

The United Republic of Tanzania



Ministry of Health and Social Welfare

National Nutrition Strategy
JULY 2011/12 – JUNE 2015/16

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ABBREVIATIONS

AMMP	-	Adult Morbidity and Mortality Project
ACC/SCN	-	Administrative Committee on Coordination/ Sub-Committee on Nutrition
AIDS	-	Acquired Immune Deficiency Syndrome
BFCI	-	Baby Friendly Community Initiative
BFHI	-	Baby-Friendly Hospital Initiative
BMI	-	Body Mass Index
CBO	-	Community Based Organization
CCHP	-	Comprehensive Council Health Plan
CHMT	-	Council Health Management Team
DPG	-	Development Partners Group
DRNCD	-	Diet Related Non Communicable Diseases
FBO	-	Faith Based Organizations
HIV	-	Human Immunodeficiency Virus
HMIS	-	Health Management Information System
IDD	-	Iodine Deficiency Disorders
IZINCG	-	International Zinc Nutrition Consultative Group
JAST	-	Joint Assistance Strategy for Tanzania
LBW	-	Low Birth Weight
LGA	-	Local Government Authority
MDGs	-	Millennium Development Goals
MKUKUTA	-	<i>Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania</i>
MVC	-	Most Vulnerable Children
NFFA	-	National Food Fortification Alliance
NGO	-	Non-Governmental Organization
NNS	-	National Nutrition Strategy
NSGRP	-	National Strategy for Growth and Reduction of Poverty
NSS	-	Nutrition Surveillance System
PLHA	-	People Living with HIV and AIDS
PMTCT	-	Prevention of Mother to Child Transmission
PPP	-	Public-Private Partnership
RHMT	-	Regional Health Management Team
SCN	-	Standing Committee on Nutrition
SWAp	-	Sector Wide Approach
TACAIDS	-	Tanzania Commission for AIDS
TDHS	-	Tanzania Demographic and Health Survey
TFNC	-	Tanzania Food and Nutrition Centre
TSED	-	Tanzania Socio-Economic Database
UN SCN	-	United Nations Standing Committee on Nutrition
UN	-	United Nations
UNICEF	-	United Nations Children's Fund
URT	-	United Republic of Tanzania
USI	-	Universal Salt Iodation

- VAD - Vitamin A Deficiency
- VAS - Vitamin A Supplementation
- WHO - World Health Organization

FOREWORD

Improving nutrition has considerable economic and social benefits, as it reduces morbidity and mortality, improves the learning and earning capacity of communities. Malnutrition is one of the most serious health problems affecting infants, children and women of reproductive age among others. Despite progress made, millions of children and women in Tanzania still suffer from different forms of under nutrition, including low birth weight, stunting, underweight, wasting, vitamin A deficiency, iodine deficiency disorders and anaemia. Furthermore, over-nutrition and diet related non-communicable diseases, including some forms of cancer, diabetes and heart diseases are on the increase.

Development of the National Nutrition Strategy aims at sharpening the focus and momentum towards improved nutrition status, especially of the vulnerable groups, which is a prerequisite for a healthy, educatable and productive nation. The NNS stipulates that improved nutrition can be achieved through implementation of sound policies and programs, and enhancing partnerships amongst nutrition stakeholders so that available resources are used optimally to deliver evidence – based and cost-effective nutrition interventions. Implementation principles of the National strategy include community participation, integrated delivery of services, universal coverage, appropriate technology, intersectoral collaboration and working in partnership.

The NNS is a result of a participatory process involving nutrition stakeholders at various levels. It provides an opportunity for re-examining critically factors contributing to malnutrition, especially for vulnerable groups based on current scientific knowledge and experience over the years for addressing nutrition problems. The NNS aims at contributing to renewed commitment towards addressing critical issues basic to improving nutrition status of the community. It focuses on priority areas which if implemented well, can make a great difference. The NNS will contribute to achieving the objectives of the National Development Vision 2025, MKUKUTA, Millenium Development Goals, the African Regional Nutrition Strategy (2005-2015) and other relevant policies, programmes and strategies by the government.

Let us all work together towards achieving the noble goal of improving the quality of human life for the current and future generations. The Ministry of Health and Social Welfare is committed to lead the way.

Dr. Hadji Hussein Mponda (MP)
Minister for Health and Social Welfare

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We are grateful to the United Nations Children's Fund (UNICEF) for its financial and technical support throughout the process. UNICEF commissioned Dr. Roland Kupka to prepare the initial draft document and his contribution is greatly appreciated.

Nutrition stakeholders were involved at every stage of the development of this document. Let us now invite them to make this their working document.

Ms Blandina S.J. Nyoni
Permanent Secretary
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EXECUTIVE SUMMARY

Context

1. Nutrition is the outcome of various processes from when food is eaten and nutrients are absorbed in the body for better health outcome. Good nutrition results from eating adequate food in terms of quality, quantity, safety and absence of diseases which cause poor absorption and utilization of nutrients in the body. Furthermore, good nutrition is essential for survival, growth, mental and physical development of human beings. Likewise, good nutrition is essential for enhancing immunity and hence reducing morbidity and mortality. Furthermore, good nutrition contributes to increased educatability, productivity, household and national income.
2. Malnutrition is a state of poor nutritional status, which is the result of inadequate or excess intake of nutrients by the body. In Tanzania, major nutrition problems relate mainly to undernourishment. Causes of malnutrition are illustrated at three levels, that is immediate, underlying and basic.
3. Malnutrition is one of the most serious health problems affecting infants, children and women of reproductive age in Tanzania. Despite progress made, millions of children and women in Tanzania continue to suffer from one or more forms of undernutrition, including low birth weight, stunting, underweight, wasting, vitamin A deficiency, iodine deficiency disorders and anaemia.
4. Addressing malnutrition brings considerable economic and social benefits as it reduces morbidity and mortality, leads to resource savings in health, improves education outcomes, enhances productivity and increases incomes. Improved nutrition will contribute to achievement of six of the Millennium Development Goals (MDGs), including goals for the eradication of extreme poverty and hunger, reduction of child mortality and improved maternal health.
5. The government and its partners have developed the National Nutrition Strategy (NNS) to state the priorities of the Government of Tanzania during the period July 2011 to June 2016 to ensure that the nation and its people are properly nourished. It is in-line with, and will contribute to, the National Development Vision 2025, MKUKUTA, the African Regional Nutrition Strategy (2005-2015) and the policies and strategies of the government.

Goal, scope and principles

6. The goal of the Strategy is that all Tanzanians attain adequate nutritional status, which is an essential requirement for a healthy and productive nation. This will be achieved

through policies, programs and partnerships that deliver evidence-based and cost-effective interventions to improve nutrition.

7. The Strategy identifies a set of services that several sectors and agencies need to provide in a harmonized manner in order to establish the conditions under which all Tanzanians can be properly nourished. While it seeks to ensure the nutritional status of all citizens of Tanzania, the major focus will be on women of reproductive age and infants aged less than two years since malnutrition's most serious and lasting damage occurs during pregnancy and the first two years of life. It encompasses both undernutrition and overnutrition, however, most attention is given to undernutrition which is the greater barrier to achievement of the MDGs and affects those with least resources to address it.
8. In providing the necessary support to individuals, households and communities throughout the country so that they are able to meet their nutritional needs, the Government of Tanzania will implement the Strategy according to the following implementation principles: community participation, integrated delivery, universal coverage, appropriate technology, working in partnership and intersectoral collaboration.

Priority areas in nutrition

9. The Strategy identifies a set of eight priority areas that are key to improving nutritional status in Tanzania. All these actions relate to nutritional problems of public health significance or are emerging challenges that have the potential for being a significant barrier to human development in the near to medium-term. They are evidence-based, cost-effective and of proven feasibility in Tanzania or similar contexts, and include:
 - Infant and young child feeding
 - Vitamin and mineral deficiencies
 - Maternal and child malnutrition
 - Nutrition and HIV and AIDS
 - Children, women and households in difficult circumstances
 - Diet-related non-communicable diseases.
 - Household food security
 - Nutrition surveillance, surveys and information management
10. Although the strategy prioritizes interventions targeting children under five years and women of reproductive age due to their high vulnerability to malnutrition, it also recognizes the importance of promoting good nutrition in other groups. These groups include children of school age, the youth and the elderly.

11. Interventions that are mandated for other sectors, such as health, water, agriculture and education, and which are included in their sectoral strategies and action plans are not duplicated in the Strategy.

Strategies

12. Eight strategies have been identified to achieve the goal and objectives of the Strategy:
 - i. *Accessing quality nutrition services*: Nutrition interventions must be delivered at scale and with high coverage if they are to have impact on prevalence of malnutrition at the population level. The focus will be on delivering a package of high-impact nutrition services. District nutrition services will be well managed, of high quality and accessible to all, particularly women and children and other vulnerable groups.
 - ii. *Advocacy and behaviour change communication*: Advocacy will to be intensified to raise the visibility and profile of malnutrition at all levels, and increase the commitment and resources for its alleviation. At the household and community level, improved knowledge on caring practices for infants, young children and women of child-bearing age is a necessary component of sustainable efforts to reduce malnutrition.
 - iii. *Legislation for a supportive environment*: Legislation, policies and standards are needed to create a supportive environment conducive to good nutrition. They include measures to prevent unethical marketing of breast-milk substitutes, to protect the breastfeeding rights of employed women, to ensure adequate labelling and quality of products intended for consumption by infants and young children, and for the fortification of food.
 - iv. *Mainstreaming nutrition into national and sectoral policies, plans and programs*: The multi-sectoral nature of nutrition requires advocacy for its inclusion in national and sector policies and plans. Nutritional indicators have been included in the MKUKUTA but further efforts are needed so that nutrition is firmly part of policies and strategies in the health, agriculture, education, community development and industry sectors.
 - v. *Institutional and technical capacity for nutrition*: Nutrition needs to attain the required institutional and technical capacity that is necessary in the decentralization framework. As LGAs are now responsible for implementation of nutrition services, it is essential that there be district level nutrition focal points who are accountable for the delivery of quality nutrition services, and supportive structures at the regional and national level to provide technical backstopping, guidance and supportive supervision. Increasing the numbers and quality of human resources for nutrition at all levels and in all relevant sectors is critical for improving the quality of nutrition services. For health service providers, pre-

service and in-service training courses need to keep pace with latest policies, strategies, guidelines and scientific thinking.

- vi. *Resource mobilization:* The budget gap in nutrition needs to be reduced by mobilizing adequate and sustainable financial resources and improving the efficiency in the use of financial resources for nutrition. Despite hard budget constraints, additional budget for nutrition exists, including larger aid from development partners, increased budget allocation from MOHSW, increased efficiency in delivering nutrition interventions and collaboration with other sectors and programs.
- vii. *Research, monitoring and evaluation:* Research, monitoring and evaluation are essential for evidence-based decision making and enhancing public accountability. Monitoring is continuous and aims to provide the management and other stakeholders with early indications of progress in the achievement of goals, objectives and results. Evaluation is a periodic exercise that attempts to systematically and objectively assess progress towards and the achievement of a program's objectives or goals. Research tests specific interventions and approaches for the betterment of nutritional status, and provides further evidence for policy and programming.
- viii. *Coordination and partnerships:* Because there are multiple causes of malnutrition, action is needed across a range of sectors including health, food and agriculture, water supply and sanitation, education and others. A coordinated response maximizes the use of available technical and financial resources and can create greater synergy of efforts. Public-private partnerships and collaboration with NGOs can increase the opportunities for delivering and scaling up nutrition services.

Obligations and responsibilities

- 13. The implementation of the Strategy requires the participation and involvement of stakeholders at all levels from the community to the national level, including the public sector (sectoral ministries and institutions, regional secretariats and local government authorities), higher learning and training institutions, professional bodies, private sector, development partners, civil society, media and the community. All concerned parties share responsibility for the successful implementation of the Strategy and should acknowledge and embrace its responsibilities.

1. CONTEXT

1.1 Background

14. Nutrition is the outcome of various processes from when food is eaten and nutrients are absorbed in the body for better health outcome. Good nutrition results from eating adequate food in terms of quality, quantity, safety and absence of diseases which cause poor absorption and utilization of nutrients in the body. Furthermore, good nutrition is essential for survival, growth, mental and physical development of human beings. Likewise, good nutrition is essential for enhancing immunity and hence reducing morbidity and mortality. Furthermore, good nutrition contributes to increased educatability, productivity, household and national income.
15. Malnutrition is a state of poor nutritional status, which is the result of inadequate or excess intake of nutrients by the body. In Tanzania, major nutrition problems relate mainly to undernourishment. Causes of malnutrition are illustrated at three levels, that is immediate, underlying and basic.
16. Malnutrition is one of the most serious health problems affecting infants, children and women of reproductive age in Tanzania. Malnutrition contributes to the deaths of over one half of children under five years in developing countries (Pelletier *et al.*, 1995) and is the single greatest cause of child mortality in Tanzania (Profiles, 2006). Beyond individual human suffering, malnutrition is a major impediment to economic growth and development. It contributes to poverty by increasing mortality, increasing susceptibility to disease, impairing cognitive development and educational achievement, and reducing work capacity and productivity in adulthood.
17. United Nations Member States throughout the world recognize that poverty is a key constraint to development, and agreed upon a common set of eight Millennium Development Goals (MDGs) to measure progress towards the reduction of poverty and related social imbalances from 1990 to 2015. Gains in national development and in the achievement of the MDGs are unlikely to occur without successful action to reduce malnutrition (Shekar, 2005).
18. Addressing malnutrition brings considerable economic and social benefits as it reduces morbidity and mortality, leads to resource savings in health, improves education outcomes, enhances productivity and increases incomes. Thus improved nutrition will contribute to the achievement of MDG 1 (eradicate extreme poverty and hunger), MDG 2 (achieving universal education), MDG 3 (promoting gender equality and empowerment of women), MDG 4 (reduce child mortality), MDG 5 (improving maternal health) and MDG 6 (combating HIV and AIDS, malaria and other diseases) (Annex I) (SCN, 2004).

19. Freedom from malnutrition is a moral imperative and a basic human right enshrined in a number of international conventions including the 1989 UN Convention on the Rights of the Child. The commitment of the Government of the United Republic of Tanzania to addressing malnutrition is seen through the National Strategy for Growth and Reduction of Poverty (NSGRP, 2005-2010), known by its Kiswahili abbreviation MKUKUTA, which provides a roadmap for Tanzania to achieve the MDGs. MKUKUTA pays considerable attention to the need to reduce undernutrition and includes goals for underweight, stunting and wasting within its Cluster II for the improvement of quality of life and social wellbeing. MKUKUTA is informed by the aspirations of the National Development Vision 2025, which articulates the vision for achieving a high quality livelihood for all Tanzanians, a well-educated society, good governance and the development of a strong and competitive economy. This vision essentially addresses the same concerns as nutrition.
20. The government and its partners have developed the National Nutrition Strategy (NNS) to state the priorities of the Government of Tanzania to ensure that the nation and its people are properly nourished. It is in-line with, and will contribute to, the National Development Vision 2025, MKUKUTA, the African Regional Nutrition Strategy (2005-2015) and the policies and strategies of the government, including the Health Sector Strategy Plan (HSSP) III, and those of other sectors, notably the agriculture, water and education sectors (Annex II).

1.2 Malnutrition in Tanzania

1.2.1 Magnitude of the public health problem

21. Tanzania has made substantial progress in reducing child undernutrition. Between 1999 and 2010, child underweight fell from 29% to 21%, child stunting fell from 44 to 35%, and child wasting fell from 5% to 4% (TDHS, 2010). Nevertheless, the prevalence of child underweight and stunting in 2004 are still 'high' according to criteria of the World Health Organization (WHO, 2010), and millions of children and women in Tanzania continue to suffer from one or more forms of undernutrition, including low birth weight, stunting, underweight, wasting, vitamin A deficiency, iodine deficiency disorders and anaemia TDHS 2010
22. The process of undernutrition often starts before a child is born. Women who are undernourished before and/or during pregnancy are more likely to give birth to infants with low birth weight. About 11% of women of reproductive age have chronic energy deficiency, defined as a body mass index (BMI) $<18.5 \text{ kg/m}^2$, and 58% of pregnant women are anaemic (TDHS, 2010), both risk factors for low birth weight. Surveys have indicated that the prevalence of infants born with low birth weight ranges from 9% to 21%

-; TDHS, 2010). Low birth weight has serious consequences for survival, health, growth and development, and increases the risk of diet-related non-communicable diseases (DRNCD) in adulthood, particularly among overweight adults (Barker, 1998).

23. Children aged less than 2 years are especially vulnerable to undernutrition as their nutritional requirements are proportionately greatest due to rapid growth; they are less able to express their needs and are susceptible to disease. In Tanzania, the prevalence of underweight and stunting rises sharply during the first 18 months of life (Annex IV). The increase in malnutrition is particularly damaging as it is during this critical period of life that most of the irreversible damage to physical growth and brain development. The period starting with pregnancy and the two years of life is therefore presents an excellent window of opportunity to address undernutrition and prevent its most serious consequences.
24. Vitamin A deficiency increases morbidity and mortality among children and pregnant women, and is the leading cause of preventable blindness. The 2010 TDHS found that 38% of children aged 6-71 months have low serum retinol levels (<20 µg/dL) and 41% of lactating women had low retinol concentrations in their breast milk (TDHS 2010) It is likely that the prevalence of VAD in children has been reduced considerably during the last decade due to the high coverage of twice yearly vitamin A supplementation (VAS), however no recent survey data on vitamin A deficiency are available.
25. Tanzania is one of the countries most affected by iodine deficiency disorders (IDD) in the world. The adverse effects of iodine deficiency include mental and physical congenital defects in newborns, low learning capacity, impaired growth, and poor health and low productivity among the general population. The situation has improved due to salt iodation, which now reaches 82% of households (TDHS, 2010), however 7% of school children were found to have goitre in 2004 and this prevalence exceeded 20% in Iringa and Rukwa regions (TFNC, 2004). Nevertheless, the current national prevalence reflects large improvements since the 1980s, when the national goitre prevalence was estimated at 25% (Kavishe, 1993).
26. Severe anaemia during pregnancy increases the risk of maternal death and of having a low birth weight infant. The most common cause is iron deficiency; other important causes include other vitamin and mineral deficiencies (folic acid, riboflavin and vitamin A, B₁₂ and C), infectious diseases such as malaria, schistosomiasis, hookworms, and HIV and AIDS. Iron deficiency anaemia impairs the growth and learning ability of children, lowers resistance to infectious diseases, and reduces the physical work capacity and productivity of adults. Anaemia affects 59% of children aged 6-59 months and 41% of women of reproductive age (TDHS, 2010). The problem begins before birth with infants born with low iron stores to mothers who are themselves iron deficient and anaemic.

27. Little is known about the prevalence of other vitamin and mineral deficiencies in Tanzania, however the nature of most diets – undiversified, low in animal products and high in plant sources that are rich in anti-nutrients – makes it likely that zinc and B₁ and B₂ deficiency are a public health problems. According to estimates by the International Zinc Nutrition Consultative Group (IZINCG), 37.5% of the Tanzanian population is at risk of inadequate zinc intake (IZINCG, 2004), which places Tanzania in the ‘high’ risk category for zinc deficiency. Lack of zinc is known to impair the immune system and children with marginal nutritional status are at significant risk of developing zinc depletion. The prevalence of other micronutrient deficiencies including niacin, calcium, selenium and vitamin B and excess intake of fluoride have not been investigated.
28. Malnutrition is particularly detrimental in the context of HIV and AIDS as it can exacerbate the progression and effects of the disease, makes antiretroviral treatments less effective, and lessens the ability of households affected by HIV and AIDS to care for its members. Furthermore, HIV and AIDS presents breastfeeding mothers with agonizing decisions on how best to feed their young infants. The 2008 HIV and AIDS and Malaria Indicator Survey found that that 6.8% of women and 4.7% of men aged 15-49 years are infected with HIV, yielding a national average of 5.8%. Nutritional management and counselling of individuals infected or affected by HIV and AIDS is of great importance.
29. Tanzania is affected by a double burden of malnutrition, with a rising prevalence of overnutrition alongside a high incidence of undernutrition. There is no data on overnutrition in children, however the prevalence of overweight in women of reproductive age is 23% and the prevalence of obesity is 6% (TDHS, 2010). Overweight and obesity are considerably higher among women in urban areas (36%) than rural areas (15%) and are rising rapidly: in 1991 the prevalence of overweight or obese women in urban areas was only 19%. The increase in overnutrition appears to be a reflection of increasing wealth in Tanzania, which has resulted in a more sedentary lifestyle and increased calorie consumption, while the diverging pattern between rural and urban areas suggests that inequalities are rising. Overnutrition is a predisposing factor for DRNCD, including diabetes, high blood pressure and coronary heart disease. These DRNCD are on the rise in Tanzania and account for the deaths of 15%-28% of men and 14%-27% of women aged 15-59 years (AMMP, 1997). While the rising incidence of overnutrition is alarming, the high prevalence of undernutrition remains the primary concern in Tanzania. The economic and health consequences of undernutrition are most pressing and disproportionately affect those with low incomes, limited education, and living conditions with poor sanitation facilities, no access to safe water and a high prevalence of infectious diseases.

1.2.2 Causes of malnutrition

30. According to the global conceptual framework (Annex III), malnutrition results directly from inadequate dietary intake and infectious diseases, and indirectly from household food insecurity, inadequate maternal and child care, poor access to health services, and an unhealthy environment. In Tanzania, it is evident that all these factors contribute to malnutrition. Poverty is the backbone of all of these problems due to its direct impact on the capacity of individuals, households, communities and nations to meet their needs and obligations for a healthy and prolonged life.
31. Many households in Tanzania are food insecure because they lack the resources to produce or purchase sufficient food for their households. Forty-four percent (44%) of Tanzanians consume too few calories to even sustain light work, and diets are undiversified, with 71% of all energy obtained from staples (FAO, 2006; Smith *et al.*, 2006). The recent increase in the cost of food worldwide is severely impacting on the lives of those who are already food insecure.
32. Caring practices that are critical for young child and maternal nutrition are far from universal. Only 49% of infants are put to the breast within one hour of birth, and only 50% of infants aged less than 6 months are exclusively breastfed (TDHS, 2010). Early introduction of complementary foods, especially under unhygienic conditions, increases the risk of malnutrition because these foods are often nutritionally inferior to breast milk and may be contaminated with pathogens. Most infants aged 6-9 months (93%) are receiving complementary foods, however the frequency and quality of these foods is often inadequate. It is the norm in Tanzania for women to bear the responsibility for caring for young children as well as being heavily occupied in domestic and agricultural tasks. With so much to do, women have little opportunity to provide time, attention and feeding for their children, or to take sufficient rest themselves. Many women in Tanzania are also not empowered to take important household decisions: 85% are not involved in decisions concerning their own health care, and 93% do not take decisions on daily household purchases, including food (TDHS, 2010).
33. Living conditions are unhealthy for many households: less than 10% of households have access to a ventilated improved pit latrine or flush toilet (TDHS, 2010). Clean and safe water is available to only 54% of the Tanzanian households (TDHS, 2010). One in eight (15%) of children under five years have had diarrhea within the preceding two weeks (TDHS, 2010). Almost all mothers (95%) know about oral rehydration salts for the treatment of diarrhea, however only 74% of children who had diarrhea in the last two weeks were given some form of oral rehydration therapy. Furthermore, only 18% of these children were given more liquids than normal and 42% were given less food than usual or no food at all (TDHS, 2010). Over 70% of children aged less than 5 years and

68% of pregnant women slept under a mosquito net the previous night, of which only one half were insecticide-treated nets (TDHS, 2010).

34. The coverage of essential health interventions has increased during the last decade, but is still not universal. According to the most recent estimates, 25% of children aged 12-23 months are not fully immunized (TDHS, 2010). Although most women (96%) receive some antenatal care from a health professional, only 43% received the recommended four antenatal clinic visits during pregnancy (TDHS, 2010). Many opportunities for promoting preventative health and nutrition interventions are missed. For example, the Tanzania Service Provision Assessment Survey (2006) found that only 6% of sick child consultations include advice to give the child extra fluid during the illness, continue to feed the sick child and bring the child back immediately for specific symptoms. Only 25% of sick children were weighed, and normal feeding practices were assessed in only 23% of children aged less than 24 months.
35. In Tanzania there is considerable variation in the prevalence of malnutrition between rural and urban areas, between regions, between and within districts and between socio-economic groups. Child malnutrition is much more prevalent among rural children than among their urban peers, and the geographic pattern mirrors that of child mortality. Interventions that aim to address malnutrition need to take these differences into account.

1.3 Existing nutrition interventions

36. Tanzania has made considerable progress in advancing the nutrition and health of its population. The reduction of undernutrition and under-five mortality rate between 1999 and 2004 coincided with the introduction of a health sector-wide approach (SWAp), health sector reforms, including decentralized planning and resource allocation, a doubling of public expenditure on health, and large increases in the coverage of child survival interventions (Masanja *et al.*, 2008). These interventions include health interventions that impact on nutritional status such as insecticide-treated nets to prevent malaria and the integrated management of childhood illnesses, as well as direct nutrition interventions, such as vitamin A supplementation (VAS) and exclusive breastfeeding.
37. Tanzania has a long history of public nutrition interventions that date back to the 1940s. Analytical work in Tanzania resulted in the formulation of the Conceptual Framework for Malnutrition and the Triple A Cycle (assessment, analysis and actions). These instruments were applied in the Iringa Nutrition Program, which later became the Joint WHO/UNICEF Nutrition Support Program, and resulted in significant reductions in child underweight and mortality. Concurrently, interventions to improve infant and young child

feeding practices and address vitamin A deficiency, iodine deficiency and anaemia have been introduced.

38. Tanzania has a highly successful VAS program among children aged 6-59 months. A survey conducted in 2004 found a coverage of 85% (HKI, TFNC & UNICEF, 2004), and since then service data has consistently recorded coverage of over 90%. Most VAS is delivered twice a year around the Day of the African Child in June and World AIDS Day in December. Deworming is linked with VAS for children aged 12-59 months and has also achieved high coverage, and there is potential to add other health and nutrition interventions such as the promotion and distribution of ITNs and immunization. Important steps have been taken to sustain VAS by ensuring that Local Government Authorities (LGAs) include sufficient resources for VAS in their annual plans.
39. There has been less success in reaching postpartum women with VAS, mainly because there is insufficient contact between women and health service providers that are able to provide VAS at delivery within the first 4 weeks after delivery, when postpartum VAS is given. Estimates indicate that the coverage is between 20% and 25% (HKI, TFNC & UNICEF, 2004; TDHS, 2010). This calls for an extension of the supplementation period to 8 weeks after delivery and efforts to increase the contact between postpartum women and the health system during this period.
40. There is a need to strengthen the implementation of the integrated package for anaemia control (iron and folic acid supplementation, de-worming, intermittent presumptive treatment of malaria, promotion of ITNs, nutrition education on appropriate diet, screening for anaemia with referral for treatment, hygiene and environmental sanitation). Efforts to prevent and control anaemia in children are hindered by the very low coverage of a micronutrient supplement to prevent iron deficiency and other causes of nutritional anaemia. However the coverage of deworming tablets among children aged 12-59 months is high and the use of insecticide-treated nets is increasing. Only 40% of pregnant women take iron and folic acid supplements for 90 days, 57% are estimated to use insecticide-treated bed nets and only 27% receive the recommended drug regimen for presumptive treatment for malaria (TDHS, 2010).
41. Food fortification has the potential to reduce the prevalence of vitamin and mineral deficiencies in the population. However, with the exception of salt iodation and some food processors who fortify edible oil and confectionary productions on a relatively small scale (TFNC, 2005), food fortification is minimal. Nevertheless, with the concerted effort of a diverse groups of stakeholders, including the government and private millers, food fortification is an achievable goal. A National Food Fortification Alliance (NFFA) has been established and is in the process of building a Private Public Partnership (PPP) in food fortification to advance the fortification agenda in the country.

42. The Universal Salt Iodation Program now reaches 82% of households with iodated salt (TDHS, 2010). This remarkable achievement is protecting millions of young brains from iodine deficiency. Salt iodation began in 1990 and the initial focus was on introducing legislation for mandatory salt iodation and on developing the capacity of the private sector to iodize salt. The Salt Production and Iodation Regulation Act of 1994 banned the marketing of un-iodated salt for human and livestock consumption, and by 1998, 72 iodation machines were in operation throughout the country. The focus of the program has now shifted to developing the capacity of small scale salt producers, raising consumer's awareness, particularly in salt-producing areas, and strengthening quality control. Only 59% of salt contains adequate iodine (TDHS, 2010), and the challenge remains to establish an effective quality assurance system to ensure that all salt is adequately iodized.
43. As caring practices underpin good nutrition, it is essential that opportunities to promote behaviour change for improved nutrition are taken at every contact between a caregiver and service provider. Among the most important caring practices are infant and young child feeding practices, hygiene and sanitary practices, appropriate home care of childhood illnesses and health care seeking, and maternal caring practices. In recognition of the importance of exclusive breastfeeding and other infant and young child feeding practices, the Ministry of Health developed a National Strategy for Infant and Young Child Nutrition in 2004 (MOH, 2004a).
44. Counselling on infant and young child feeding and nutritional care and support for PLHA have lagged behind other HIV and AIDS interventions in Tanzania. However, the National Guide on Nutrition Care and Support for People Living with HIV and AIDS has been developed (TFNC, 2003) and nutrition is integrated in the National Guidelines on PMTTCT and the PMTCT Scale-up Plan. There is an urgent need to ensure that these guidelines and plans are implemented in their entirety.
45. Because of the multifactoral nature of malnutrition, interventions are needed from multiple sectors to complement direct nutrition interventions and address the underlying causes of malnutrition. Key sectors include health, agriculture, community development, livestock, natural resources, water, education, culture, land and environment.
46. The Ministry of Health and Social Welfare (MOHSW) is responsible for many of the policies and strategies which directly and indirectly affect nutrition outcomes. Health services are determined by the National Package on Essential Health Interventions which include interventions for the prevention and management of childhood diseases that contribute to malnutrition, such as diarrhea and malaria, as well as nutrition interventions.

47. Various measures are being undertaken by the government to address food security through the agriculture sector. The Agriculture Sector Development Program (ASDP) has several components that have the potential to support nutrition outcomes, including activities for the following: (i) increased and more stable household food production (ii) increased farm incomes and the ability of farm households to diversify and supplement their diets through purchased foodstuffs (iii) reduced labour demand, especially during peak periods and (iv) increased consumer awareness of good nutrition practices and the benefits of a diversified diet.
48. The government's Water Sector Development Program (WSDP) is working to improve access to safe water, and thereby reducing the prevalence of diarrhea, one of the main infectious causes of malnutrition.
49. Schools provide an opportunity for communication of information about nutrition, as well as delivering nutrition interventions. The Ministry of Education and Vocational Training has a permanent committee that reviews the education curriculum, including the component on nutrition.

1.4 Challenges

50. There is poor coverage of many essential nutrition interventions, including the prevention and control of anaemia and management of severe acute malnutrition. Poor coverage is the result of weaknesses in the demand for and provision of services.
51. Few health facilities provide the full set of nutrition interventions that are needed to prevent, control and manage malnutrition in children and women. This is particularly disadvantageous for addressing nutritional problems that are multifactorial in nature and require multiple different interventions, such as the prevention and control of anaemia.
52. Opportunities to integrate nutrition interventions into all possible contacts between vulnerable groups and health service providers are not fully exploited, which limits coverage and impact. Interventions to promote behaviour change, such as counselling on exclusive breastfeeding, need to be delivered multiple times to the same mother in order to increase the likelihood of a positive outcome.
53. There are inadequate linkages with programs and projects in other sectors that could provide synergistic services to address the underlying causes of malnutrition. Under these circumstances, actions do not create synergy and therefore do not cumulate to produce substantial and durable impact on nutrition. Further efforts are needed to ensure that nutrition is firmly mainstreamed in sector policies, strategies and programmes.

54. There are inadequate linkages between the health facilities and the communities they serve, and the referral system from the community to higher levels of care is not functioning well. A low level of awareness of available services and their benefits is affecting the community's demand, particularly for preventative services. This is compounded by the perception of poor quality services and unfriendly health care. Increased participation by community members is needed so they are more aware of their nutrition needs and rights, and are fully integrated in the planning, implementation and monitoring of services.
55. There is low coverage of health services in remote areas and among other hard-to-reach populations. The use of special strategies to reach these groups is rare.
56. Key decisions about priorities and resource allocations are made at the local government level, where the understanding of the importance of malnutrition and how to deal with nutrition problems is limited. Very few nutritional professionals exist to provide high quality technical support to LGA efforts to address malnutrition. In particular, there are no district staff that are accountable for nutrition and who are responsible for coordinating the design, planning and implementation of nutrition interventions. Consequently, there is a lack of prioritization of nutrition in council plans, including the Comprehensive Council Health Plans, and nutrition is not allocated adequate financial and human resources to provide quality nutrition services. In light of the decentralization process in the country, the institutional arrangements for nutrition need to be reviewed so that the LGAs have the organizational structure necessary to implement nutrition services and are supported by appropriate structures at the regional and national level.
57. Supervision from the RHMTs and CHMTs is not optimal and needs improvement. Both the RHMTs and CHMTs are not fully informed on policies, strategies, programmes or specific activities in nutrition and concerted effort is needed to ensure they are oriented while their health service providers are trained.
58. There is an acute shortage of health service providers who are adequately trained to deliver nutrition interventions at facility and community levels. Pre-service and in-service curricula and training materials need to be updated, based on latest policies, guidelines and scientific knowledge. There is little follow-up to ensure that health workers use the acquired knowledge and skills from in-service training thus the need to strength monitoring and supportive supervision.
59. Policies, standards and guidelines in nutrition are not fully used at the implementation level. They may not be known, read or understood by health workers due the human

resource crisis, which leaves the health workers with little time to study sector development.

60. Legislation that is needed to create a supportive environment for nutrition is not yet fully developed, updated, enacted and enforced. This includes the National Regulation for Marketing of Breast Milk Substitutes and Designated Products (1994); Code of Hygienic Practice for Foods for Infants and Children, Maternity Leave Legislation and legislation for the fortification of food, including salt iodation. The legalisation is not fully understood by all who have responsibilities for its implementation and enforcement.
61. Only limited financial resources are made available for nutrition activities in Tanzania. Insufficient attention from the government and development partners stems from the low understanding about the severity of the problem of malnutrition for Tanzania and the concrete actions that can be taken to address it. In addition, collaboration with other sectors and programs is not fully exploited to mobilize funds.
62. Nutrition needs to be better integrated into existing national surveys in all relevant sectors and management information systems. The Nutrition Surveillance System is not fully functional and needs further revitalization so that it can provide timely and accurate data that is used to monitor nutrition and guide decisions. The use of data for decision-making at all levels, including the district level, needs to be strengthened so that resources are directed where they are needed most.
63. In the absence of adequate coordination, actors tend to define their own nutrition intervention packages and to implement them with minimal coordination. The result is often fragmented interventions which have limited or no impact relative to the investment necessary to implement them. Greater coordination is needed at the national, regional and district levels both within the health sector and with other sectors to increase the synergy of efforts and harmonize approaches and interventions.

1.5 Institutional Capacity

64. Multiple stakeholders are currently involved in the implementation of nutrition activities in the country, including the public sector, private sector, civil society organizations (CSOs) and development partners. The public sector includes all government sectoral ministries and related institutions from the central ministries, regional government and local government authorities. CSOs include national and international non-government organizations (NGOs), faith based organizations (FBOs), community-based organizations (CBOs), higher learning institutions, and political parties; the development partners include the UN agencies, and multi-lateral and bilateral organizations.

65. The sectoral ministries and institutions which operate at the national level have the responsibility for policy development, strategic planning, technical guidance, mobilizing resources, regulating, and monitoring and evaluation.
66. The Ministry of Health and Social Welfare (MOHSW) is responsible for the delivery of public health services in Tanzania. It formulates policies, strategic plans, regulations and legislation, and develops guidelines to facilitate implementation. It also oversees preventive services, national and referral hospitals, procurement and distribution of equipment, drugs and supplies, donor coordination, the overall health budget, human resources planning and quality assurance at all levels.
67. The Tanzania Food and Nutrition Centre (TFNC) acts as the implementing institution in nutrition on behalf of the MOHSW. It was established by the Act of Parliament No. 24 of 1973, which was later amended with the Act No 3 of 1995. Its mandate includes nutrition policy formulation, planning and initiation of nutrition programmes, advocacy, capacity development, harmonization, coordination, research, monitoring and evaluation of nutrition services in the country.
68. Other sectoral ministries that have nutrition concerns include the regional administration and local government; community development, gender and children; education and vocational training; agriculture, livestock, fisheries and food security; water and sanitation; industry, trade and marketing; and planning, economy and empowerment. These sectors incorporate nutrition concerns into their policies and programs, as related to the sector's needs, and have staff deployed up to the community level.
69. Tanzania is committed to decentralization by devolution and has an administrative structure in which local government authorities (LGAs) are responsible for the delivery of public services. The offices of the Regional Administrative Secretaries interpret and adapt national policies to regional realities, and monitor their implementation in districts.
70. Institutions of higher education and training for the sectors of health, agriculture, community development and education have incorporated nutrition into their curricula. However, some of these curricula need updating and the through-put of graduates specialising in nutrition needs to be increased.
71. The government is committed to enhancing Public-Private Partnership (PPP) in implementing actions including nutrition. The private sector operates at various levels and scale, depending on its objectives, resources and interest. It includes the Tanzania Salt Producers Association, which was formed in 1993 to promote the production of iodated salt in Tanzania. While the driving force of the private sector is to make profit,

with renewed commitment to improvement of the well being of Tanzanians, this sector has a strategic role to play.

72. Civil society organizations complement the government's efforts in addressing malnutrition. They work at the grassroots and intermediary levels in implementing nutrition and related activities. International NGOs tend to have a national focus and are well equipped technically and financially to support nutrition and related undertakings at various levels. For greater coherence in the delivery of nutrition interventions, it is important that NGOs, CBOs and FBOs are adequately informed and conform with national governing policies, guidelines, laws and regulations, and national standards.
73. Development partners have been supporting the government's efforts in social and economic development. They are well positioned to mobilize resources, a major constraint to scaling up nutrition interventions in Tanzania. However, nutrition has been given low priority by many development partners even though its impact on the health, wellbeing and the development of the nation is well documented. The current institutional arrangements among the development partners are conducive to the mobilization of resources and action for nutrition. The Joint Assistance Strategy for Tanzania (JAST) and the Sector Wide Approaches (SWAp) provide this avenue. In addition, the establishment and formalization of Development Partners Group (DPG) on Nutrition is enhancing coordination among development partners and ensuring greater support for nutrition.

2. GOAL, SCOPE, PRINCIPLES AND TARGETS

2.1 Goal

74. The goal of the Strategy is that all Tanzanians attain adequate nutritional status, which is an essential requirement for a healthy and productive nation. This will be achieved through policies, strategies, programs and partnerships that deliver evidence-based and cost-effective interventions to improve nutrition.

2.2 Scope

75. The Strategy provides an overview of the priority nutrition interventions and strategic directions for nutrition for the period July 2009 to June 2015. It provides a framework for sustainable improvements in nutrition that are based on scientific evidence and input obtained from the community to the national levels. It consolidates and builds upon previous nutrition-related strategies and efforts. While it encompasses both undernutrition and overnutrition, most attention is given to undernutrition which is the greater barrier to achievement of the MDGs and affects those with least resources to address it.

76. The Strategy seeks to ensure the nutritional status of all citizens of Tanzania throughout the life cycle (Annex V). However, the major focus will be on women of reproductive age and children under five years of age with special emphasis on children aged less than two years since malnutrition's most serious and lasting damage occurs during pregnancy and the first two years of life. It also identifies other nutritionally vulnerable population groups living both in the community and in institutions, in particular (i) persons infected or affected by HIV and AIDS (ii) most vulnerable children who have little or no access to health services (iii) and persons affected by emergencies and disasters. To have the greatest initial impact, the priority interventions should first target the regions where the prevalence of malnutrition is greatest, and later be extended to all regions.

77. The Strategy identifies direct nutrition interventions that are evidence-based and have highest cost-benefit ratios. It recognizes that these direct nutrition interventions need to be coordinated at all levels – national, regional, district and community – with actions to address the underlying determinants of good nutrition: food security, health services, a healthy environment and adequate care for the nutritionally vulnerable. Many of these actions are implemented by other sectors such as health, agriculture, water and education. Very few new mandates or commitments are required of these sectors; simply by carrying out their current responsibilities effectively they will make significant contributions to sustainably reducing malnutrition. However, the Strategy requires that

each of these sectors works in a more collaborative fashion with each other and include nutrition objectives in justifying, planning and budgeting for their regular activities

78. A separate action planning activity will be needed to identify the specific activities required to address the priorities stated in this Strategy and put in place required resources so that identified activities can be effectively undertaken.

2.3 Principles

79. In providing the necessary support to individuals, households and communities through the country so that they are able to meet their nutritional needs, the Government of Tanzania will implement the Strategy according to the following implementation principles:

- i. *Community participation*: A key aim of the Strategy is to enable communities to lead the action needed to address the local nutrition problems they face through participatory approaches. Linkages between the community level and higher levels of care will be strengthened.
- ii. *Integrated delivery*: Nutrition interventions will be integrated within the delivery of facility-based and community-based health services. Opportunities to integrate nutrition interventions into the extension services of other sectors, such as agriculture, will also be explored.
- iii. *Universal coverage*: The aim is to achieve universal coverage of high-impact interventions throughout the lifecycle to save lives and reduce inequities, with a focus on targeting those most in need – women, young children, the poor, hard-to-reach and marginalized communities and individuals.
- iv. *Appropriate technology*: In designing interventions and programs to address malnutrition, appropriate technology will be employed that pays special consideration to the environmental, ethical, cultural, social and economical aspects of the community it is intended for.
- v. *Working in partnership*: Scaling up delivery demands stronger partnerships between all stakeholders – the government, civil society, communities, private sectors, to name a few.
- vi. *Intersectoral collaboration*: Sectoral responsibilities that contribute to reducing malnutrition are maintained. However, an increased level of accountability for reducing malnutrition is required of these sectors. The inclusion of nutrition interventions in other

sectoral strategies will be strengthened. In addition, there is to be strong intersectoral coordination of actions to improve nutrition.

2.4 Targets

80. The targets to be achieved by 2015, are as follows:

- Reduce the prevalence of underweight in children aged 0-59 months (weight-for-age z-score <-2 SD) from 16% 2010 to 11%*.
- Reduce the prevalence of stunting in children aged 0-59 months (height-for-age z-score <-2 SD) from 42% 2010 to 27%*.
- Prevalence of exclusive breastfeeding in children <6 months increased from 50 percent (2010) to 60 percent.
- Sustain the prevalence of wasting in children aged 0-59 months (weight-for-height z-score <-2 SD) below 5% at all times¹.
- Sustain the prevalence of thinness (body mass index <18.5 kg/m²) among women of reproductive age below the 2005 prevalence of 10% at all times.
- Reduce the prevalence of vitamin A deficiency among children aged 6-59 months (serum retinol levels <20 µg/dL) from 24% in 1997 to <15%.
- Reduce the prevalence of anaemia (haemoglobin concentration <11 g/dl) among pregnant women from 48.4% in 2004/5 to 35%.
- Reduce the prevalence of anaemia among children aged 6-59 months of age (haemoglobin concentration <11 g/dl) from 71.8% in 2004/5 to 55%.
- Maintain the prevalence of iodine deficiency among children aged 6-12 years (urinary iodine concentrations <100 µg/l) at <50%.

Behavior change and service provision objectives

- Increase the proportion of infants under six months who are exclusively breastfed from 41% to 60%.
- Increase the proportion of infants aged 4-5 months who are breastfed exclusively from 13.5% to 25%.
- Maintain the proportion of infants aged six to nine months who are fed solid foods in addition to breast milk at >90%.
- Maintain the percentage of children aged 6-59 months who received a vitamin A supplement in the last six months at >90%.

* Prevalence rate according to New WHO Child Growth Standards

¹ The 5% target is less than the 2% target set in the NSGRP, as it is felt that the latter target is too ambitious.

- Increase the proportion of women who receive a dose of vitamin A supplement within eight weeks of delivery from 20% to 40%.
- Increase the proportion of mothers who take iron supplementation for more than 90 days during pregnancy and the post-partum period from 10% to 30%.
- Increase the coverage of adequately iodized salt from 43% to 90%.

3. PRIORITY AREAS IN NUTRITION

81. In Tanzania, the interventions needed to safeguard the nutrition of children and women are well known, and have been recently highlighted in the *Lancet* series on child survival (2003), neonatal health (2005), maternal health (2006), and nutrition (2008). The challenge is to ensure that they reach those most in need. The Strategy identifies a set of priority areas that are key to improving nutritional status in Tanzania. In selecting these priority areas the following considerations were made. Firstly, the size of the malnutrition problem being addressed by a particular priority area is relatively large or, if an emerging challenge, should have the potential for being a significant barrier to human development in the near to medium-term. Secondly, as the critical window of opportunity for preventing the most damaging consequences of malnutrition extends from conception to the first two years of a child's life, the major focus of the priority areas are on maternal, infant and young child nutrition. Thirdly, the priority areas should be evidence-based, cost-effective and of proven feasibility in Tanzania or similar contexts.

82. Using the above criteria, eight priority areas have been selected for inclusion:

- Infant and young child feeding
- Vitamin and mineral deficiencies
- Maternal and child malnutrition
- Nutrition and HIV and AIDS
- Children, women and households in difficult circumstances
- Diet-related non-communicable diseases.
- Household food security
- Nutrition surveillance, surveys and information management

83. Although the strategy prioritizes interventions targeting children under five years and women of reproductive age, due to their high vulnerability to malnutrition, it also recognizes the importance of promoting good nutrition in other groups. These groups include school age children, the youth and the elderly.

84. Interventions that are mandated for other sectors, such as health, water, agriculture and education, and which are included in their sectoral strategies and action plans are not duplicated in the Strategy.

3.1 Infant and young child feeding

85. Infant and young child feeding encompasses the set of feeding practices needed to protect against malnutrition. These practices are essential for the nutrition, growth, development and survival of infants and young children. Infants should be breastfed within one hour of delivery, exclusively breastfed for the first six months of life, and

thereafter should receive nutritionally adequate and safe complementary foods while breastfeeding continues up to two years and beyond. Global analysis has indicated that if implemented at scale, appropriate breastfeeding and complementary feeding can avert almost one-fifth of all child deaths (Jones *et al.*, 2003).

86. The Strategy aims to ensure that the Tanzania National Strategy on Infant and Young Child Nutrition (MOH, 2004a) and its implementation plan (MOH, 2004b) are fully implemented. Skilled behaviour change counselling and support for infant and young child nutrition should be integrated into all points of contact between mothers and health service providers during pregnancy and the first two years of life of a child. Every health facility that provides maternity services should successfully and sustainably practice all the requirements of the Baby Friendly Hospital Initiative (BFHI). Community-based support networks are also needed to help support appropriate infant and young child feeding at the community level through the Baby Friendly Community Initiative (BFCI).
87. The legislation needed to protect appropriate infant and young child feeding practices should be reviewed, implemented, monitored and enforced. This includes the National Regulation for Marketing of Breast Milk Substitutes and Designated Products (1994); relevant Codex Alimentarius and national standards, and the Code of Hygienic Practice for Foods for Infants and Children to ensure that processed infant and complementary foods are safe and nutritionally adequate; and Maternity Leave Legislation to protect the breastfeeding rights of working women.

3.2 Vitamin and mineral deficiencies

88. Vitamin and mineral deficiencies contribute to morbidity and mortality among children and women by impairing immunity, impeding cognitive development and growth, reducing physical capacity and work performance in adulthood, and increasing the risk of obstetric complications among pregnant women. In Tanzania, vitamin A deficiency and anaemia are problems of public health significance. Deficiency of zinc, selenium, calcium and fluoride are public health concerns globally, but little is known about their prevalence in the country.
89. Multiple strategies are needed to prevent and control these deficiencies. They are all designed to increased the dietary intake of vitamins and minerals, and include supplementation, fortification, and dietary improvement. These interventions yields high rates of return; based on cost-benefit ratios, the 2008 Copenhagen Consensus ranked micronutrient supplementation (vitamin A and zinc) the top solution to advance global welfare, and micronutrient fortification was ranked third. Complementary strategies within the agriculture sector include biofortification and crop diversification.

3.2.1 Supplementation

90. Groups at high risk of vitamin and mineral deficiencies need supplements to produce rapid improvements in their vitamin and mineral status. This is likely to remain the case until significant improvements are made in the diets of the entire population.
91. Supplementation with vitamin A, iron-folate and zinc is being implemented in Tanzania. Coverage of these supplements needs to be expanded to scale (>90%) and sustained consistently at these high levels among groups at high risk of deficiency. Multi-micronutrient supplementation of children and pregnant women has been trialled and should be considered for scale-up.

3.2.2 Fortification

92. Fortification is a sustainable approach to improving the micronutrient status of a population. Universal fortification of at least one food staple or condiment with micronutrients for the general population will improve the micronutrient status of almost all people and lay the foundation for long-term source of micronutrients.
93. Initiatives are underway to fortify maize flour, sugar, cooking oil and wheat flour through Private Public Partnership (PPP). The growing urban population is increasingly consuming industrially processed foods, many of which are appropriate vehicles for fortification with micronutrients. Elsewhere in the country, where there is inadequate access to industrially processed foods, community-based point-of-use food fortification initiatives may need to be explored. Infants and young children do not eat sufficient amounts of food staples to meet their micronutrient needs and so other strategies are needed for these groups including 'home fortificants' such as micronutrient powders and appropriately marketed complementary foods.
94. The Strategy aims to ensure that the fortification agenda in Tanzania is advanced by ensuring that legislation, regulations, standards and guidelines are set for fortification of appropriate food vehicles with vitamins and minerals; establishing a quality assurance system at critical control points; and socially marketing fortified foods among consumers. A National Fortification Plan will be developed to provide a roadmap for the actions needed to take food fortification to scale.
95. Ongoing efforts in salt iodation need to be strengthened and sustained so that the goal of 90% coverage with adequately iodation salt is achieved. Special efforts are needed to ensure that the iodine content of salt is within the recommended levels by promoting modern technological approaches to improve the performance of salt factories;

strengthening quality assurance; and strengthening advocacy and communication efforts.

3.2.3 Dietary improvement

96. Dietary improvement aims to improve and maintain vitamin and mineral status through changes in behaviour that lead to an increase in the selection of foods rich in vitamin and minerals, and a meal pattern favourable to increased absorption of vitamins and minerals. In addition; selection of food processing methods that increases absorption of vitamins and minerals should be promoted. Animal foods are the best sources of vitamin and minerals and should be promoted where economically and culturally appropriate. Where poverty or culture limits the intake of animal foods, small changes in the dietary intake of plant foods can considerably improve the intake and absorption of vitamins and minerals. In infancy and early childhood, appropriate breastfeeding and complementary feeding practices are key to preventing and controlling vitamin and mineral deficiencies.

97. Key interventions that fall under dietary improvement include:

- Protect, promote and support appropriate breastfeeding and complementary feeding practices for infants and young children
- Advise women of reproductive age and other caregivers on how to improve dietary intake for themselves and their young children, including the consumption of low-cost locally available foods and fortified foods, where available and affordable.
- Ensure that public and private schools, hospitals, orphanages prisons and other relevant institutions provide meals with appropriate dietary content.
- Educate school children and caregivers about the importance of nutrition and options for improving dietary intake.
- Promote food preparation and processing technologies that increase bioavailability and absorption of vitamins and minerals.

3.2.4 Integrated packages

98. Most micronutrient deficiencies and anaemia in particular, are caused by multiple factors. This calls for integrated packages of interventions to be delivered to high-risk groups. For anaemia, this includes iron and folic acid supplementation, de-worming, intermittent presumptive treatment of malaria, promotion of ITNs, nutrition education on appropriate diet, promotion of fortified foods, screening for anaemia with referral for treatment, hygiene and environmental sanitation.

3.3 Managing maternal and child malnutrition

3.3.1 Maternal malnutrition

99. The intergenerational transfer of malnutrition begins with the poor nutritional status of women, both before and during pregnancy. Women who are short, thin, and gain inadequate weight during pregnancy, and are deficient in micronutrients are more likely to give birth to low birth weight infants. They are also at increased risk of obstetric complications and of maternal death.
100. Effective short route interventions to reduce maternal malnutrition, low birth weight and associated morbidity and mortality include iron and folic acid or multi-micronutrient supplementation, intermittent presumptive treatment of malaria and use of ITNs, deworming, increasing the age at first pregnancy, birth spacing, reduction of women's workload, additional rest during pregnancy and lactation, and nutrition education to improve dietary intake. Several of these actions relate to improved caring practices for women. Improving caring practices for women requires building the knowledge of not only the women themselves, but of those who influence their access to the resources they need for proper care, particularly their family members. It requires greater empowerment of women within households, within society in general and within decision-making processes from community to national level.

3.3.2 Child malnutrition

101. The capacity of the family, community and health system (both facility and community-based) to manage child malnutrition needs to be developed. Caregivers, community-based workers and health service providers who have contact with infants and young children should be oriented on the early signs and dangers of malnutrition. Community-based workers and health service providers should also know how to identify the underlying causes of malnutrition; be able to recognize poor child caring practices and advise caregivers on corrective action; and be equipped with screening tools for acute malnutrition and appropriate information for referral and follow-up.
102. A system for active screening of acute malnutrition in children needs to be established both at the community and facility level, with referral for appropriate treatment. Mid-upper arm circumference is ideal as an initial screening tool as it is simple to perform, rapid and can be integrated into all contacts between children and health services (for example, immunization, IMCI, VAS and deworming, PMTCT and paediatric care for HIV/AIDS).
103. Children with acute malnutrition are at high risk of dying, particularly those with severe acute malnutrition, and require therapeutic feeding with appropriate treatment. Severely

acutely malnourished children with complications should be referred to an inpatient facility with trained staff for nutritional rehabilitation and treatment according to the National Guidelines. Those without complications who are alert, have good appetite and are clinically well can be managed through outpatient care in the community. Health service providers will require guidelines and training in order to carry out their responsibilities as well as an uninterrupted supply of therapeutic feeds, supplements and pharmaceuticals.

3.4 Nutrition and HIV

104. HIV and AIDS is an immediate cause of malnutrition and has a devastating impact on all underlying causes of malnutrition - caring practices and capacity, household food security and the provision of health services. The Strategy addresses two nutrition aspects of HIV and AIDS: the nutritional care of persons living with HIV and AIDS (PLHIV) and the prevention of mother to child transmission (PMTCT) of HIV.
105. PLHIV are very vulnerable to malnutrition due to both biological and social reasons. Proper nutritional care of PLHIV helps to maintain body weight and strength, enhances the ability of the body to tolerate ARVs and optimizes the benefits of antiretroviral medicines and treatment of opportunistic infections. It also delays the progression of HIV infection to AIDS thus increasing productivity and prolonging life. Nutritional assessment, dietary guidance, micronutrient supplementation, supplementary feeding and therapeutic feeding counselling on the side-effect of some ARV should be included in the care and support for PLHIV to prevent and treat malnutrition.
106. Infant feeding counselling and support improves child survival by promoting appropriate feeding practices while minimizing the risk of HIV transmission through breastfeeding. There is need to develop the capacity of the health system, community and family to provide adequate support to HIV-positive women to enable them to select the best infant feeding option for their infants and themselves, and to successfully carry out their infant feeding decisions.
107. A consultative group should be established to keep abreast of scientific developments in the area of nutrition and HIV and AIDS, and advise on necessary changes to policies, strategies, guidelines and interventions.

3.5 Children, women and households in difficult circumstances

108. Children, women and households in difficult circumstances require special attention and practical support to prevent malnutrition. The Strategy has identified two such circumstances: most vulnerable children (MVC) and emergencies. Both these

circumstances require an enabling environment where special attention and support is available to address the difficult circumstances.

3.5.1 Emergencies

109. An emergency is a natural or man-made disaster that requires an extraordinary response. Examples include epidemics, floods, earthquakes, drought, fires and civil unrest. Emergencies threaten all the conditions needed for good nutrition, including the ability of caregivers to provide proper care, the maintenance of adequate health services and a healthy environment, and the food security of households. Children and women are among the most vulnerable victims during emergencies, and this vulnerability often lasts long after the immediate crisis has ended.
110. Nutrition interventions are to be strongly integrated into emergency response plans and operations. Guidance is needed on the provision of nutritional support to populations affected by emergencies, particularly those at greatest risk of malnutrition and its consequences. This will include the monitoring of nutritional status during emergencies; specific targeting of nutritional interventions to infants, young children, pregnant women and breastfeeding women; and the protection, promotion and support of appropriate infant and young child feeding practices.
111. Because of the urgency with which these interventions are often required when an emergency arises, emergency preparedness plans and guidelines need to be established so that they can be effective in an emergency. In addition, there is need to develop the capacity among the health system and other stakeholders before an emergency strikes so that there are sufficient human, financial and material resources to provide appropriate nutrition care to children and women in the event of an emergency.

3.5.2 Most vulnerable children

112. Special attention is needed for most vulnerable children (MVC) living under challenging circumstances. These children are affected nutritionally, mentally, socially and emotionally, mainly due to a lack of or inadequate family care and comprehensive supportive programs. They include orphans, children separated from their parents, child labourers, street children, disabled children, and children infected or affected by HIV and AIDS. These children should be specially targeted for nutrition interventions to meet their right to good nutrition, including social protection schemes.

3.6 Diet-related non-communicable diseases

113. As economic growth and incomes increase in Tanzania, dietary habits and lifestyles are changing. A sedentary lifestyle and increased consumption of high calorie foods increases the risk of diet-related non-communicable diseases (DRNCD), including cardiovascular diseases, diabetes, some cancers and other illnesses. There is considerable evidence that infants who are malnourished in the uterus and are born with low birth weight are more susceptible to suffer from such diseases as adults.
114. While the burden of undernutrition in Tanzania is much greater than overnutrition, and is likely to remain this way for many years to come, the government will monitor trends in diet-related disorders and intervene where indicated. The focus will be on the promotion of healthy diets and healthy active lifestyles, and market interventions to encourage the production of healthier foods, particularly fruits and vegetables, and controls on food fat content. In addition, interventions to ensure mothers are healthy and well nourished during pregnancy can assist in preventing low birth weight, a risk factor for DRNCD. There will be increasing need to develop and implement simultaneous activities to address problems associated with both undernutrition and overnutrition.

3.7 Household food security

115. At the household level, food security refers to the ability of the household to secure, either from its own production or through purchases, adequate food for meeting the dietary needs of all members of the household. Households which are vulnerable to food insecurity lack sufficient resources to produce or purchase sufficient nutritious food.
116. The Strategy aims to strengthen household food security by mobilizing action to improve household food production, harvest and post-harvest handling, storage and preservation, food processing and preparation, animal husbandry and fishery. Beneficial indigenous practices will be encouraged, and where necessary appropriate technologies will be introduced and made available, accessible and affordable at all times, including technologies that reduce women's workload. The formation of formal and informal lending institutions will facilitate the acquisition of credit, while effective extension services can help improve agricultural and livestock rearing practices.
117. To improve food production, it is necessary to promote the proper management and sustainable utilization of natural resources by community members. Actions to reduce food losses during harvesting and post-harvesting include the promotion of improved preservation methods and food storage structures. Food processing and preparation techniques aimed at retaining the nutritional quality of food and enhancing the shelf life will enhance the year-round availability of nutritious foods. For households that do not

produce their own food, income-generating activities are needed so that they can afford to purchase sufficient nutritious food. Once food is available at the household level, it is important to promote equitable distribution among household members.

3.8 Nutritional surveillance, surveys and information management

118. In order to better understand the scope of the problem of malnutrition throughout the country and to measure progress in addressing it, the nutritional status of the population must be monitored on a regular basis. This requires the collection of nutritional data, and its analysis and management.
119. A comprehensive nutrition surveillance program can help assess whether the actions taken under the Strategy are effective and whether modifications to the Strategy are needed as nutritional challenges change through time. The Strategy aims to further strengthen the Nutritional Surveillance System (NSS) so that timely and reliable nutrition information is generated. The NSS will be linked with other information management systems such as Tanzania Socio-Economic Database (TSED), Health Management Information System (HMIS) and poverty monitoring system to be sustainable. Strengthening coordination of the NSS from national to village level is crucial.
120. Nutrition indicators should also be incorporated into national surveys such as the Tanzania Demographic and Health Survey to monitor progress towards nutrition targets in national plans, including MKUKUTA. Where necessary, separate nutrition surveys can be conducted to obtain additional information on nutritional status, particularly micronutrient status. There is no data on the prevalence of zinc, selenium, calcium and fluoride, and up-to-date data on the prevalence of vitamin A deficiency, iodine deficiency, iron deficiency, folate deficiency and anaemia are also required.

4. STRATEGIES

121. Eight cross-cutting strategies have been identified to achieve high coverage and quality delivery of the priority areas in nutrition, and thus achieve the objectives of the Strategy. The strategies are summarized in the Table 1, which provides the expected results, indicators and means of verification for each strategic objective (SO). This table is intended as the basis for the formulation of detailed 3-year costed Plans of Action, which will stipulate the activities, a timeline for achievement, allocation of responsibilities for implementation, and measurable indicators for monitoring and evaluation..

4.1 Strategy 1: Accessing quality nutrition services

122. Nutrition interventions must be delivered at scale and with high coverage if they are to have impact on prevalence of malnutrition at the population level. The focus will be on delivering a package of high-impact nutrition services. District nutrition services will be well managed, of high quality and accessible to all, particularly women and children and other vulnerable groups.

SO 1.1: Increase access to nutrition services at community and facility level

123. ***Health facilities provide the minimum package of high-impact nutrition services:*** The aim is to ensure that every health facility at all levels is able to provide the minimum package of high-impact nutrition services to safeguard the nutritional status of children and women including the assessment of nutritional status; promoting and supporting infant and young child feeding practices; counselling on dietary improvement; provision of micronutrient supplements; management of malnutrition; nutritional support for PLHIV; and treatment of underlying infectious diseases.

124. ***Integration of nutrition interventions into the delivery of health services is increased:*** Most interventions to improve nutrition cannot be successfully delivered through a single contact with a health service provider. Children, women and other caregivers need multiple contacts to acquire knowledge for behaviour change, receive counselling, obtain supplements and other nutritional commodities, and be assessed for malnutrition. For this reason, nutrition interventions will be packaged with health interventions and integrated, to the extent possible, in all existing health services with which the mother/caregiver has contact throughout pregnancy and during the first two years of a child's life. Such contacts include antenatal care, delivery care, postnatal care, growth monitoring promotion, twice yearly VAS and deworming, immunization, integrated management of the sick child (IMCI), PMTCT, and care and support programs for PLHA.

125. **Linkage with other sectors is improved to address immediate and underlying causes of malnutrition in a comprehensive manner:** Linkages between nutrition services and other relevant programs will be strengthened to address malnutrition caused by underlying factors, such as household food insecurity and unhealthy environment. Opportunities to better incorporate nutrition interventions, particularly nutrition education, in the services provided by other sectors will be explored, including the agriculture, water and education sectors.
126. **Community-based programs and networks to promote and support appropriate nutrition behaviours are developed:** Nutrition programmes that encourage the full participation and cooperation of the entire community, including men, will be brought to the communities through community outreach programs. Communities will identify their needs and will be involved in decision-making, implementation and oversight of actions. Community-based groups or networks will be utilized to provide support to women and caregivers. They may take the form of mother support groups, peer counsellors or women's groups, and where possible should utilize existing structures.
127. **Two-way referral mechanisms between the community and higher levels of care are strengthened:** Malnourished women and children can only be treated if they present at outreach or facility-based health services. This is especially important for severe acute malnutrition, which carries a high risk of mortality. Active case detection is required in the community by persons who are both familiar with screening methods and understand the signs and symptoms for referral.
128. **Nutrition interventions are effective in reducing undernutrition in vulnerable groups:** Special efforts and alternative delivery strategies are needed to identify hard-to-reach groups in need of nutrition services. They include populations living in remote areas and socially disadvantaged groups including most vulnerable children. Disparities in access to interventions among these groups should be documented, and activities planned to address them.

SO 1.2: Strengthen the quality of nutrition services

129. **Guidelines, standards, protocols, job aids and other technical tools for nutrition are updated and disseminated to districts:** Guidelines, standards, protocols, job aids and other technical tools for nutrition will be developed and periodically revised to ensure they reflect the latest scientific knowledge, international guidelines, and national policies.
130. **Adherence to policies, guidelines, standards, protocols, job aids and other technical tools for nutrition is improved:** Policies, guidelines, standards, technical tools and protocols for nutrition will be distributed to all health facilities, and adherence

will be improved through quality of care initiatives, supportive supervision and monitoring and evaluation.

131. **Availability of essential equipment and supplies for nutrition is guaranteed at all health facilities:** Nutrition pharmaceuticals and commodities will be included in the Essential Drug List, and uninterrupted access at all levels to safe and pharmaceuticals, medical supplies and equipment for nutrition will be ensured.

SO 1.3: Improve the district- and regional-level management of nutrition services.

132. **Minimum package of high-impact nutrition services is included in Comprehensive Council Health Plans (CCHPs):** A district-level nutrition focal person will provide high quality technical support to LGAs. Council Health Management Teams will understand the minimum package of high-impact nutrition services to be provided at community and facility level and will incorporate sufficient resources in the annual CCHPs.

133. **Supportive supervision of health facilities by CHMT, RHMT and other sectors staff includes nutrition:** CHMTs, RHMTs and other sectors will include nutrition indicators in their supervision checklists and provide supportive supervision to improve the quality of nutrition services. They will be included in capacity building efforts for nutrition so they are in a position to provide this support.

134. **Supportive supervision of extension workers in the agriculture and community development includes nutrition:** Nutrition indicators are in supervision checklists and supervisors provide supportive supervision to improve the quality of nutrition services. They will be included in capacity building efforts for nutrition so they are in a position to provide this support.

4.2 Strategy 2: Behaviour change communication

135. At the household and community level, improved knowledge on caring practices for infants, young children and women of child-bearing age is a necessary component of sustainable efforts to reduce malnutrition.

SO 2.1: Enhance behaviours, customs and traditions of men, women, caregivers, family and community members, and those who influence them which impacts positively on nutrition.

136. **Men, women, caregivers, family and community members practice behaviours, customs and traditions that support improved nutrition:** Behaviour change

communication (BCC) will focus on the actions that need to be taken in support of improved nutrition. It will be guided by a BCC strategy, which will be informed by formative research that establishes the key behaviour issues and barriers to and facilitators of interventions to prevent malnutrition. The focus is not only on the primary target groups, such as women, but also on those who influence the primary target groups at all levels, including family members, employers and health service providers. A broad range of channels will be used, including individual and group counseling, informal gatherings at community level, formal sessions through health services, school curricula and mass media. As individual and group counseling is one of the most effective channels, the capacity of health service providers to counsel women, caregivers and family members on the changes in behaviour need to prevent malnutrition will be enhanced. The full range of nutrition and malnutrition issues will be covered, including breastfeeding, complementary feeding, dietary improvement, hygiene and sanitation, home care of illnesses, and utilization of health services. Special attention will be paid to ensuring that programmes and projects use consistent community messages, tools and materials, and to inserting behaviour change counselling and support for nutrition into all points of contacts between women, caregivers and service providers.

4.3 Strategy 3: Legislation for a supportive environment for optimal nutrition

137. Legislation, policies and standards are needed to create a supportive environment conducive to good nutrition. They include measures to prevent unethical marketing of breast-milk substitutes; to protect the breastfeeding rights of employed women; to ensure adequate labelling and quality of products intended for consumption by infants and young children; to enable the tax-free import and registration of nutrition commodities; and for the fortification of food.

SO 3.1: Strengthen the implementation, monitoring and enforcement of legislation.

138. ***Legislation to create a supportive environment for optimal nutrition is enacted and periodically revised, including legislation for the protection of breastfeeding legislation to regulate marketing of breastmilk substitutes, maternity rights, food safety and food fortification:*** Legislation will be developed and enacted, based on international codes and conventions, to ensure that infant and young child feeding practices are protected and that food fortification paves the way for a sustainable reduction in the prevalence of micronutrient deficiencies. This legislation will need to be periodically revised and amended according to international recommendations and changing contexts in the country.

139. ***Regulations, standards and guidelines to support the implementation of legislation are developed, and periodically revised when necessary:*** Regulations,

standards and guidelines provide the necessary directives to implement legislation, including By Laws enacted in local government authorities and will be developed and revised in line with the enactment of legislation and subsequent amendments.

140. ***Monitoring and enforcement procedures are strengthened to more effectively detect violations:*** Procedures for monitoring and enforcement of legislation will be established and will clearly stipulate the roles and responsibilities of key stakeholders so that swift action is taken against those that violate the legislation. The awareness of policy-makers, the food industry, food wholesalers/marketers, health service providers, employers and the general public about relevant legislation will be raised.

4.4 Strategy 4: Mainstreaming nutrition interventions into national and sectoral policies, plans and programs

141. The multi-sectoral nature of nutrition requires advocacy for its inclusion in national and sector policies and plans. Nutritional indicators have been included in the MKUKUTA but further efforts are needed so that nutrition is firmly part of policies and strategies in the health, agriculture, education, community development and industry sectors.

SO 4.1: Mainstream nutrition into national and sectoral policies, plans and programs.

142. ***All government development policies adequately incorporate nutrition as a priority area of achieving economic growth, stability and prosperity:*** Existing and developing policies, plans and programs will be reviewed to ensure that nutrition is adequately incorporated, and that there is coherence between the various documents.

4.5 Strategy 5: Technical capacity for nutrition

143. Nutrition needs to attain the required institutional and technical capacity that is necessary in the decentralization framework. As LGAs are now responsible for implementation of nutrition services, it is essential that there be district level nutrition focal points who are accountable for the delivery of quality nutrition services, and supportive structures at the regional and national level to provide technical backstopping, guidance and supportive supervision. Increasing the numbers and quality of human resources for nutrition at all levels and in all relevant sectors is critical for improving the quality of nutrition services. For health service providers, pre-service and in-service training courses need to keep pace with latest policies, strategies, guidelines and scientific thinking.

SO 5.1: Build strategic and operational capacity for nutrition

144. **National level structures provide strategic leadership and technical backstopping:** TFNC will continue to lead the national response to nutrition and ensure a coordinated, effective and efficient approach to tackling malnutrition. It will provide strategic leadership to all sectors; strengthen multi-sector coordination and collaboration; advocate for resources for nutrition; promote harmonization and alignment of sector financing; provide guidance, training and technical support to implementing agencies; and monitor and evaluate progress. A desk office in the Ministry of Health will provide in-house expertise and oversight, strengthen coordination with TFNC and help ensure that nutrition remains an integral part of the ministry's disease prevention strategy.
145. **Regional departments provide supportive supervision and guidance to LGAs.** The ability of the regional departments to provide technical guidance and supervision to LGAs to improve nutrition service delivery will be strengthened. The competency of RHMT members will be created to interpret policies, regulations and conduct supportive supervision for nutrition. Coordination between the regional departments, including health, water, agriculture, education will be improved.
146. **Local government authorities have the capacity to plan and implement nutrition services:** Each council will have a designated focal point for nutrition. With guidance from the RHMTs and TFNC, these focal points will be responsible for identifying the districts key nutrition problems, assisting health, agriculture, community development and education staff in designing nutrition interventions, integrating them into district plans and budgets, and overseeing implementation.

SO 5.2: Improve the knowledge, skills and competencies of service providers at all levels to give adequate support in nutrition

147. **Pre-service curricula and training materials for service providers includes appropriate content on nutrition:** A nutrition component will be integrated into the training curricula of various cadres in all relevant sectors, including but not limited to the health, agriculture, community development, education and water sectors. The most sustainable way to address the current knowledge and skills gaps is to include essential knowledge and competences in the pre-service curricula. Whilst such efforts progress, there is also need to increase the knowledge and skills of health service providers, nutritionists and allied professionals who are already in service through action-oriented skills-focused training. Pre-service and in-service curricula will be periodically reviewed and updated in line with scientific knowledge, emerging issues and changing policies. This will include content on nutrition policy, guidelines, and relevant legislation, as well as skills training for interpersonal communication, counselling and community mobilization. Special attention is needed to develop the capacity of nutrition focal points at the district

level so that they are able to provide high quality technical support to government efforts in nutrition.

148. ***In-service training materials, guidelines, protocols and job aids are available:*** Training materials, guidelines, protocols and job aids to support the functions of service providers and community-based workers in delivering nutrition services will be produced and disseminated.
149. ***Pool of trainers in nutrition for training of service providers is developed:*** Teams of experienced trainers for both in-service and pre-service education will be created to support the capacity building efforts.
150. ***Follow-up and supportive supervision of service providers and community-based workers is improved to sustain their knowledge and skills:*** Supportive supervision is important following training to ensure that knowledge and skills are translated into improved service delivery. Follow-up and coaching will become integral part of on-the-job training.

4.6 Strategy 6: Advocacy and resource mobilization

151. Advocacy will be intensified to raise the visibility and profile of malnutrition at all levels, and increase the commitment and resources for its alleviation. The budget gap in nutrition needs to be reduced by mobilizing adequate and sustainable financial resources and improving the efficiency in the use of financial resources for nutrition. Despite hard budget constraints, additional budget for nutrition exists, including larger aid from development partners, increased budget allocation from MOHSW, increased efficiency in delivering nutrition interventions and collaboration with other sectors and programs (WB, TFNC & UNICEF, 2007).

SO 6.1: Establish and maintain nutrition high on the development agenda at all levels and mobilize adequate and sustainable financial resources to support implementation of the NNS

152. ***Nutrition is established and maintained high on the development agenda:*** Advocacy is needed to raise the profile of improved nutrition as a key element in Tanzania's development efforts. This advocacy work will involve building the knowledge of policy makers and leaders at all levels on the serious implications of malnutrition for health, survival and development in order to develop commitment and mobilize resources for nutrition. Advocacy efforts will take many forms from conducting high-level consultations with national level policy makers, to building grassroots demand among

constituents to motivate their political leaders to address malnutrition within their communities.

153. ***Increased resources are mobilized for nutrition at the central, regional and district levels:*** The nature and magnitude of malnutrition and its implication for the development of the country will be better communicated to policy makers and planners in the government and among development partners to leverage increased resources and commitment for nutrition. As nutrition is multi-sectoral there exist opportunities to leverage the considerable resources available in other sectors and programs. The capacity of RHMTs and CHMTs to plan and budget for nutrition will be enhanced by ensuring the minimum package of nutrition interventions is understood, integrating nutrition adequately into financing and budgeting tools, and tracking budget allocations in approved CCHPs to monitor progress.

4.7 Strategy 7: Research, monitoring and evaluation

154. Research, monitoring and evaluation are essential for evidence-based decision making and enhancing public accountability. Monitoring is continuous and aims to provide the management and other stakeholders with early indications of progress in the achievement of goals, objectives and results. Evaluation is a periodic exercise that attempts to systematically and objectively assess progress towards and the achievement of a program's objectives or goals. Research tests specific interventions and approaches for the betterment of nutritional status, and provides further evidence for policy and programming.

SO 7.1: Develop framework/plans for monitoring, evaluation and research for nutrition
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155. ***Monitoring and evaluation framework and research plan developed:*** A monitoring and evaluation framework and research plan will be developed to explain how nutrition data and information will be collected, processed, analysed, interpreted, shared and used. The plan will provide a framework to monitor and evaluate the NNS and specific policies, strategies and interventions and assess their effectiveness in improving nutrition, justify their continuation or modification, and provide feedback at all levels. It will cut across all sectors, utilize all relevant data collection systems (Annex VI) and identify the roles and responsibilities of actors at all levels. All organizations working in the field of nutrition will be encouraged to follow the same monitoring and evaluation plan to ensure comparability.
156. ***Nutrition included in sectoral M&E strategies and plans:*** Nutrition will be included in the M&E and research strategies and plans of other sectors, including the

comprehensive M&E and research policy and strategy that are being developed under HSSP III.

SO 7.2: Obtain timely data on the nutritional status of the population through nutritional surveillance, HMIS, periodic surveys, and other routine and non-routine data systems.

157. **Nutrition indicators are included in HMIS, periodic surveys, surveillance systems and other routine and non-routine data systems:** In addition to TFNC's Management Information System, nutrition indicators will be incorporated into existing Health Management Information System, periodic surveys such as the Tanzania Health and Demographic Survey and other routine and non-routine data systems. The consistent use of nutrition indicators for monitoring and evaluating trends in nutrition will be ensured.
158. **Nutritional surveillance is strengthened:** The Nutritional Surveillance System and Rapid Vulnerability Assessments will be strengthened so that they provide accurate and timely information on nutritional status.
159. **Special surveys conducted to obtain specialised data on nutritional status:** Where existing data collection systems are unable to provide data on a specific aspect of nutrition, special surveys will be conducted to fill the information gap.

SO 7.3: Strengthen the evidence-base for nutrition policy and programming

160. **Research implemented to provide necessary additional information for nutrition planning, and research findings disseminated:** Research, including operations research, is needed to determine the factors that contribute to poor nutrition at all levels; identify which groups most need and benefit from services; and identify best practices and cost-effective approaches to improving nutrition for evidence-based advocacy and programme implementation. The results for monitoring, evaluation and research should be regularly reviewed, shared and used to direct resources where they are needed most, advocate for new or revised policies, legislation, strategies, plans and interventions for improving nutrition. For data to be used more effectively, training is needed in the management and interpretation of data.

4.8 Strategy 8: Coordination and partnerships

161. Because there are multiple causes of malnutrition, action is needed across a range of sectors including health, food and agriculture, water supply and sanitation, education and others. A coordinated response maximizes the use of available technical and financial resources and can create greater synergy of efforts. Public-private partnerships and collaboration with NGOs can increase the opportunities for delivering and scaling up nutrition services.

SO 8.1: Enhance coherence and synergy in the delivery of nutrition interventions through coordination at all levels

162. **Coordination structures for nutrition are functional:** Coordination mechanisms are necessary at all levels – national, regional, and district - to create and sustain coordination and synergy both within and across sectors. At the national level, existing coordination structures will be revitalized to enable nutrition to be better mainstreamed in sector policies, strategies and programs. A department charged with coordination nutrition activities with other Ministries, Local Government and programs and projects should be established, preferably in TFNC. The DPG Nutrition will continue to enhance coordination among development partners and ensure greater technical and financial support for nutrition. At the regional level, forums will be established to facilitate interaction on a regular basis. At the district level, the council development plans offer opportunities for collaboration among partners and integration of actions for nutrition.

SO 8.2: Strengthen partnerships for nutrition.

163. **Strategic partnerships for nutrition are established:** Strategic partnerships will be forged with the private sector, civil society and other development agencies. The availability of iodized salt throughout Tanzania shows that it is possible to collaborate successfully with the private sector. Other opportunities for public-private partnerships exist, for example, the promotion of food fortification and social marketing of nutrition messages. Civil society organizations, such as NGOs have the potential to expand the coverage of interventions, particularly at the community level.

Table 1: Achieving the strategic objectives

Strategy 1: Accessing quality nutrition services

Strategic objective	Expected result	Indicators	Means of verification
SO 1.1: Increase access to nutrition services at the community and facility level.	Health facilities provide the minimum package of high-impact nutrition services	Proportion of health facilities providing the minimum package of nutrition services	HMIS Annual Report
	Integration of nutrition interventions into the delivery of health services is increased	Nutrition services integrated with maternal, newborn and child health activities and other health programs.	Review of RHMT supervision reports; qualitative study
	Linkage with other sectors is improved to address immediate and underlying causes of malnutrition in a comprehensive manner.	Links are established with other sectors to address immediate and underlying causes of malnutrition	Qualitative study
	Community-based programs and networks to promote and support appropriate nutrition behaviours are developed.	Number of districts with community-based networks to promote and support appropriate nutrition behaviours.	Review of RHMT supervision reports; qualitative study; TSPA
	Referral mechanisms from community to higher levels of care are strengthened.	Proportion of children with severe acute malnutrition and complications who are treated at a health facility.	Survey
	Nutrition interventions are effective in reducing undernutrition in vulnerable groups.	Prevalence of undernutrition in vulnerable groups	TDHS and other nutrition surveys
SO 1.2: Strengthen the quality of nutrition services.	Guidelines, standards, protocols, job aids and other technical tools for nutrition are updated and disseminated to districts.	Availability of policies and guidelines in nutrition in health facilities and numbers of health workers training using the guidelines	Review RHMT supervision reports
	Adherence to policies, guidelines, standards, protocols, job aids and other technical tools for nutrition is improved.	Proportion of health staff in sampled health facilities working according to policies, guidelines, standards, technical and protocols.	Survey
		Facility-based case fatality rate for severe acute malnutrition	HMIS

Strategic objective	Expected result	Indicators	Means of verification
	Availability of essential equipment and supplies for nutrition is guaranteed at all health facilities.	Availability of essential equipment and supplies for nutrition.	HMIS annual report
SO 1.3: Improve the district- and regional-level management of nutrition services	Minimum package of high-impact nutrition services is included in Comprehensive Council Health Plans (CCHPs)	Proportion of CCHPs that include the minimum package of essential nutrition services.	CCHPs
	Supportive supervision of public and private health facilities by CHMT and RHMT staff includes nutrition.	Number of supervision visits that include nutrition indicators	CHMT and RHMT reports.

Strategy 2: Behaviour change communication

Strategic objective	Expected result	Indicators	Means of verification
SO 2.1: Enhance the nutrition behaviours of women, caregivers, family and community members, and those who influence them	Women, caregivers, family and community members practice behaviours that support improved nutrition	Proportion of caregivers who practice minimum set of key behaviours for nutrition	Survey

Strategy 3: Legislation for a supportive environment for optimal nutrition.

Strategic objective	Expected result	Indicators	Means of verification
SO 3.1: Strengthen the implementation, monitoring and enforcement of legislation.	Legislation to create a supportive environment for optimal nutrition is developed and periodically revised, including legislation for the protection of breastfeeding, maternity rights, food safety, registration and tax-exemption of commodities for nutrition and food fortification.	Updated legislation available.	Updated legislation.
	Regulations, standards and guidelines to support the implementation of legislation are developed, and periodically revised when necessary.	Updated regulations, standards and guidelines available.	Updated regulations, standards and guidelines.
	Monitoring and enforcement procedures are strengthened to more effectively detect violations.	Number of violations against legislation. Proportion of violation cases that are brought to court.	Court proceedings.

Strategy 4: Mainstreaming nutrition interventions in national and sectoral policies and plans

Strategic objective	Expected result	Indicators	Means of verification
SO 4.1: All government development policies adequately incorporate nutrition as a priority area of achieving economic growth, stability and prosperity.	Nutrition interventions are mainstreamed into national and sectoral policies, plans and programs	Nutrition interventions mainstreamed into national and sectoral policies, plans and programs	Review of national and sectoral policies, plans and programs

Strategy 5: Technical capacity for nutrition

Strategic objective	Expected result	Indicators	Means of verification
SO 5.1: Build strategic and operational capacity for nutrition	National level structures provide strategic leadership and technical backstopping	Strengthened national level structures.	Qualitative study
	Regional departments provide supportive supervision and guidance to LGAs	Number of districts given supportive supervision on nutrition by RHMT at least twice per year	RHMT supervision reports
	Local government authorities have the capacity to plan and implement nutrition services	Number of districts with nutrition focal points	HRIS
SO 5.2: Improve the knowledge and skills of professional and community-based workers at all levels to give adequate support in nutrition.	Pre-service curricula and training materials for service providers includes appropriate content on nutrition.	Proportion of training institutions using up-to-date curricula.	Survey
	In-service training materials, guidelines, protocols and job aids are available	Proportion of service providers that have relevant job aids	Survey
	Pool of trainers in nutrition for training of service providers is developed.	Pool of trainers available for training of service providers and community-based workers in nutrition.	HRIS
	Follow-up and supportive supervision of service providers and community-based workers is improved to sustain their knowledge and skills.	Proportion of service providers and community-based workers who receive at one least supportive supervision contact following training.	Survey

Strategy 6: Advocacy and resource mobilization

Strategic objective	Expected result	Indicators	Means of verification
SO 6.1: Establish and maintain nutrition high on the development agenda at all levels and mobilize adequate and sustainable financial resources to support implementation of the NNS	Nutrition is established and maintained high on the development agenda	Number of high level advocacy events per year	Media monitoring
	Increased resources are mobilized for nutrition at the central, regional and district levels	Available government and DP budget for nutrition.	MTEFs

Strategy 7: Research, monitoring and evaluation

Strategic objective	Expected result	Indicators	Means of verification
SO 7.1: Develop framework/plans for monitoring, evaluation and research for nutrition	Monitoring and evaluation framework and research plan developed	Availability of monitoring and evaluation framework and research plan	Monitoring and evaluation framework Research plan
SO 7.2: Obtain timely data on the nutritional status of the population through nutritional surveillance, HMIS, periodic surveys, and other routine and non-routine data systems.	Nutrition indicators are included in HMIS, periodic surveys, surveillance system and other routine and non-routine data systems.	Nutrition data is generated by routine and non-routine data systems	Reports of the HMIS, Demographic and Health Survey, Rapid Vulnerability Assessments and Panel Surveys
	Nutritional surveillance is strengthened	Operational surveillance systems	Surveillance reports
	Special surveys conducted to obtain specialised data on nutritional status.	Up-to-date data on prevalence of malnutrition available.	Survey report
SO 7.3: Strengthen the evidence-base for nutrition policy and programming	Research implemented to provide necessary additional information for nutrition planning, and research findings disseminated	Availability of research reports	Review HIS reports
	Disseminate the results of research, and revise policies, strategies and plans in response to new knowledge and programme experiences and outcomes.	Revised policies, strategies and plans	Research reports

Strategy 8: Coordination and partnerships

Strategic objective	Expected result	Indicators	Means of verification
SO 8.1: Enhance coherence and synergy in the delivery of nutrition interventions through coordination at all levels	Coordination structures for nutrition are functional	Number of functional coordination structures	Qualitative study
SO 8.2: Strengthen partnerships for nutrition	Strategic partnerships for nutrition are established.	Number of functional partnerships in place	Qualitative study

5. OBLIGATIONS AND RESPONSIBILITIES

164. The implementation of the Strategy requires the participation and involvement of stakeholders at all levels from the community to the national level, including the public sector (sectoral ministries and institutions, regional secretariats and local government authorities), research institutes, higher learning and training institutions, professional bodies, private sector, development partners, civil society, media and the community. All concerned parties share responsibility for the successful implementation of the Strategy and should acknowledge and embrace its responsibilities. The obligations and responsibilities of all stakeholders are identified below to ensure that their collective action contributes to the full attainment of the Strategy's goal and objectives.

5.1 Public sector

5.1.1 National level

165. The sectoral ministries and institutions which operate at the national level are responsible for ensuring that nutrition is adequately reflected in sector policies, strategic plans, legislation, regulations and guidelines that lie within their mandate and jurisdiction. They are also responsible for identifying and allocating human, financial and organization resources for implementation of the Strategy, donor coordination, and quality assurance for nutrition at all levels.

166. The Government of Tanzania has committed itself to scaling up nutrition (SUNI) in the country. To enhance fulfilment of this commitment, the Government has established a High Level National Steering Committee for Nutrition which includes senior representatives from the Government, Development Partners, Private Sector and Civil Society.

167. The objective of the High-level Steering Committee on Nutrition is to ensure comprehensive and coordinated understanding and action in responding to nutrition challenges in Tanzania. It will serve as the inter-ministerial monitoring body of the National Nutrition Strategy (NNS) and Tanzania Agriculture and Food Security Investment Plan (TAFSIP). Similar multisectoral coordination committees for nutrition at sub-national level will be established.

168. The principal functions of the Committee will include the following:

- Advise the Government on appropriate response and the action being taken to address the nutrition challenges.

- Develop consensus with ministries and key external actors on a Framework for Action and the proposed way forward, including a set of key time-bound milestones for the NNS, TAFSIP and related activities.
- Promote the coordinated implementation of the NNP, TAFSIP and related activities across all relevant line ministries and external partners.
- Monitor the implementation of key milestones for the NNS, TAFSIP and related activities.
- Provide advice on the choice of strategies, policies or interventions that need to be taken to eliminate or reduce the impact of the underlying causes on food insecurity and malnutrition.
- Monitor public expenditure on nutrition to ensure that it impacts on National Development Plan, MKUKUTA, NNS and TAFSIP objectives.

169. The ministry responsible for health and nutrition will be responsible for overall coordination, technical leadership and guidance on the implementation and monitoring of the Strategy. It will develop legislation, regulations and guidelines relevant to nutrition in-line with the Strategy, and will advocate, mobilize and allocate resources for the implementation of the Strategy

170. TFNC, as the technical arm of the ministry responsible for health and nutrition, lead the national response to nutrition and ensure a coordinated, effective and efficient approach to tackling malnutrition. It will provide strategic leadership to all sectors; strengthen multi-sector coordination and collaboration; advocate for resources for nutrition; promote harmonization and alignment of sector financing; provide guidance, training and technical support to implementing agencies; and monitor and evaluate progress.

171. Other government agencies will contribute to implementation of the Strategy including the Tanzania Food and Drug Authority, which is responsible for assuring the quality and safety of food, the Tanzania Bureau of Standards, which establishes the standards for food quality and fortification, and universities, which provide research specialists.

5.1.2 Regional secretariats

172. The regional secretariats will be responsible for interpreting policies and policy guidelines on nutrition; maintaining norms and minimum standards; and providing technical guidance and supportive supervision to local government authorities on nutrition; and

coordinating, monitoring and evaluating the implementation of the strategy by different stakeholders at the regional level.

5.1.3 Local government authorities

173. The LGAs will be responsible for integrating Strategy components/activities into their Comprehensive Council Development Plans; ensuring the implementation of policies, strategies and guidelines within their respective districts; mobilizing resources for implementation of nutrition activities; and sensitizing and supporting wards and communities to initiate, implement and monitor nutrition activities at ward and community levels. In addition the LGAs will coordinate, provide technical support and monitor the implementation of the Strategy at ward and village/mtaa levels.

5.2 Higher learning and training institutions

174. Higher learning institutions, including public and private institutions for training all levels of health, agriculture and community development workers, will be responsible for reviewing and updating their curricula for pre-service, in-service and continuing education to ensure nutrition is adequately integrated. They will increase opportunities for training in nutrition, undertake research in nutrition, and provide technical advice and updates on nutrition developments.

5.3 Professional bodies

175. Professional bodies will issue guidance in nutrition, conduct research, set professional standards, and participate in the developing of curricula for pre-service, in-service and continuing education.

5.4 Private Sector

176. The government recognizes the contribution of the private sector in the provision of social services, including nutrition. The private sector will be responsible for supporting government and community actions and efforts geared towards implementing Strategy. It will invest resources for the implementation of the Strategy in line with laws, regulations and guidelines.

5.5 Development Partners

177. The implementation of the Strategy requires the involvement and support of various development partners including UN agencies, multilateral and bilateral organizations. The development partners will be responsible for advocating for nutrition as a human development issue, and for increased human, financial and institutional resources for

implementation of the Strategy; mobilizing resources for implementation of the Strategy; provide technical assistance for the development of policies, standards, guidelines and legislation; and supporting capacity building at various levels.

5.6 Civil society

178. Civil society includes national and international NGOs, CBOs, FBOs, and political parties. NGOs, CBOs and FBOs will be responsible for advocating for nutrition as a human development issue, mobilizing resources for implementation of the Strategy, providing technical and financial support to LGAs in the implementation of Strategy and supporting LGAs in capacity development and management of nutrition activities. They will incorporate nutrition interventions in community-based programs and ensure effective linkages to the health care system and other relevant sectors. Political parties will be responsible for incorporating Strategy concerns in their party manifestos.

5.7 Media

179. The media, including the print, radio and television media will highlight the problem of malnutrition in Tanzania, advocate for action, and report on progress, failures and successes in the alleviation of malnutrition.

5.8 Community

180. The participation of the community is crucial to the successful implementation of this strategy. Individuals and families hold the key to maintaining and improving their own health, and are actors in their own development. In the implementation of the Strategy, the community will be responsible for mobilizing resources, initiating, implementing and monitoring the implementation of nutrition activities in line with Strategy

REFERENCES

Adult Morbidity and Mortality Project (1997). *Policy Implication of Adult Morbidity and Mortality. End of Phase 1 Report.*

ACC/SCN (2000). *Fourth Report on the World Nutrition Situation. Nutrition Throughout the Life Cycle.* Geneva: ACC/SCN in collaboration with IFPRI.

African Regional Nutritional Strategy 2005-2015

Barker DJP (1998). *Mothers, Babies and Diseases in Later Life.* London: Churchill Livingstone.

FAO (2006). *Food Security Statistics.* Food and Agriculture Organization: Rome.

HKI, TFNC & UNICEF (2004). *Rapid Population-based Assessment of National Vitamin A Supplementation Program in Tanzania.* Helen Keller International: Dar es Salaam, Tanzania.

International Zinc Nutrition Consultative Group (IZINCG) (2004). Assessment of the risk of zinc deficiency in populations and options for its control. *Food and Nutrition Bulletin* **25**: S91-S204.

Jones G, Steketee RW, Black RE, Bhutta ZA, Morris SS (2003). How many child deaths can we prevent this year? *Lancet* **362**: 65-71.

Kavishe FP (1993). *Nutrition Relevant Action in Tanzania. TFNC Monograph Series No 1.* Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

Masanja H, de Savigny D, Smithson P, Schellenberg J, John T, Mbuya C, Upunda G, Boerma T, Victora C, Smith T, Mshinda H. (2008). Child survival gains in Tanzania: analysis of data from demographic and health surveys. *Lancet* **371**, 1276-83.

MOH (2004a). *Tanzania National Strategy on Infant and Young Child Nutrition.* United Republic of Tanzania, Ministry of Health, Dar es Salaam.

MOH (2004b). *Tanzania National Strategy on Infant and Young Child Nutrition Implementation Plan.* United Republic of Tanzania, Ministry of Health, Dar es Salaam.

ORC Macro. MEASURE DHS (2001), *Nutrition of Young Children and Mothers in Tanzania. Findings from the 1999 Tanzania Reproductive and Child Health Survey.* Calverton, 2001

Pelletier DL Frongillo EA Schroeder DG & Habicht JP. (1995). The effects of malnutrition on child mortality in developing countries. *Bulletin of the World Health Organization* 7: 443–448.

Profiles (2006). Mimeo.

Shekar M (2005). Reassessing strategies for improving health. Strategies should include nutrition. *British Medical Journal* 331:1270.

SCN (2004). *Nutrition and the Millennium Development Goals*. Number 28. Standing Committee on Nutrition, Geneva.

Smith L, Alderman H & Aduayom D (2006). *Food insecurity in Sub-Saharan Africa: New Estimates from Household Expenditure Surveys*. Research Report 146. IFPRI: Washington DC.

TDHS (1992). *Tanzania Demographic and Health Survey 1991/2*. National Bureau of Statistics and Macro International: Dar es Salaam, Tanzania.

TDHS (2005). *Tanzania Demographic and Health Survey 2004/5*. National Bureau of Statistics and Macro International: Dar es Salaam, Tanzania.

TFNC (1997). *A Report on the National Vitamin A Survey 1997*. TFNC Report No. 1880. Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

TFNC (2002). *Prevalence of low birth weight, risk factors and level of maternal service and care provision in 7 districts of Tanzania*. TFNC, 2002. Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

TFNC (2003). *National Guide on Nutrition Care and Support for People Living with HIV and AIDS*. Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

TFNC (2004a). *Component III: Causes of Malnutrition and Tanzania's Nutrition Programs Past and Present*. Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

TFNC (2004b). *Evaluation of IDD control program*. TFNC Report 2002. Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

TFNC (2005). *Tanzania Mainland Nutrition Survey*. Tanzania Food and Nutrition Centre: Dar es Salaam, Tanzania.

TSPA (2006). *Tanzania Service Provision Assessment Survey, 2006*. National Bureau of Statistics, Dar es Salaam, and Macro International, Calverton, USA.

Tanzania Commission for AIDS (TACAIDS), National Bureau of Statistics (NBS), and ORC Macro. MEASURE DHS. *Tanzania HIV and AIDS and Malaria Indicator Survey 2007-08 Preliminary Report*. NBS and Macro International, 2008.

UNICEF (1998). *State of the World's Children 1998*. UNICEF: New York.

World Bank (2006). *Repositioning nutrition and central to development. A strategy for large-scale action*. World Bank: Washington.

World Bank, TFNC & UNICEF (2007). *United Republic of Tanzania Advancing Nutrition for Long-Term Equitable Growth*. World Bank: Washington.

WHO (1995). *Physical status: the use and interpretation of anthropometry*. World Health Organization: Geneva.

ANNEX I: How investing in nutrition is critical to achieving the MDGs

Goal	Nutrition effect
Goal 1: Eradicate extreme poverty and hunger	Malnutrition erodes human capital and reduced productivity though irreversible and intergenerational effects on cognitive and physical development.
Goal 2: Achieve universal primary education	Malnutrition affects the chances that a child will go to school, stay in school and perform well at school.
Goal 3: Promote gender equality and empower women	Biases against girls and women in access to food, health, and care resources may result in malnutrition and reduce their access to assets. Addressing malnutrition empowers women more than men.
Goal 4: Reduce child mortality	Malnutrition directly or indirectly associated with more than 50% of child deaths, and it is the main contributor to the burden of disease in the developing world.
Goal 5: Improve maternal health	Maternal health is compromised by malnutrition, which is associated with most major risk factors for maternal mortality. Maternal stunting and iron and iodine deficiencies pose serious problems.
Goal 6: Combat HIV and AIDS, malaria and other diseases	Malnutrition may increase the risk of HIV transmission, compromise antiretroviral therapy, and hasten the onset of AIDS and premature death. It increases the chances of tuberculosis infection, resulting in disease, and it reduces malarial survival rates. Different forms of malnutrition are important risk factors for diet-related chronic diseases.

Source: adapted from World Bank (2006)

ANNEX II: Policies and strategies with nutrition concerns.

Key policies and strategies that have nutrition concerns include the following.

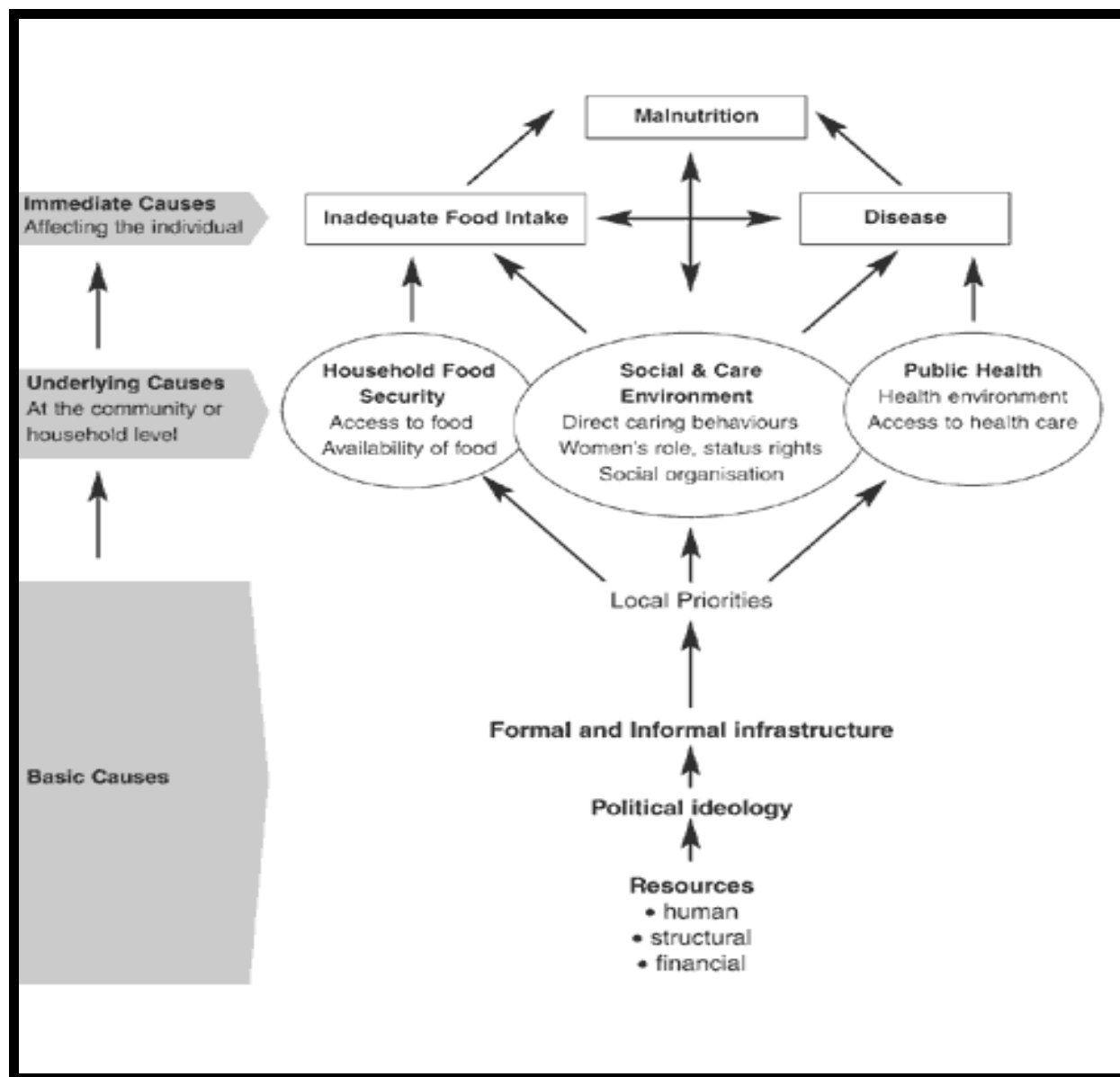
Policies

National Agricultural Policy
National Disaster Management Policy
National Food and Nutrition Policy
National Food Security Policy
National Health Policy
National HIV and AIDS Policy
National Livestock Development Policy
National Policy for Labour and Youth Development
National Population Policy
National Water Policy
National Women and Gender Development Policy

Strategies

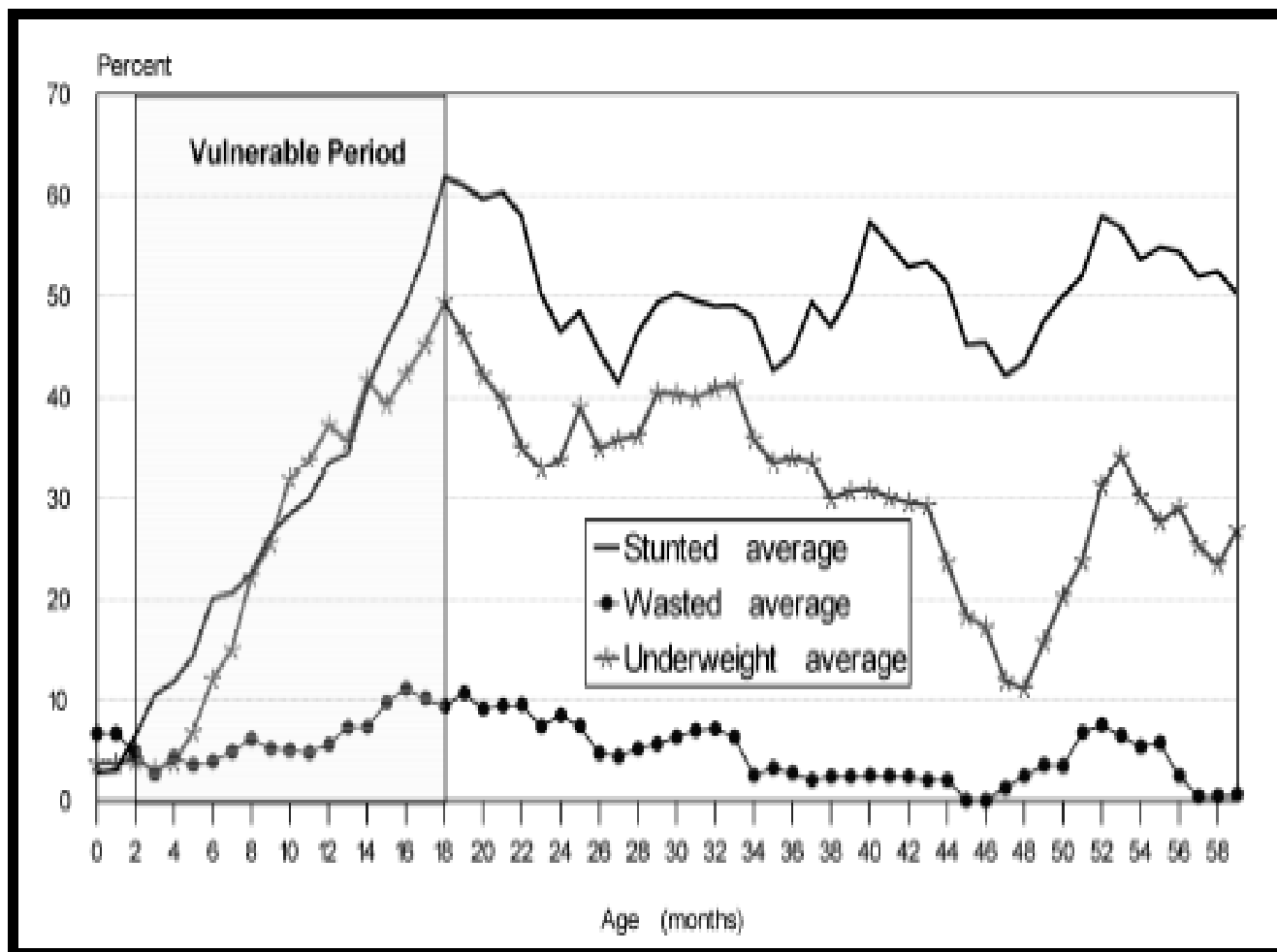
Health Sector HIV and AIDS Strategy II (2008-2013)
Health Sector Strategic Plan III (2009-15)
National Multi-Sectoral Strategic Framework on HIV and AIDS (2008-12)
National Package of Essential Health Interventions in Tanzania (2000)
National Road Map Strategic Plan to Accelerate Reduction of Maternal and Newborn and Child Deaths in Tanzania (2008-2015)
Tanzania National Strategy on Infant and Young Child Nutrition (2004).

ANNEX III: Conceptual framework of malnutrition



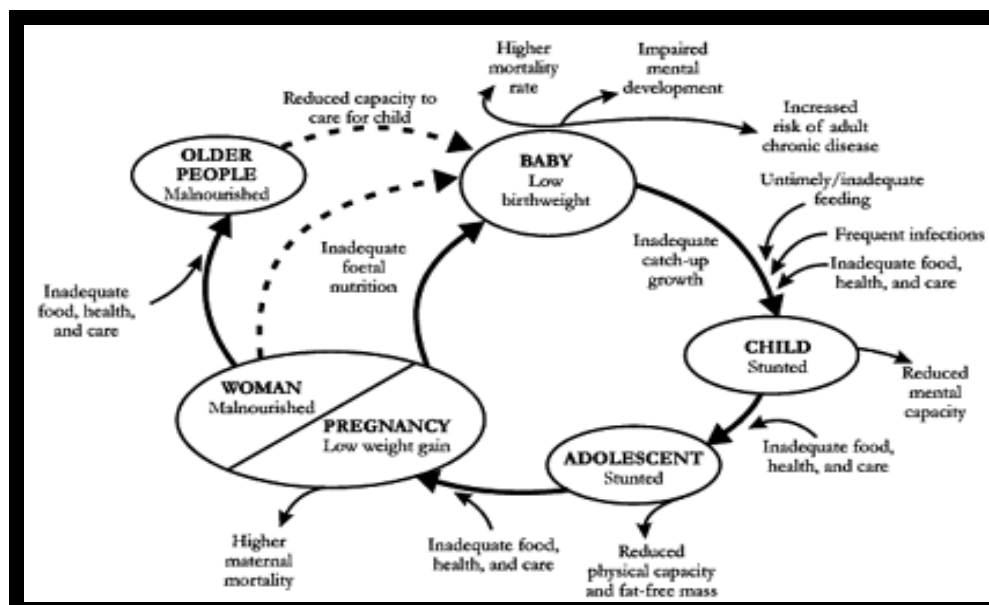
Source: adapted from UNICEF (1998)

ANNEX IV: The window of opportunity for addressing undernutrition



Source: ORC Macro. Nutrition of young children and mothers in Tanzania. Findings from the 1999 Tanzania Reproductive and Child Health Survey. Calverton, 2001

ANNEX V: Nutrition throughout the life cycle



Source: ACC/SCN (2000)

ANNEX VI Data collection systems

Progress towards the goal and objectives of the NNS will be measured using the following data collection systems which together provide a comprehensive information system that can be used to planning activities, reviewing progress and evaluating the NNS.

- **Demographic Health Surveys and other national level surveys:** The Tanzania Demographic Health Survey (TDHS) is conducted every 4 years to collect data on the nutrition and health status and services. In addition, there are other periodic, nationally representative surveys (e.g., HIV and AIDS Indicator Survey and Malaria Indicator Survey) and research projects, which can provide important information on the nutrition and health status of the population.
- **Special surveys:** Additional surveys are needed to obtain data and information that is not included in periodic surveys or routine monitoring systems. This includes, but is not limited to, the prevalence of micronutrient deficiencies.
- **Nutritional Surveillance System:** The Nutrition Surveillance System (NSS) has recently been revitalized. The NSS will be linked with other information management systems such as Tanzania Socio-Economic Database (TSED), Health Management Information System (HMIS) and poverty monitoring system to be sustainable.
- **Routine health information systems:** The Health Management Information System (HMIS), known in Kiswahili as MTUHA, provides information on health/nutrition services outputs, diagnoses and other health systems information on quarterly and annual basis.
- **HSSP III monitoring and evaluation instruments:** During the implementation of HSSP III, the following data collection instruments will be used:
 - Mid-term and End-term reviews, which will provide in-depth analysis HSSP II
 - Baseline and End-line Surveys, which will focus on obtained data and information that are not available through other data collection mechanisms.
 - Joint Annual Health Sector Review (JAHSR), which will assess progress towards milestones agreed annually between stakeholders