acronym MKUKUTA, has targets for reduction of income poverty and for various indicators of social well-being, including nutrition targets. The MKUKUTA Monitoring System provides information for monitoring progress towards national goals and targets, including those related to the macro economy and prices.

Private Sector

Private sector actors for nutrition include the Tanzania Salt Producers Association which was formed in 1993 specifically to promote the production of iodated salt in Tanzania, especially among small-scale producers. Private sector producers are also testing food fortification. The Government generally supports public-private partnerships. For example, the social marketing framework of the malaria control programme engages a network of

producers, wholesalers and retailers, who manufacture and supply mosquito nets and chemicals for impregnating the nets for sale to the public. Vouchers are being made available through health services to pregnant women and to mothers with children under five years, so that they may purchase the nets from private retailers at a discount.

Non-Governmental and Civil Society Organisations

Non-governmental organisations/civil society organisations nationally and locally are involved in nutrition work. The **Helen Keller Institute** is actively involved with the vitamin A programme. **CARE** and **World Vision** are especially involved in the malaria control programme's voucher scheme. **Save the Children** support programmes in Lindi and Singida as well as work to influence national policy to improve the conditions of children. Many others are actively involved both at community level and in influencing national policies to improve the status of children and their care givers. The **Tanzania Home Economics Association** is actively involved in promoting the care of children, especially the most vulnerable, including children affected by HIV/AIDS and children living in Makete, the district with the highest proportion of orphaned children, many of whom have lost parents due to HIV/AIDS.

International Donors

International donors also provide support for nutrition. **USAID** is working closely with the Helen Keller Institute to support the programme of twice-yearly vitamin A supplementation, which includes a component for deworming. USAID also provides support for malaria control. **UNICEF** is a longstanding partner not only of TFNC and the Ministry of Health, but also in national and local planning and monitoring processes to promote the realisation of children's rights. The **World Food Programme**, in addition to the large programme of relief for refugees in the north-west of Tanzania, has provided school meals and household rations in some parts of the country to encourage higher rates of school enrolment of girls and to assist households affected by HIV/AIDS. It is putting special emphasis on vulnerability assessments and on strengthening systems of nutrition surveillance.



An Organisational Strategy for Nutrition

Any effective organisational strategy needs a focus, a goal which is agreed and understood by all key actors. Based on the evidence outlined in the sections above, this paper recommends that **a national nutrition strategy must focus on protecting, promoting and sustaining good nutrition in young children**, to prevent the onset of malnutrition in this vulnerable population, and in subsequent generations. Analysis strongly indicates that health and caring practices for young children, including feeding practices, are the most critical. In some communities, in some years, the amount of food in the household may be an important consideration, but this is not the usual determinant of malnutrition of young children in Tanzania.

Priority needs to be given to:

- the health and care of pregnant and lactating women, especially young women and girls;
- the promotion of and support for exclusive breastfeeding of babies for six months, and for extended breastfeeding with complementary foods for children up to two years;
- helminth control through the regular deworming of children;
- rehydration for diarrhoea – carers of children must know to increase, or at least maintain, regular fluid and food intake;
- malaria alleviation – through provision of impregnated mosquito nets for pregnant women and young children, and early treatment of malaria with artesimin-based combination therapy; and
- sustaining high rates of immunisation, especially against measles, and vitamin A supplementation.

The most important actors are parents, communities, health workers, and the institutions which support them, especially those who can provide sound information as well as essential services.

In defining an organisational strategy for nutrition to coherently address the most critical priorities, the following principles should be applied:

- Make the best use of existing strengths and resources, which will require strong coordination with an agreed strategy and planning process;
- Ensure continuity and sustainability by learning from experience and best practices nationally and internationally, and applying these in practice and to scale;
- Maintain momentum, enthusiasm and focus on priorities;
- Work within national strategies – particularly MKUKUTA and its monitoring system – and in accordance with accepted roles and responsibilities for public service management – decentralisation, JAST principles of national leadership, preference for financing through budget support, and provision of technical assistance according to national demand.

National Leadership

TFNC will need to provide strategic direction and leadership, working in close collaboration with national ministries and in support of local authorities. Moreover, while driving a coordinated nutrition strategy, and recognising its central role in the reform agenda for public services, TFNC also needs to focus its own contribution. Technical support for sound analytic work as well as reliable information and communication systems must be among the Centre's first priorities, to enhance its capacity to work with partners who provide training and information on nutrition to communities.⁴

A stronger focus on generating and supporting national commitment for nutrition may mean that the Centre spends fewer resources on direct community work, and more on undertaking and sharing analytic work, and on coordinating stakeholders involved in nutrition. A review of TFNC's strategic plan and staffing is warranted, which may be most effectively done with external facilitation, an approach followed by other national institutions seeking to manage change. Complementary reviews of partner institutions engaged with TFNC in nutrition work may also be warranted.

Some level of engagement with community-level work will still be needed by TFNC staff so that their communication, information and advocacy programmes are well-grounded. However, based on the strategic priorities described above, this report anticipates that TFNC will have less involvement with project work in the field than is currently implied by several of the "direct interventions" of the Centre's Strategic Plan, and more engagement and focus on supporting partner institutions that implement nutrition interventions with communities, families and parents. Currently, financial incentives for staff are such that time spent in the field is rewarded, and there is project financing by TFNC's partners for it. A strategic review of the Centre could lead to recommendations for some restructuring. For instance, increased financing for nutrition work directed by TFNC, and more attractive salaries could help reduce the extent to which allowances for fieldwork and workshops take up the professional time of TFNC staff. TFNC's status as a national institution provides some flexibility in establishing salary scales.

To advance the national cause of nutrition, TFNC may work more effectively in partnership with a central committee for nutrition. A **National Committee for Nutrition**, established in a central ministry, could more easily attract the participation of key planners and decision makers in multisectoral discussions than is now usually the case.

TFNC itself sees no difficulty in convening multisectoral discussions. The Centre has a recognised national role for nutrition notwithstanding its institutional "home" in the government. However, the voice for nutrition and its priority on the national agenda may more likely be heard from a central organ of government which has a strong role to play in national planning and resource allocations. Careful consideration would be needed in establishing such a committee, not least the enthusiasm and commitment of the convening ministry. Such committees have been tried elsewhere, not always successfully. However, the

⁴ Much stronger technological support for TFNC's communication work is needed: the Centre's computer communication system is frequently down, e-mail links are dysfunctional and, at the time of writing this report, it was not possible to access documentation about nutrition in Tanzania through a TFNC webpage.

need to significantly improve the profile and advocacy for nutrition suggests that this option merits careful consideration.

The establishment of a National Committee for Nutrition would also provide an umbrella decision-making body to which existing consultative groups and steering mechanisms for different aspects of nutrition would report. It could also provide a strong mechanism for oversight of external support for nutrition, helping to ensure that any support is in accordance with agreed national strategies and the principles of the JAST. Pro-active coordination and strong mobilisation for nutrition as a priority for Tanzanian development must be derived from national interests, with external partners playing a supportive role.

In **local authorities**, much can be achieved through **strengthened health** services, but more resources will be needed to improve communication and outreach work. Antenatal care needs to be strengthened, using the opportunities of ANC visits to provide for micronutrient supplementation, intermittent presumptive treatment of malaria, advice on early and exclusive breastfeeding, and access to impregnated mosquito nets. The management of health services for young children needs to systematically incorporate the lessons from TEHIP, and priority should be given those geographic areas where rates of child malnutrition are high. MCH staff need to spend more time in assessing nutrition and providing information and advice to carers of young children. In turn, health staff themselves need the necessary equipment, as well as greater access to information and refresher training to maintain and update their skills.

Council health budgets need to make explicit provision for these aspects of care and treatment, and may need to be expanded to include the costs of supplies and services now being externally financed. Vitamin A supplementation is a case in point.

A member of the council's staff must be designated for nutrition, who will work closely with colleagues in health, community development, agriculture and other actors in nutrition. As the focal point, this position must have special responsibilities for compiling and assessing information about nutrition, and reporting to the council management team. Based on this information, specific plans for nutrition should be incorporated in council budgets and development plans.

Staffing in many local authorities is currently inadequate to achieve the objectives of this focused nutrition strategy, and it is likely to be most critically constrained in those areas where rates of child malnutrition are highest. Councils in these areas need special support to fund, recruit and retain staff. Financial incentives to encourage applicants for vacant posts in needy rural areas, now under consideration by the Government, warrant speedy implementation.

Formula financial allocations to local authorities need to be examined to assess the extent to which they provide adequate incentives to address the wide disparities in health and nutrition outcomes. Analytic work will be needed, supported by TFNC and the MKUKUTA monitoring system.

Information in the **health management information system (HMIS)** needs to be much more effectively used, especially the assessment of children's nutritional status at the time of measles vaccination. The first point of use of HMIS data is by staff of health facilities in management of their own services. Ward development committees and district councils, too, can make much more systematic use of this information in directing additional support to those parts of their jurisdictions with the highest prevalence of child malnutrition. For this to happen, more training will be needed in the compilation and interpretation of data. To be a more effective instrument for timely decision-making, data requirements need to be streamlined and demand for information articulated in management and council meetings.

The **MKUKUTA monitoring system** offers an opportunity for visible national reporting of nutrition which can provide incentives for strengthening reporting at decentralised levels of government. If monitoring nutrition is linked to the priority allocation of funds and staffing it is more likely that data will be collected and reported in a timely fashion. The links between MKUKUTA and the planning and budgeting processes of government are being strengthened. An important advantage of nutrition as an indicator is that it can be reported more frequently, one of the few health outcome indicators under cluster II of MKUKUTA for which data can be regularly collected and reported. In contrast, estimates of infant, under-five and maternal mortality rely on periodic surveys and are not reported annually. However, for children's nutrition to become a reliably reported annual indicator, much work will be needed to strengthen this aspect of the HMIS. The health sector review has consistently called attention to the need to strengthen the HMIS, and concerted efforts on the part of TFNC and its partners will be needed to gain understanding of the value of nutrition indicators.



Recommendations for Next Steps

The preceding sections have highlighted priority areas and discussed measures to enable more effective planning and action to protect, promote and sustain good nutrition. In summary, this report makes the following recommendations to key institutions to strengthen nutrition strategies in Tanzania:

- Tanzania Food and Nutrition Centre
 - Strengthen coordination of nutrition actors and interventions
 - Increase focus on analytic work
 - Provide technical support for sound information systems and communication
 - Review strategic plan, staffing and schemes of remuneration
 - Prioritise advocacy for nutrition, working closely with effective communicators nationally and with those who work directly with communities
- National Committee for Nutrition
 - To be established in a central ministry, thereby providing priority for child nutrition in national planning and monitoring systems, particularly MKUKUTA, as well as a mechanism for oversight of external support for nutrition
- Ministry of Health and Social Welfare
 - Prioritise promotive and preventive health services for young children in the ministry's plans and budgets
 - Expand training and supervision of health staff, especially MCH staff, with additional emphasis on promoting effective communication skills
 - Ensure adequate supplies for micronutrient supplementation
 - Strengthen assessment, reporting and use of data about children's nutrition at the time of measles vaccination, as a priority within the health management information system
- Prime Minister's Office – Regional Administration and Local Government and Ministry of Finance
 - Implement the scheme to provide incentives for recruitment of essential staff in needy councils (where rates of child malnutrition are high)
 - Review the formulae for financial allocations to councils to assess the extent to which they adequately address disparities, including indicators of child malnutrition

- Local Government Authorities
 - Designate member of council staff as a nutrition focal point
 - Ensure nutrition priorities included in plans and budgets
 - Implement promotive and preventive health services for young children and direct outreach and community work to areas most in need, i.e., those with the highest rates of child malnutrition
 - Provide monitoring information to Ministry of Health, PMO-RALG, TFNC
 - Train health staff in effective communication for early and exclusive breastfeeding and sound feeding practices for young children
- External partners
 - Provide support for nutrition through the government budget
 - Share new information about sound nutrition programming, and provide technical support on request of government
- NGOs
 - Support community work in areas with high rates of child malnutrition, working with local authorities where additional support is needed especially with innovative nutrition programming.

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