United Republic of Tanzania

TANZANIA NATIONAL NUTRITION SURVEY 2018

SUMMARY OF KEY FINDINGS

JUNE 2019

1. Introduction

After the first Tanzania National Nutrition Survey (TNNS) was conducted in 2014, the Government agreed to repeat it every four years, in between Demographic and Health Surveys (DHS). The second TNNS using SMART Methodology (Standardized Monitoring and Assessment of Relief and Transitions) was conducted between September and November 2018.

The objectives were to assess the nutritional status of children aged 0-59 months and of women aged 15-49 years, determine infant and young child feeding (IYCF) practices, and assess coverage of micronutrient interventions. Compared to the first TNNS 2014, **new indicators** were added to assess other possible drivers of malnutrition: low birth weight, diarrhea among children aged 0-59 months, households' hygiene and sanitation practices, and laboratory tests for adequate salt iodization. Anemia prevalence among women aged 15-49 years was also measured as this is a major nutritional concern in Tanzania.

Data were collected from more than 99 per cent of targeted clusters. 17,524 children aged 0-59 months and 9,426 women aged 15-49 years were surveyed.

The survey was coordinated through a **National Technical Committee** led by TFNC and including NBS, MOHCDGEC, PORALG, OCGS, ZMOH, University of Dodoma, development partners and a SMART survey consultant. Enumerators were selected among students from the University of Dodoma, School of Nursing and Public Health. They were supported by selected supervisors from TFNC, MOHCDGEC, PORALG, ZMOH and regional and district nutritionists. Data were collected using tablets.

TNNS 2018 findings are representative at national and regional levels. They will be used to track progress of the National Multisectoral Nutrition Action Plan (NMNAP) 2016-21 and inform decision making.

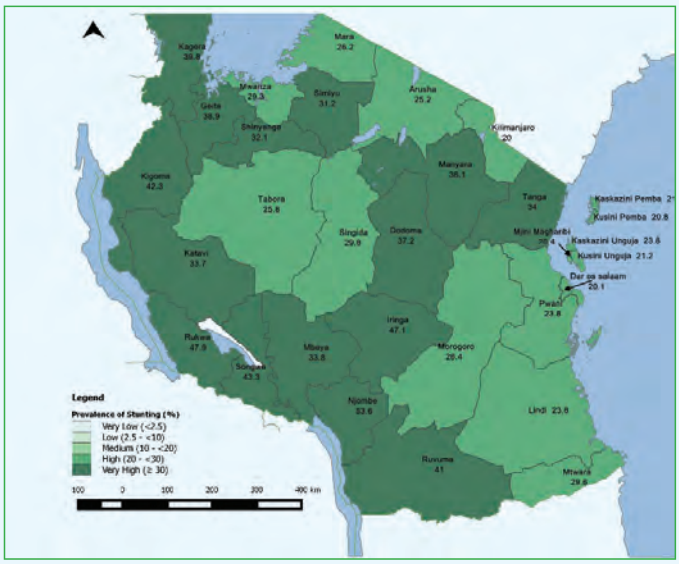
2. Results

2.1 Children Nutritional Status

Chronic Malnutrition

At national level, **the prevalence of chronic malnutrition or stunting among children aged 0-59 months decreased from 42.0% in 2010 (1), to 34.7% in 2014 (2), to 34.4% in 2015 (3), to 31.8% in 2018.** According to the new UNICEF-WHO prevalence thresholds (4), the current national prevalence of stunting is considered "very high" (≥30%) and thus a public health concern.

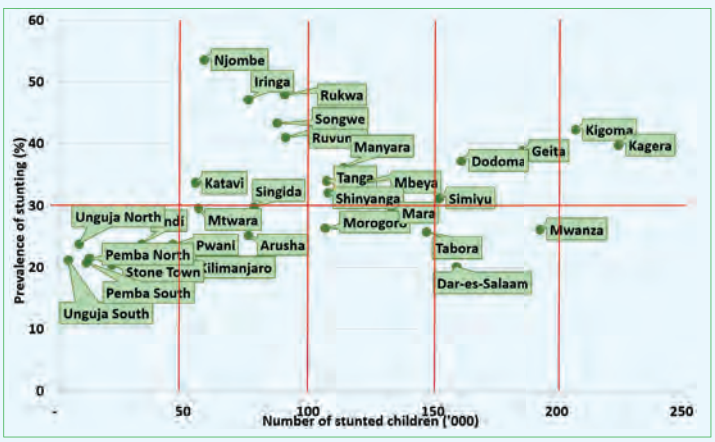
Figure 1: Prevalence of stunting or chronic malnutrition in children 0-59 months of age, by region (UNICEF-WHO 2019)



Despite a steady reduction in the prevalence of stunting, the burden has increased due to rapid national population growth, from 2.7 million children in 2015 to almost 3 million children in 2018.

There is disparity in the distribution of these children between regions. The regions with the highest number of stunted children (>150,000) are Dodoma, Dar es Salaam, Kigoma, Kagera, Mwanza, Simiyu and Geita; those with the highest stunting prevalence (≥40%) are Njombe, Rukwa, Iringa, Songwe, Ruvuma, Kagera and Kigoma. **There is a need to prioritize nutrition interventions in the regions with the highest burden and prevalence of stunting**.

Figure 2: Display of regions based on prevalence of stunting and number of stunted children under 5 years old



Stunting in Tanzania starts in the first month of life, with a prevalence of 15.1%, and increases rapidly until it reaches peak at 27 months (45.2%). By this age, most of the damage of malnutrition in childhood is done and cannot be reversed (Figure 3).

Prevalence of stunting in age groups 12-23 months and 24-35 months were found to be the highest with 36.1% and 43.3% respectively.

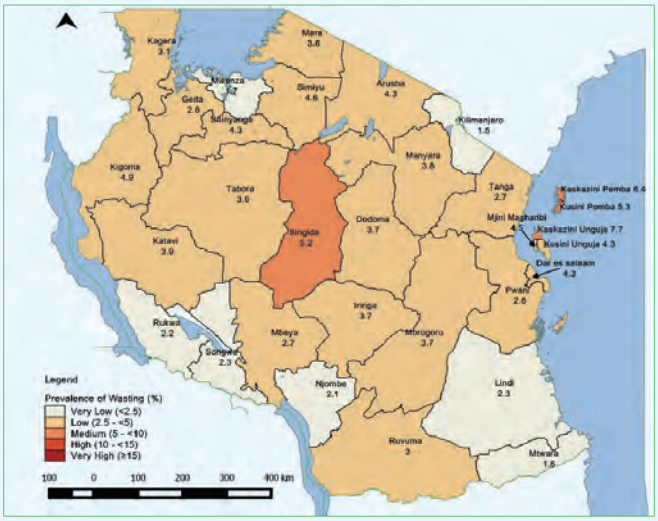
Figure 3: Prevalence of stunting or chronic malnutrition in children 0-59 months of age, by age in months

Stunting has life-long consequences on children: leads to impaired cognitive development, resulting in low school performance and lower earning as adults, which in turns affects national economic growth.

Acute Malnutrition

At national level, **the prevalence of Global Acute Malnutrition (GAM) among children aged 0-59 months decreased from 4.8% in 2010 (1), to 3.8% in 2014 (2), to 4.5 in 2015 (3), to 3.5% in 2018**. The prevalence of GAM was maintained as "low" according to UNICEF-WHO thresholds (4). In Zanzibar, GAM prevalence decreased from 12.0% in 2010 (1) to 6.7% in 2018 and is considered as "medium".

Figure 4: Prevalence of wasting or acute malnutrition in children 0-59 months of age, by region

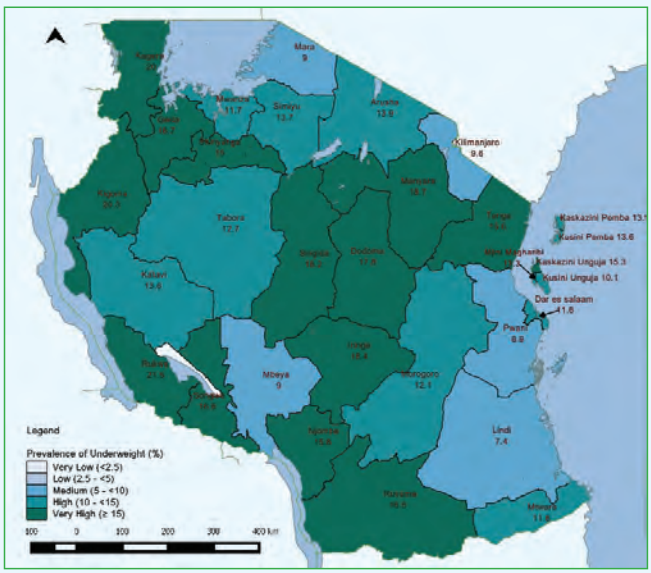


In 2018, there were approximately 440,000 moderately acute malnourished children and 90,000 severely acute malnourished children in Tanzania. The latter are at high risk of dying if not detected and adequately treated.

Underweight

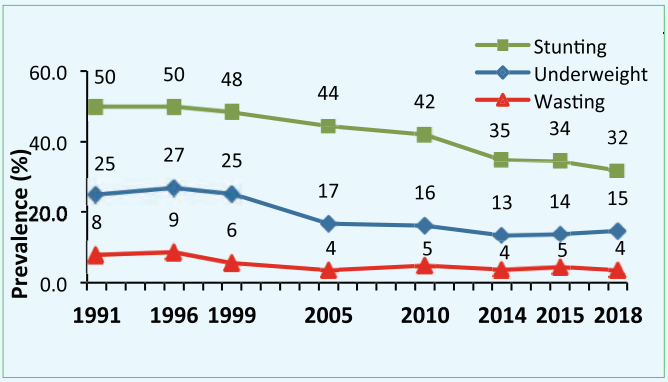
At national level, **the prevalence of underweight among children under five years decreased from 25% in 1991 (4), to 16% in 2010 (1), to 13% in 2014 (2), and increased to 14% in 2015 (3) and 15% in 2018**.

Figure 5: Prevalence of underweight in children 0-59 months of age, by region



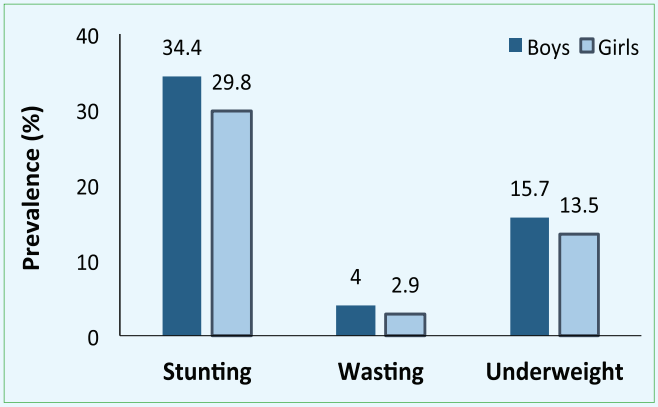
An analysis of the trends in nutritional status of children from 1991 to 2018 shows a downward trend in all forms of undernutrition (figure 6). Stunting declined by 8 percentage points in two decades between 1991 and 2010, sharply declined by 12 percentage points within a decade as shown by the 2010, 2014, 2015 and 2018 surveys. Unlike the pattern observed in stunting, underweight decreased from 25% in 1991 to 13% in 2014 then increased to 15% in 2018. The prevalence of wasting decreased from 8% in 1991 to 4% in 2018 and remained very low during the last ten years within levels below 5%.

Figure 6: Trends in nutritional status of under five children according to WHO Growth Standards 2006 (1991-2018)



Significant disparities persist between boys and girls, as the prevalence of all 3 forms of undernutrition was higher among boys than girls.

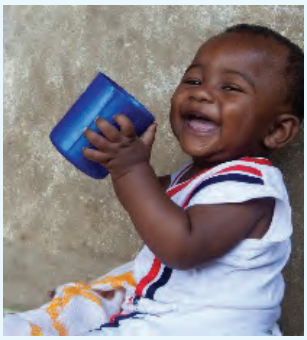
Figure 7: Prevalence nutritional status of children aged 0-59 months by gender



2.2 Children Weight and Size at Birth

The prevalence of low birth weight in Tanzania mainland was 6.3% and ranged from 3.8% in Manyara and Mara to 11.0% in Ruvuma. The highest prevalence of low birth weight was found in Ruvuma, Mtwara (9.8%), Lindi (9.2%) and Dar es Salaam (8.8%). In Zanzibar the percentage of births with a reported birth weight less than 2.5 kg was 8.3% (ranging from 7.4% in Pemba North to 8.5% in Unguja North). Since 2010, the national prevalence of low birth weight remained between 6% and 7% (1, 3). Children born with low birth weight (<2.5 Kg) are more likely to become stunted and to have cognitive disabilities and a lower IQ.

2.3 Infant and Young Child Feeding (IYCF) Practices



At national level, the percentage of infants aged 0-5 months who were exclusively breastfed significantly increased from 41.1% in 2014 (2) to 58% in 2018. In Zanzibar exclusive breastfeeding rate also increased from 19.7% to 30.0%.

The percentage of children aged 6-23 months receiving minimum dietary diversity increased for from 24.5% in 2014 (2) to 35.1% in 2018, and the percentage of children receiving a minimum acceptable diet increased from 20.0% to 30.3% during the same period.

The NMNAP mid-term target was to increase exclusive breastfeeding from 41% in 2014 to 50% in 2018 and minimum acceptable diet from 20% in 2014 to 25% in 2018. They were both met. Optimal IYCF practices strongly contributes to reduce stunting and infant and child mortality.

Table 1: Summary of IYCF indicators (TNNS 2018)

IYCF Indicators	National	Mainland	Zanzibar
Children Ever Breastfed (0-23 m)	96.6	96.6	98.0
Early Initiation to Breast-feeding (0-23 m)	53.5	53.5	52.7
Exclusive Breastfeeding under 6 months (0-5 m)	57.8	58.6	30
Continued Breastfeeding at 1 year (12-15 m)	92.2	92.2	83.9
Continued Breastfeeding at 2 years (20-23m)	43.3	43.7	43.3
Timely Introduction of Complement. Food (6-8 m)	86.8	87.1	79.1
Minimum Dietary Diversi-ty (6-23 m)	35.1	35.6	18.8
Minimum Meal Frequency (6-23 m)	57.4	58.0	36.4
Minimum Acceptable Diet (6-23 m)	30.3	30.7	14.0

2.4 Vitamin A Supplementation and Deworming

The proportion of children aged 6-59 months who received vitamin A supplementation in the 6 months prior to the survey in Tanzania Mainland was 63.8% in 2018, which is lower than 72.2% in 2014 (2), but higher than 41.0% in 2015 (3). In 2018 the lowest coverage of vitamin A supplementation (< 50%) was in Tanga, Rukwa, Shinyanga and Katavi regions. **In Zanzibar, coverage of vitamin A supplementation increased from 58.2% in 2014 (2) to 78.9% in 2018.**

The proportion of children aged 12-59 months who received deworming tablets in the 6 months period prior to the survey in Tanzania Mainland decreased from 70.6% in 2014 to 59.0% 2018 but was higher than 50.0% in 2015. In 2018 the lowest coverage of deworming (<50%) was in Tanga, Rukwa, Shinyanga, Tabora, Kigoma, Manyara and Katavi regions. **In Zanzibar, coverage of deworming increased from 68.4% in 2014 (2) to 80.7% in 2014.**

Improving the Vitamin A status of deficient children through supplementation enhances their resistance to disease and can significantly reduce mortality.

2.5 Diarrhoea in the past two weeks

At national level, TNNS 2018 findings indicate that **14.0% of children 0-59 months had diarrhoea (3 or more times loose or watery stools in a day) in the two weeks preceding the survey; this prevalence was higher than in TDHS 2015-16 (11.8%)**. The highest rates were in Manyara (27.8%), Arusha (25.2%), Songwe (23.8%) and Kigoma (20.9%) where approximately one child out of four was suffering from diarrhoea.

Diarrhoea is one of leading causes of death among children under five worldwide. Repeated episodes of diarrhoea are increasingly thought to be connected to acute malnutrition, stunting and death.

2.6 Women Nutritional Status

BMI/MUAC

Body Mass Index (BMI) is used to classify a person as underweight, normal, overweight or obese. **At national level, according to the BMI classification, 7.3% of women aged 15-49 years were thin or underweight. This is higher than 5.9% prevalence found in 2014.** Prevalence of underweight exceeding 10% was found in Unguja North, Pemba North, Manyara, Kagera and Singida. The prevalence of underweight was highest in age groups 15-19 and 20-24 years with 14.8% and 7.6% respectively. Maternal undernutrition is one of the main contributing factors to low birth weight in babies.

According to TNNS 2018 findings, 31.9% of women are overweight or obese in Tanzania, which represents an increase from 29.7% in 2014 (2) and 11.3% in 1991 (5). High levels of obesity (above 20%) were found in Kilimanjaro, Dar es Salaam, Stone Town and Unguja South. Overweight and obesity are among the main determinants of non-communicable diseases such as cardiovascular diseases, cancers, diabetes.

Anaemia

TNNS 2018 findings show that 29% of women aged 15-49 years in Tanzania are anaemic. 16% of women were classified as mildly anaemic, 12% as moderately anaemic, and 1% as severely anaemic. **The prevalence of anaemia found in 2018 TNNS was significantly lower than the rate recorded in both 2010 (40%) (1) and 2015 (45%) (3).** Maternal micronutrient deficiencies, especially anemia, are among the main causes of maternal mortality, with 20% of maternal deaths attributed to severe maternal anemia globally.

2.7 Iron-Folic Acid Supplementation

At national level, **the percentage of women aged 15-49 years with children under five years of age who took iron-folic acid supplementation for 90 days or longer during pregnancy for past birth as recommended by WHO was 28.5%. This represents an important increase compared to 8.3% in 2014 (2) and 21.0% in 2015 (3).** Iron-Folic Acid Supplementation is a key intervention recommended by WHO to reduce micronutrients deficiencies and especially anaemia during pregnancy.

2.8 Use of Iodized Salt

TNNS 2018 findings show that at national level **61.2% of households used adequately iodized salt. This represents a significant improvement compared to 47.0% in 2010 (1) and 60.6% in 2015 (3) and 2018.** The percentage of households with adequately iodized salt lower in Zanzibar than in Mainland, with 39.0% and 61.8% respectively. Four regions had a percentage of non-iodized salt above 10%: Dodoma (11.0%), Simiyu (18.9%), Manyara (28.6%) and Singida (34.2%). Universal Salt Iodization is the main strategy recommended by WHO to achieve elimination of iodine deficiency disorders, which have life-lasting effects on impaired cognitive development.

2.9 Handwashing Practices

TNNS 2018 findings show that **69.4% of households in Tanzania have soap**. Availability of soap was ranging from 46.1% in Songwe to 86.9% in Njombe. In Zanzibar, availability of soap was ranging from 40.5% in Unguja North to 63.6% in Pemba North. However, **only 2.7% of the interviewed household members reported having used soap for handwashing at least at two critical times during past 24 hours (including "after defecating")** (2.8% in Mainland and 0.6% in Zanzibar). In Mainland, several regions were below 1%: Dar es Salaam, Lindi, Iringa, Mbeya, Singida, Tabora, Shinyanga, Mara, Geita and Songwe. The highest rates were found in Arusha and Ruvuma with respectively 14.0% and 7.8%. In Zanzibar, handwashing with soap was ranging from 0.0% in Unguja South, Stone Town and Pemba South to 3.2% in Pemba North. **These results represent a decrease compared to 2014 (2) where 11.7% of interviewed household members reported having used soap for handwashing at least at two critical times during past 24 hours**.

2.10 Sanitation Facilities

TNNS 2018 results show that **in Tanzania, one in four households (25%) used improved toilet facilities**. Use of improved non-shared toilet facilities was much higher among households in Zanzibar (59.2%) than in Mainland (24.0%). At national level, approximately **20% of households used a shared improved toilet facility** with two households or more (20.1% in Mainland and 13.9% in Zanzibar). **Use of improved non-shared toilet facilities increased from 19.1% in 2015 (3) to 25.0% in 2018.**

Approximately 55% of households in Tanzania used unimproved toilet facilities or had no toilet facilities at all. Approximately 56% of households in Mainland used unimproved toilet facilities or had no toilet facilities at all, while only one household out of four (26.9%) in Zanzibar used unimproved toilet facilities or had no toilet at all. Approximately 6% of households in Tanzania had no toilet at all (6.1%, results not presented). **The percentage of households using unimproved toilet facilities decreased from 64.5% in 2015 (3) to 55.1% in 2018**.

Findings of the TNNS 2018 show that at national level, 87.1% of the households were disposing children's faeces safely. **The percentage of households disposing children's faeces safely increased from 71.9 in 2015 (3) to 81.7% in 2018**.

3 Summary of key findings

Tanzania National Nutrition Survey	2014	2018
Global Acute Malnutrition (GAM) 0-59	3.8	3.5
Severe Acute Malnutrition (SAM) 0-59	0.9	0.4
Stunting 0-59	34.7	31.8
Vitamin A supplementation 6-59	72.2	63.8
Deworming 6-59	70.6	59.0
Diarrhoea in last 2 weeks	n/a	14.0
Births with a reported weight < 2.5 kg	n/a	6.3
Timely initiation of breastfeeding	50.8	53.5
Exclusive breastfeeding under 6 months	41.1	57.8
Continued breastfeeding at 2 years	48.2	43.3
Minimum dietary diversity	24.5	35.1
Minimum meal frequency	65.7	57.4
Minimum acceptable diet	20.0	30.3
Overweight among women 15-49 years	29.7	31.7
Obesity among women 15-49 years	9.7	11.5
Underweight among women 15-49 years	5.9	7.3
IFAS intake during 90+ days	17.5	28.5
Anaemia among non-pregnant women	n/a	28.8
Households with salt adequately iodized	n/a	61.2
Households with soap	91.4	69.4
Hand-washing at critical times	11.7	2.7
Use of improved toilet	n/a	25.0
Use of a shared improved toilet	n/a	19.9
Use of an unimproved toilet	n/a	55.1
Households with children under three years old that dispose of faeces safely	n/a	87.1

4 Conclusions

TNNS 2018 results show a consistent trend in the reduction in the prevalence of stunting among children under five years nationally. **The mid-term target of NMNAP 2016-21 to reduce stunting prevalence from 34% in 2015 to 32% in 2018 was met**. Tanzania is also on track to meet the 28% stunting prevalence target by 2021. **However, the number of children affected remains high and is increasing**, requiring additional effort to further improve the effectiveness of nutrition interventions.

Among the key determinants of stunting reduction are certainly improved **infant and young child feeding (IYCF) practices**, with exclusive breastfeeding rate for infant aged 0-5 months and minimum acceptable diet for children aged 6-23 months increased respectively from 41% to 58% and from 20% to 30% between 2014 (2) and 2018. Exclusive Breastfeeding is also considered one of the main contributors to child survival.

The prevalence of GAM was also reduced and maintained below 5%, however, there are still about 90,000 children with SAM every year who contribute to persistently high child mortality rates in the country as only 10% of them are treated.

Important achievements were also found in the nutritional status of women**. The prevalence of anaemia was reduced from 45% in 2015 (3) to 29% in 2018**. However, this rate is still unacceptably high. Additionally, it was found that prevalence of **overweight and obesity among women is continuing to increase, from 28% in 2015 (3) to 32% in 2018**. This form of malnutrition is related to economic development and changes in life-style linked to increased welfare.

5 Recommendations

Tanzania faces a triple burden of malnutrition and needs to address high levels of **childhood undernutrition**, high levels of **micronutrients deficiencies** among children and women, and increasingly high level of **overweight and obesity**.

Because malnutrition results from several household, environmental, socioeconomic and cultural factors, **reduction of malnutrition requires a multisectoral approach**. Nutrition Specific and Nutrition Sensitive interventions need to be implemented in synergy, and the enabling environment for nutrition needs to be further strengthened.

It is specifically recommended to:

1. **Continue prioritize stunting reduction among children under five years** through scale-up of community- and facility- based interventions promoting optimal parenting practices among pregnant women and caregivers of young children during the 1,000 days window of opportunity, and establish synergies with key interventions in Food Security, Health, WASH, Education, Social Protection Environment and Industry sectors.

2. **Increase coverage of services to treat children with acute malnutrition**, by strengthening community level screening for malnutrition, referral and treatment at health facilities level.

3. **Maintain high coverage of services to address micronutrients deficiencies among children**, such as Vitamin A supplementation and deworming during child health and nutrition months.

4. **Initiate and scale key interventions to address malnutrition among school-age children and adolescents**, including promotion of optimal diets, promotion of physical activity and weekly iron and folic acid supplementation.

5. **Strengthen interventions addressing malnutrition among pregnant women**, including promotion of optimal diets, reduction of workload, and multiple micronutrient supplementation including iron and folic acid.

6. **Initiate and scale-up interventions to address overweight and obesity among the adult population** and prevent diet-rleated non-communicable diseases.

7. Strengthen surveillance system and law enforcement to ensure **universal salt iodization**, and support professionalization of the salt industry.

8. Further **strengthen nutrition governance by increasing participation and accountability of key nutrition sensitive sectors**, notably: Food Security, Health, WASH, Education, Social Protection, Environment and Industry.

9. **Continue tracking progress towards nutrition results and expenditure** targets at national and sub-national level;

10. **Repeat the National Nutrition Survey in 2022** following the 2020 TDHS to ensure regular monitoring of the situation of the nutritional status of Tanzanian children, adolescents and women and provide essential information for evidence-based planning and programming for nutrition.

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This survey was led by the Tanzania Food and Nutrition Centre (TFNC); National Bureau of Statistics (NBS) and Office of Chief Government Statistics (OCGS) Zanzibar in collaboration with Presidents Office – Regional Secretariat and Local Government (PORALG); Ministry of Health, Community Development, Gender Elderly and Children (MOHCDGEC); Ministry of Health – Zanzibar (ZMOH); and the University of Dodoma (UDOM).

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