

NUTRITION YEARBOOK

2021



Republic of Zambia

01

Articles written by professionals in the nutrition sector

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Showcasing of Best Practices


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NFNC Annual Report





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Editorial



Musonda J. Mofu- Acting Executive Director

Dear Readers,

This edition of the NFNC Nutrition Sector Year Book 2021 is the first of its kind that has been developed with support from GIZ. The main purpose of the book is to promote consumption of local healthy nutritious foods by households to prevent malnutrition. This is in line with SDG #2, target 2.2, which demands states to commit themselves to ending all forms of malnutrition, including stunting and wasting in children under 5 years of age and to address nutritional needs of adolescent girls, pregnant and lactating women and older persons.

Our country is daunted by the challenge of stunting which is currently standing at 35%. The precarious scenario poses serious socio-economic and health challenges to the nation and to the wellbeing of individuals. Added to it, the country continues to record high cases of non-communicable diseases which are mostly attributed to poor nutrition and lifestyle. To help prevent malnutrition at various levels, Government with partners have developed multi-sectorial interventions through the First 1000 Most Critical Days Programme II.

Therefore, this edition compliments the available interventions by bringing out detailed information pertaining to nutrition issues in the country. The articles in this book were authored by renowned nutrition scientists from the academia, the United Nations as well as Government nutrition experts. Other than that, some other information on nutrition came through from interviews with nutrition champions such as celebrities, nutrition students, civic leaders and professionals in the food industry.

The book has three main sections; the first section is the front part which brings to the fore major nutrition trends locally, regionally and globally. In this section, nutrition scientists narrate that most of the people in Zambia are consuming unhealthy animal based, processed and fast foods. Another challenge is that, most of the diets are poor consisting of nshima (maize thick porridge), eaten with relish of vegetables and animal source foods. During meal times, many households do not include fruits on their menu.

Cultural beliefs and practices also do contribute to poor consumption of foods that are rich in nutrients. This is because beliefs, taboos and religious practices influence

food consumption and cooking patterns. For instance, in some cultures it is a taboo for pregnant women to eat eggs as it is believed that their babies would be born without hair. Over and above, in some cultures, they encourage use of soda in preparing vegetables because they believe that, it softens vegetables and makes it tastier. Yet this destroys vitamins C and Bland sodium is known to be harmful to the body. There is also a sense of prestige associated with eating some perceived special foods like apples, butter, margarine, other processed foods compared to consuming rich traditional foods like Masuku. This predisposes people to non-communicable diseases and leads to malnutrition in households.

Even if there is some of form of “gold rush” in consuming fast and processed foods, Government is leading the path in scaling up nutrition interventions to curb malnutrition. This is noticeable in several policy documents on nutrition such as the Farmer input Support Programme (FISP), and the Second National Agricultural Policy (SNAP, 2016) where Government empowers vulnerable households with fertilizer, Maize, Legumes seed and provides technical support through farmer extension services. Apart from that, through MCDP II, Government continues to support production of food crops, fish, small livestock, rearing chickens, goats and pigs and encourages the pass on program. In order to encourage breast feeding, Government has taken steps by enacting the food and drugs (Marketing of Breast-Feeding Substitutes) Regulations 2006 SI # 48 of 2006, Vol.17 cap 303 which regulates marketing of substitutes, feeding bottles, pacifiers and teats.

More importantly, as a way of ensuring that children and pregnant mothers had sufficient vitamins, Government issued a vitamin A supplementation policy to benefit children and the iron and folic acid supplementation policy for pregnant mothers. The fact that malnutrition is tackled in a multisectorial manner, Government also developed the social protection policy to improve the well-being and livelihoods of vulnerable households and encourages flourishing of village savings and lending groups. Government has moved another mile by developing the WASH policy which has nutrition concerns embedded in it.

The middle part of the book captures information on best practices drawn from various nutrition interventions in Zambia. Through use of different nutrition interventions, local communities in Luapula, Mpika, Petauke, Kalabo and other areas have developed skills in preparing key hole gardens for vegetables, improved skills in fish farming and acquired skills in pump mending. Consequently, they will have access to sufficient safe nutritious foods and clean safe water, which will help to reduce malnutrition in the country.

The last section of the book shares information on the NFNC mandate, financial performance and activities that were implemented in the year 2021. Even though covid 19 was rife during the period of implementation, the NFNC team worked tirelessly to ensure that the activities which were in their line of duty were implemented.

Acknowledgements

I would like to acknowledge the financial, material and technical support which the National Food and Nutrition Commission received from GIZ in producing the NFNC Sector Year Book 2021. My gratitude also goes to the following contributors; Dr. Rhoda Mofya Mukuka (Food Agriculture Organization), Dr. Chiza Mweenda (Lecturer-University of Zambia), Dr. Bernard Moonga (Lecturer-University of Zambia), Dr. Raider Habulembe Mugode (National Food and Nutrition Commission of Zambia), Dr. Chisela Kaliwile (National Food and Nutrition Commission of Zambia), Isaac Mwanza (Graduate – Human Nutrition, University of Zambia), Abigail Mbuli (Master Chef), Lota Mandevu (Drimz) and the entire editorial team for making the NFNC Sector Year Book 2021 a reality.

Mandate of the NFNC

The National Food and Nutrition Commission (NFNC) was established in 1967 through an Act of Parliament. The institution is now guided by the Food and Nutrition Act of Parliament, No.3 of 2020, which gives NFNC a wider mandate to provide leadership on matters of food and nutrition in the country. The Act will make the Commission more efficient in its response to the new multi-sectoral response of attending to nutrition issues. The NFNC is funded by government through monthly grants. As a Statutory Board, NFNC is also mandated to mobilize resources from different sources that include local, regional, and international organizations in line with government laid down procedures.

Vision

To be Zambia's Centre of Excellence in leading food and nutrition Action

Mission Statement

To provide efficient and effective leadership in coordinating food and nutrition Action in Zambia

Core Values

The core values for the institution are:

1. Creativity
2. Integrity
3. Equity
4. Team work
5. Accountability

Goal

During this MTEF period, the institution will strive to increase accessibility to food and nutrition services in order to improve the nutritional status of the Zambian population.

NFNC Operations

NFNC has six (6) operational units namely:

1. Nutrition Education and Communication (NECU)
2. Training and Collaboration (TCU)
3. Research and Planning (RPU)
4. Public Health and Community Nutrition (PHCNU)
5. Accounts
6. Administration

The overall objective of the Commission is to promote, support and facilitate the improvement of nutritional status of the population of Zambia through sector ministries of Health, Agriculture, Livestock and Fisheries, Community Development and Social Services, Ministry of General Education, other relevant Government ministries and department or statutory bodies, Non-Governmental Organisations, and private organizations. Under the new legal framework, the main functions of the Commission are:

- 1) Register nutritionists, except those registered under the Health Professions Act;
- 2) Formulate the national food and nutrition programme in the Republic;
- 3) Coordinate, monitor and evaluate food and nutrition programmes in order to improve delivery and access to food and nutrition services;
- 4) Regulate operations of Nutrition Groups
- 5) Evidence generation to aid policy formulation and programming on food and nutrition
- 6) Develop food and nutrition guidelines
- 7) Ensure food and nutrition is mainstreamed in sector planning documents.
- 8) Establish and maintain a National Food and Nutrition Information System and Data Bank.
- 9) Mobilize resources according to government laid down procedures, for investment in food and nutrition programs.

FINANCIAL PERFORMANCE

The National Food and Nutrition Commission does not receive funds into its accounts from donors to implement projects. Instead, individuals that implement nutrition activities receive money directly into their accounts to facilitate implementation of scaling up nutrition projects.



Petauke and Katete DNCC team members pose for a photo after a capacity building workshop by NFNC

The ladder of change: Katete and Petauke DNCCs improving nutrition programs

By the Communication and Advocacy Team; Katete and Petauke, November 2021

The establishment and operationalisation of the District Nutrition Coordinating Committees (DNCCs) in Petauke and Katete districts of Eastern Province in 2015 has given line ministries and various partners to platform to work as a multisectoral team in implementing nutrition activities. This is as a result of the support from the German International Development Corporation (GIZ) that is implementing the Food and Nutrition Security Enhanced Resilience (FANSER) Project on behalf of the German Ministry of Economic Cooperation and Development (BMZ). Through field of activity (5), the relevant nutrition governance stakeholders at district and ward levels received technical and organisational support in their role as multi-sector nutrition actors.

GIZ through the FANSER project has since 2015 supported the establishment and operations of the DNCCs in Katete and Petauke in order to ensure that there was collaboration among the various nutrition players in the district. In addition, the Ward Nutrition Coordinating Committees (WNCCs) were formed to coordinate nutrition activities at ward level. As at now we have 15 WNCCs in Petauke and 13 WNCCs in Katete. Looking back, we see that such collaboration has resulted in a more coordinated approach in implementation of nutrition programs as Petauke DNCC Vice Chairperson, Daniel Kanyinji attests: “We realised that working in silos could not yield results. So, most of the DNCC members now are aware that we need to approach the issues of nutrition in a multisectoral way so that the services that we are providing converge at household level,”



Petauke DNCC members

Each year, the development of the district multi-sector nutrition plans is done to ensure that stakeholders have one plan to enhance joint implementation and monitoring of nutrition related activities in the district. This is further enhanced through periodic stakeholder mapping, frequent trainings for capacity building, strengthened communication and advocacy as well as monitoring and evaluation activities through the Technical working groups to ensure that nutrition programs utilize standardized protocols, policies and guidelines, as prescribed by NFNC's national guidelines.

One of the remarkable achievements by the DNCC members both in Katete and Petauke is the introduction of the focal point persons. A focal point person is a DNCC member in charge of overseeing all the activities of a particular ward that are pioneered by the WNCC members. This has helped in the effectiveness of the activities and has improved the coordination between the DNCC'S and WNCC's.

The DNCC with support from GIZ-FANSER project has periodically done stakeholder audits in order to analyse who is doing which activities within the district and where possible bring new partners on board and create further synergies. This process has greatly strengthened collaboration among the nutrition stakeholders in the district.

According to Catholic Relief Services (CRS) Programme Manager on FANSER Project, Sara Francis Mwanza, stakeholder mapping has lessened the duplication of activities in the same areas because the district has the information about who is doing what in which area.

Katete M&E Chairperson Penias Phiri explained that DNCC in the MCDP II sets nutrition related targets every quarter which should be implemented and achieved.

“So, as M&E, we need to ensure that we monitor closely those activities to meet the targets and, report on those activities and those outputs using the NFNC's recommended the scaling up nutrition reporting format.”

In addition, DNCCs has become a convening space for sectors that initially used to work in silos and never realised they had a role to play in fighting malnutrition.

“In the past nutrition was always looked at as being a health problem and there was a challenge of people trying to relate nutrition to hygiene or WASH,” said Mr. William Phiri.

He added: “I strongly feel our department has come in to try and bridge that gap. When we go to a household we want to tell them you can eat all the nice food, the nutritious food, but if the WASH part is not taken care of, your efforts will be zero.”

For FANSER Eastern Province Regional Coordinator Annette Roth, having DNCCs and WNCCs that are formed and functional, with diverse members and are now planning, reporting and monitoring activities together, is a milestone achievement.

“I would say we have supported to create the foundation for effective planning and reporting, and this will lead, I am very sure, to better nutrition outcomes in the districts,” Ms Roth said.

Importance and development of local diets- A Global Perspective



Rhoda Mofya-Mukuka Nutrition Coordinator – FAO Zambia

1.1 Introduction

Worldwide, food systems are transforming due to increased demand for food and change in consumption patterns, driven by factors like global population growth, economic development, urbanisation, globalisation and climate change. At the same time, there has been significant change in dietary patterns over the last decades, from consumption of wide variety of foods to diets with limited species and mostly composed of processed foods (Lachat et al., 2017). Another key driver of change in diet composition is the increase in available food energy in most countries, leading to higher consumption of energy foods especially among the low-income groups (Traill et al., 2014). Globally, dietary patterns are becoming increasingly unhealthy with increased intake of animal-based, processed and fast foods (Willett, et al., 2019).

In line with the global trends, Zambia, is similarly undergoing rapid population increase, urbanization, rising per capita income and climate change (Chisanga and Mbata-Zulu, 2019).

These factors are significantly contributing to rapid changing diets towards less consumption of local foods. Food supply and availability are broadly heading away from consumption of the healthier local foods (Harris, et al., 2019). A recent study found that there has been an increase in the expenditure shares of perishable and processed food in both rural and urban areas in Zambia (Chisanga and Mbata-Zulu, 2019).

In response to the food systems and diets transformations coupled with the commitments to achieve the Sustainable Development Goals (SDGs), particularly Goal #2 of ending hunger, many Governments and development partners are promoting local food systems which are more resilient and sustainable (Enthoven and Van den Broeck, 2021). SDG 2 calls on the Member States of the United Nations to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. This should ensure consumer access to safe, nutritious food, improved remuneration of farmers, preservation of natural resources and climate change mitigation (UN General Assembly, 2015), all of which could be achieved through promoting local food systems.

There is a direct link between local food systems and local diets as majority of the food producers, particularly in developing countries, are small scale and rural-based, who entirely depend on their own local food systems for food



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Food systems refer to the whole range of processes and infrastructure involved in satisfying people's food security requirements (Porter et al., 2014), while a local food product is one that is marketed within a geographical region that could be considered local to a particular area. As the term "local" varies in terms of geographical coverage, there isn't one quantifiable definition of a local food.

provisions. Developing local food systems, is therefore, likely to improve local diets.

1.2 Importance of local diets

Promoters and advocates of local diets and local food systems often draw on a number of benefits, including reduction in carbon dioxide emissions and energy use, stimulation of local economies, and creation of a greater sense of community (CEFS and NCU, 2013). More recent studies have looked at local food systems from four perspectives – the farmer, the consumer, the economy and environment (Enthoven and Van den Broeck, 2021).

Farmer/Producer perspective

From the farmer's perspective, producing foods for local consumption becomes cheaper compared to transporting it elsewhere as selling food locally cuts down on transportation and preservation. Additionally, research has shown that participating in local food systems provides farmers with a high sense of social recognition or association with the particular food which can benefit the local community economically (Enthoven and Van den Broeck, 2021).

Local food systems are mostly characterised by a variety of plant-genetic diversity, adaptive to the area, giving the producers a competitive advantage in terms of agro-climatic suitability (FAO and Bio-diversity International, 2017). Furthermore, given the diversity of local foods available, local food systems are more likely to maintain bio-diversity which, in turn, provides more variety of foods to the consumers.

Consumer perspective

Local Food Systems can increase consumer access to healthy diets given that there is low likelihood of processing before the food is consumed.

Locally grown foods are more likely to be higher in nutritional value and favour compared to foods produced elsewhere. This is because there is usually shorter time between harvest and consumption, which is less likely to reduce the nutrient value. In addition, when food is grown locally, the crops are picked at their peak of ripeness versus being harvested early in order to be shipped and distributed to a local retail store, often induced with artificial ripening.

Local foods also promote a safer food supply. Multiple steps between the consumer and their food's source, increase the chances of contamination. Food grown in distant locations has an increased potential for food safety issues at harvesting, washing, shipping and distribution.

Food traceability is increasingly becoming a critical factor in food choices. When food is produced locally, consumers know and understand the environment and conditions under which the food is produced. In addition, the consumers can interact directly with the producers and can inquire on the food production practices.



Economic perspective

Local food systems play a key role in the local economy. Firstly, it promotes employment throughout the value chain, thereby attracting supporting actors in the value chain.

Secondly, food sold locally, retains money in the local community, thereby, generating positive economic impacts such as local economic viability from the money reinvested in businesses and services in the specific community.

Thirdly, local food systems can help to foster social ties, given the direct interactions amongst the actors along the value chain. Social ties, which include business trust, can help boost the local economy.

Environmental perspective

Local food production has been found to be beneficial for the environment due to the use of environmentally-friendly production practices and reduced negative impact on climate change. Researchers also argue that when energy use is calculated across all stages of the food value chain, it is much lower for local food systems (CEFS and NCU, 2013). Hence, consuming locally produced foods uses less energy than consuming food produced elsewhere. It also enhances more production through increased demand, thereby maintaining the farm land. However, this only holds true if production is environmentally-friendly.

1.3 Developing local diets

The discussion above has outlined the importance of local diets from different perspectives. Therefore, in order to effectively promote local diets, it is important for Governments to develop and implement policies that support activities across the four perspectives. These include trade, agriculture, environment, food security, nutrition and consumer policies. The policies should focus on ensuring local food availability and accessibility on one hand, and enhance consumption on the other hand. One way to promote local consumption is to enhance social behavioural change communication to influence food preferences. In addition, this requires collective efforts by the Government, private sector and other non-state actors to support the production of diverse, healthy and environmentally-sustainable foods (Willett, et al., 2019). The third pathway is ensuring stability in food prices to improve food access and, ultimately, improve local diets. All these interventions require effective policies and strategic policy implementation. Changes in food consumption (operating in conjunction with other determinants) have implications for both overnutrition and undernutrition.

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Differences in dietary intake within agro-ecological zones of Zambia

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Background

Diet is one of the main determinants of health and nutritional outcomes. There is an old adage, “*you are what you eat*”; which can be considered at all levels, including individual, society and even national level. Similarly, Hippocrates is known to have said: “*Let food be thy medicine and medicine be thy food*”. Empirical epidemiological evidence has demonstrated that diets have an important role in nourishing human beings as well preventing certain non-communicable diseases such as diabetes and hypertension (Witkamp and van Norren, 2018; WHO & FAO, 2003). Evidence has been accumulating demonstrating that what we eat not only influences human health, but also significantly impacts the natural environment. Consequently, the concept of sustainable diets has equally gained attention at global level (Willet et al., 2019; FAO et al., 2021). FAO describes “sustainable diets,” with low environmental impacts and at the same time contributing food and nutrition security and to healthy life for present and future generations.

Dietary intake can be influenced by an interplay of several factors operating at individual, household and society levels. Such factors include income, prices, individual preferences and beliefs, culture, geographical as well as socio-economic factors (Vasileska and Rechkoska 2012). Stok et al., 2017 identified weather or seasons as one of the key environmental factors at Meso-Macro level that predict dietary intake, while Chakona and Shackleton, 2018 demonstrated that variation in agro-ecology influences dietary intake.





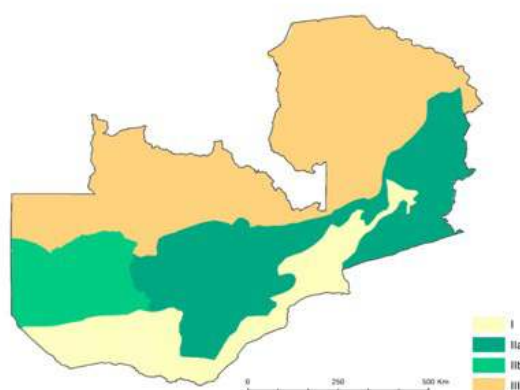
From an ecological perspective, Zambia, is divided into three zones (Figure 1 Ecological zones of Zambia). An ecological zone is a landscape unit that is basically defined by precipitation intensity, variability and annual amounts (Unninayar and Olsen, 2015). Zone I receives <800mm of rainfall per year, thus suitable for drought-resistant and irrigated crops and livestock. Zone II b and IIa have similar rainfall patterns, they receive about 800 to 1000mm of annual rainfall and consists of sandy soils. Zone III is considered as high rainfall zone (1000-1500 mm of rainfall per year).

Understanding differences in dietary intake among individuals across and within ecological zones may aid in the development of targeted interventions and nutrition in Zambia. Individual's diets can change, as seen at the global level and in Zambia (Harris et al. 2019), where there is a general shift towards unhealthy diets. Improving nutritional outcomes is one of the of the Zambia's developmental goals, as evidenced by the government's commitment to prioritize nutrition in overarching national development plans (NDPs) as well as public sectoral policies and strategies for the National National Food and Nutrition Commission (NFNC), Ministry of Health (MoH) and Ministry of Agriculture (MoA), just to mention a few.

Differences in dietary intake within Zambia: an ecological zone perspective

As indicated in the background, there is evidence suggesting that variability in dietary intake may partly be explained by changes in agro-ecology. Studies exploring dietary intake across the country are used to identify the possibility of dietary intake variation among Zambians as resident in diferent ecological zones of the country. Studies were identified through searching PubMed, Web of Science, Google Scholar and snowballing. Priority was given to articles reporting dietary intake as one of the outcomes.

In a study aimed at assessing maize production and consumption among households, Groote et al., 2015 demonstrated that vegetables and maize were the most consumed foods in all ecological zones of the country. The survey also demonstrated that Zone III respondents had significantly lower proportion of households consuming from the nuts and seeds food group when compared to zones I and II. Alaofe et al. (2014) also demonstrated that the diets of women and children from communities in zone III (Luapula and Northern province) were predominantly vegetarian (mostly vegetables, legumes, grains and roots) and that only 4-9% of the total energy come from animal source foods; they showed that roots and tubers, beans, nuts, and seeds, vegetables and grains were consumed by more than 75% of the sampled women and children. In addition, the consumption of animal source foods and fruits was not common. Similar findings from zone II were reported among young children and women in earlier study (Hotz et al., 2011) and from zone I among women of reproductive age (Grech et al. 2018), the latter study further demonstrated relatively low consumption of wild foods among women. However, Ickowitz et al. (2021), in a study conducted in the dry season, demonstrated that wild fruits contributed up to 80% of total fruit intake across all the four ecological zones of Zambia, represented by Kazungula-Zone I; Kaoma-Zone IIa; Choma-Zone IIb and Luwingu-Zone III.



Yamauchi and Kon (2010), studied the diets of men and women from Zone I (Sinazongwe district) from August to September in 2010. They also observed similarities in dietary intake between men and women, demonstrating low prevalence of fruit consumption and animal source foods. Similarly diets of communities from both Zone I and IIa of the Barotse were predominantly based on maize, cassava and sweet potatoes (Pasqualino et al., 2016)

The foregoing analysis has reaffirmed the fact that overall the Zambian diets are monotonous, largely consisting of maize-based staples consumed with a 'relish' of vegetables, and small portions of animal source foods. Furthermore, fruit consumption in Zambia continues to be below the frequency and amounts associated with good health and nutrition outcomes.

What does that mean for nutrition?

As shown in the preceding sections, irrespective of the limitations of the evidence, there appears to be no significant differences in dietary intake. What is evident, though, is that across the agro-ecological zones, diets are way less diversified. Empirical evidence has demonstrated that such diets are one of the major risk factors for malnutrition (Aboagye et al. 2021). To a greater degree, the persistently high levels of malnutrition among the vulnerable groups in Zambia is explained by poor dietary intake. Thus, interventions aimed at enhancing consumption of diverse diets in right amounts are paramount to improve nutrition indicators for Zambia. Considering that the determinants of dietary intake are numerous, there is need to intensify multi-sectoral approaches to promote optimal dietary intake across the country, with special emphasis on transforming food systems to guarantee intake of nutritious, safe, affordable, and sustainable diets across Zambia. One of the approaches to promote consumption of diverse diets is to ensure that the local food environments can support consumption of diverse foods, both within and across food groups. Development and promotion of locally available foods, as described in chapter one, is one of the recommended approaches ensure available of healthy and diverse diets (Pradhan et al., 2021). Within the same narrative, transformation of food systems, food-based dietary guidelines have been identified as having the potential to shape not only consumer behavior, but also national policies that foster food and nutrition security both at individual and national level.

What does the government do to support diverse diets?

The Zambian Government considers improving nutrition as one of the strategies for enhancing the national economic growth as well as ensuring the health of all Zambians. Specifically, the government has provided a conducive policy environment to promote development and implementation of interventions aimed at improving consumption of diversified diets. NFNC is the government's institution which is responsible policy guidance and oversight related to food and nutrition. In collaboration with various development partners, both local and international, the Zambian government has been promoting evidence based food and nutrition programming. The government has recently demonstrated its commitment to support consumption of diverse diets by developing and launching the national food based dietary guidelines. Furthermore, the government is supporting development partners such as the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), World Vision International (WVI) just to mention a few, which implements food and nutrition interventions with specific objectives to promote production and consumption of diverse diets. The government also is also implementing various programmes which may not have dietary diversity as one of the primary objectives, for example the Social Cash Transfer programme.

Limitations

Dietary intake information currently available in Zambia comes from single 24 hour recalls, which coupled with small sample sizes and seasonality limits external validity of the findings. Furthermore, majority of the studies focus on women and children, which also restricts generalizability of the results. The representative data from the national assessment will provide a clearer picture of the dietary intake across the ecological zone in the country.

Conclusion and recommendations

Using the currently available information, it can be concluded that there are no major differences in dietary intake among Zambians across ecological zones. It has also been demonstrated that diets of Zambians continue to be less diverse. Efforts to promote dietary diversity should be intensified. There is also need for high quality studies with sufficient power to detect significant difference in dietary intake in order to allow designing of location specific effective interventions to improve diets and nutrition among Zambians.

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Inside Zambia

1. How culture affects consumption of local foods in Zambia

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The patterns of human behaviour and interactions, and the symbolic structures forms a culture of a particular society. Culture encompasses elements of language, dress types, *food*, religion, traditional knowledge, social habits, music, values, beliefs and arts that people share in common and that differentiate one society from another (Reddy and Anitha, 2015; LaMorte, 2016). Within the same culture, layers of culture exist, such as those associated with gender (male and female), social class (rich or poor, educated and not educated, working-class and not working), generational groups (grandparents, parents and children), ethnicity and religious differences. Culture also shapes behaviour of individuals in a particular, community or society including their dietary patterns.

Culture changes over time following our everyday interactions that occur among individuals and is passed on from one generation to another (Kashima, 2008; (LaMorte, 2016) including changes in our dietary patterns. For instance, there was a noticeable change in what constituted as a staple food in Africa around AD 1500. Until then, maize was not a staple to the African continent, but sorghum and millet were. Currently, maize is Africa's most important cereal crop accounting for over 50% of caloric intake in Zambia (McCann, 2005).



Maize came to Africa due to the movement of both people and crops across the Atlantic Ocean (Cherniwchan and Moreno-Cruz, 2019). However, sorghum and millet offered many benefits to the continent, including being resistant to drought, high nutrient levels in terms of calories, protein and fibre (for millet) and may require fewer resources to grow compared to maize (Danalatos, Archontoulis and K, 2009) (A and Mushunje, 2010; Jocelyne, Béhiblo and Ernest, 2020) and is, thus, a better alternative for improving food security in some parts of the country. Therefore, the change to maize occurred without considering that maize was, to some level, a poor substitute for sorghum and millet. Given the views above, especially when the world is facing challenges in meeting future food needs and reducing malnutrition,

understanding how culture affects the consumption of local foods may be key to sustaining a healthy diet.

Alonso (2015, pg. 6) explains that culture, “shapes a community’s diet, food preferences, intra-household food distribution patterns, child feeding practices, food processing and preparation techniques. However, culture’s impact on food or diet in a community or society is also subject to the social, economic and ecological environment of the society.

Cultural practices determine how societies use natural resources such as land, water and forests, for example, to respond to the challenges they face, and whether the response to the challenges threatens their livelihoods and wellbeing, considering they depend on these resources for many things. To illustrate this, natural resources provide indigenous food plants, animals and insects, but cutting down trees to catch caterpillars threatens to reduce the caterpillar population in the future, increases soil erosion, makes some tree species extinct, and threatens food and nutrition security. Ultimately, culture also determines the ecological resilience of that community. The ecological differences can occur within a tribal group or region or province, bringing about cultural differences that may result in a differential impact on health and nutrition. For example, the *Lozi* people in the plains have more preference for fish, meat and sour milk due to access to the plains and animal rearing, while those from the dry land forest use more herbs, wild fruits, roots, leaves, mushrooms and caterpillars (Meister, 1981). Similarly, the Tonga “We” in the valley consume more of tree plant foods, due to poor landscape and poor soils, compared to those of the plateau who are cattle keepers and consume more animal source food such as fresh and sour milk and meat (Colson, 2002). It is obvious that the diets of such people would differ to some level. From the nutrition point of view, the nutritional differences experienced may differ due to consumption of less or more plant source foods or less or more animal source foods. Evidence shows that, compared to animal based diets, plant based diets promote lower BMI, lower rates of non-communicable diseases such as obesity, diabetes, and heart diseases (Tello, 2018; Sissons, 2019).

Farming systems practised in various regions of the country is another way that illustrates how culture influences the availability of food in communities and households. An example of this is the chitemene system, a land-clearing practice to pave way for ploughing and planting, specific to the northern and southern parts of Zambia. The Chitemene system allows regrowth of trees after harvesting or with the change of field, compared to the uprooting of trees, a practice that increases

deforestation, leading to reduced hunting and forest food gathering because of loss of animal and some plant species. Furthermore, chitemene increases soil erosion and reduces soil fertility, resulting in low crop yields. Consequently, the quantity of food available for consumption, let alone the diversity of diets reduces, contributing to food insecurity (Youmatter, 2020). Similarly, overfishing occurring in the country’s lakes and rivers, particularly when using unauthorized methods such as the mosquito nets (allows catching of very small fish) contributes to less food availability, greater poverty and the loss of ecosystem functioning due to depleting and poisoning the fish and other living things in the water (Gettleman, 2015) Stockholm University, 2019) (Jones and Unsworth, 2020).

In the social context, food patterns are often used as a means of retaining our cultural identity. Our ancestors influenced our food preferences, to some extent shaping our food choices. For example, serving traditional beverages (chibwantu in southern, thobwa in eastern and munkoyo in the northern part of the country) to a visitor is one of the common practices in Zambia. It is believed that when a visitor arrives at a home, it is not known when they last had a meal. In such a case, the traditional beverages serve as an energy booster. They are also used as energy booster during hard jobs such as farming processes (digging, ploughing, weeding, harvesting) and as a snack (Simoloka, 2013). However, there are also ethnic differences in the way the beverages are prepared. Unlike the beverages (munkoyo and thobwa) found in the Northern and Eastern provinces that are made from mealie meal, the Tonga version is made from finer maize grits. A fermented beer was also brewed called ‘*matimba*’ (Kapambwe, 2018). In thobwa, germinated cereal flour is added to aid fermentation while in Chibwantu and ‘munkoyo’ a called ‘*munkoyo*’ (*rhynchosia root*) root is used. The fermentation and germination processes help to make nutrients more easily available in the body through the deactivation of the antinutritional factors found in such foods. The practice of adding germinated cereal flour to children’s porridge as a way of making it more nutritious was being promoted by NFNC in the eighties. The munkoyo roots are high in flavonoids and anti-oxidative properties that offer some protection from some cancer and heart diseases.

Equally important are the beliefs, taboos and religious practices that exist in a community and live on due to fear or terror which, when not followed, may be accompanied by punishment (O’Doherty, 1960). In some Zambian societies, beliefs and taboos exist and have an impact on food consumption. For example, consumption of eggs by pregnant women is not allowed in some societies

as they believe that the child will be born without hair (M'soka, Mabuza and Pretorius, 2015) and, similarly, some believe that a child fed with eggs may develop seizures later in life (Madress, 2019). Consumption of raw groundnuts for young women and adolescents is also prohibited in some societies. In most poor settings, foods such as groundnuts and eggs are commonly available as the commodities are easily grown by women, therefore, are key to improving food security. Such food taboos prevent access to some nutrient-rich foods needed for the growth and development of children and good pregnancy outcomes. When they exist in communities that do not have adequate and quality foods, it may affect the adequacy of the diet. In addition, the First 1000 Most Critical Days Programme (MCDP), has been promoting dietary diversity by promoting small livestock and home gardens. Food taboos prevent maximum gain from programmes like the MCDP as the vulnerable groups may not access the foods, even if available. Key messages on nutrition and behavior change are important to change such beliefs.

Culture also influences infant feeding decisions that may impact child growth and development either positively or negatively. Breastmilk is the child's first food from birth to six months and it provides all the nutrition a child needs to grow and develop (WHO, 2022) and the recommendations have been promoted for years. However, certain ethnic groups desire to give concoctions to a new-born and to wash the mother's breast before the commencement of breastfeeding, thus delaying the commencement of breastfeeding while putting the child at increased risk of illness and death (Smith *et al.*, 2017; Oot *et al.*, 2018; Davis, 2018). Some societies believe in the throwing of first milk (colostrum) which is the only complete diet after birth, denying the child the nutrients it needs to grow right from the beginning. Furthermore, most times, women fail to breastfeed their babies in public in the presence of other mothers for fear that the child will become ill from charms being used by mothers (M'soka, Mabuza and Pretorius, 2015). In some communities, some foods are sometimes withheld from older children when they are sick, particularly with diarrhoea (Raider Habulembe, Mofu and Mweemba, 2019). Such practices distort a child's diet, particularly exclusive breastfeeding in the first 6 months, and are detrimental to child growth, especially in developing countries where stunting is being recorded even at birth (UNICEF, 2020). In as much as it is recommended that children should be fed using their own plates to allow for adequate consumption, traditional beliefs exist in some society where children are not allowed to eat alone (but together with older siblings), believing that the child will learn to be mean. Even when serving food (particularly meat), the father, and not the growing child, is the priority (Madress, 2019). The beliefs and taboos that exist in our societies are partly responsible for the failure of the nutrition programmes to reach the targets.

The most difficult situation is that food restrictions are applied more to the female folks and children who are considered the most vulnerable, and yet the quality of pregnancy outcome and child growth and development holds the key to our country's development (Ruger, 2003)

For some reason, some foods are just considered as of low prestige/status as for many indigenous vegetables and fruits. For instance, preference would be given to an apple for instance, instead of mumsomoso (African medlar, Scientific name : *Vangueriopsis lancifora*) and/or breakfast mealie meal compared to mgaiwa (straight run) as these may be associated with being better in society (modernisation). However, most of the times the so called "modern foods" are beyond the reach of most Zambians while indigenous foods are relatively cheaper or even free. In addition, consumption of foods such as butter, margarine and many other processed foods (high in sugar, salt and fat and with some nutrients removed) is also linked to being in the higher-class category/modernisation status. Yet, such a kind of diet may partially explain why Non Communicable Diseases including obesity and overweight are high, especially in urban areas (MOH, 2020) that depend more on processed foods compared to rural areas. Processed foods are associated with non-communicable diseases compared to non-processed indigenous foods (FAO, 2019)(Browne *et al.*, 2020). Urbanisation also results in high reliance on food from the conventional market, leading to reduced consumption of healthier traditional foods (Deaconu, Mercille and Batal, 2021). Neglecting traditional foods may also have contributed to high levels of malnutrition, including stunting, by neglecting a rich source of nutrients needed for growth, especially in societies with low purchasing power (Deaconu, Mercille and Batal, 2021).

The culture of food processing in urban and rural areas may differ, resulting in health nutrition differential benefits from the foods consumed. Due to rapid urbanisation in most cities of the country, there is simultaneous change in food sources, preparation and consumption patterns, increasing the consumption of highly processed foods. While rural communities still depend substantially on farming and gathering of traditional foods, urban populations are supermarket dependant likely to consume more of livestock products (meat, milk, and eggs), vegetable oils, processed foods and sugar as sources of food energy (Proctor and Berdegué, 2016)(Harris *et al.*, 2019). Some notable changes include change from mgaiwa to breakfast mealie meal, fresh foods to canned foods and rich porridges to wheat bread. Processed foods tend to be less healthy when compared to traditional food due to high energy (from fats, sugar and extraction) and salt that increase the risk of non-communicable diseases.

Ethnic differences also play a role in the differences in livelihood patterns that may have an association with differences in diets common in each province. Fishing communities along the rivers (Zambezi, Kafue, Luapula) and lakes (Kariba, Mweru, Luapula and Tanganyika) and cattle rearing communities (as explained above) consume more protein of animal origin compared to the general population with low levels of animal origin (Nyirenda, Musukwa and Mugode, 2007). There is high use of sodium bicarbonate (commonly called soda) among the people in the Northern part of the country when preparing plant source foods, particularly vegetables. It is believed that soda makes the vegetables soft (e.g. pumpkin leaves, cassava leaves), reduce poison in the food (e.g. cassava leaves) or improve the taste of foods cooked in groundnuts (Nyirenda, Musukwa and Mugode, 2007). However, sodium bicarbonate may destroy some vitamins such as vitamin C and B1 and also add sodium which may be harmful to the body (Nyirenda, Musukwa and Mugode, 2007) (Christine, 2018).

It is important to understand the culture of the population we are working with and the elements that are related to food access and plan for interventions that address them. Since culture may differ across the provinces, ethnic groups or communities as highlighted above, it implies that generalised solutions to reduction of undernutrition may not yield adequate impact. In addition, health education must be carefully designed to correct such practices in socially and culturally appropriate ways (Abdussalam and Kiiferstein, 1996).

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2. Policies and plans to reduce stunting – the Zambian scenario

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Introduction

Stunting is a type of malnutrition caused by a chronic lack of deprivation of adequate nutrition which is exacerbated by poor health. It is the most widespread form of childhood undernutrition with 22% of children under the age of 5 years were estimated to be suffering from stunting in 2020, globally. More than half of all stunted children under the age of 5 lived in Asia (53%) and two-fifths, (41%), lived in Africa. Eastern Africa, Middle Asia and Southern Asia have been identified as having very high levels of stunting (30%) (UNICEF, WHO, World Bank Group, 2021). Despite decades of implementing various interventions aimed at reducing stunting, Zambia's stunting levels are still very high (35% HFA-z-score) (ZSA, MoH and ICF, 2019).

Stunting, unfortunately, co-exists with micronutrient deficiencies such as those caused by iodine, iron, vitamin A and zinc (Fongar, Gödecke and Qaim, 2019). Approximately, 2 billion people are affected by these deficiencies (Bhutta and Salam, 2012). In Zambia, an estimated 35% of children under the age of five years are stunted (ZSA, MOH, ICF, 2019), 54% are deficient in vitamin A and 50% are anemic. The causes of stunting are multifaceted and addressing them, requires a multifaceted approach.

Zambia joined the Scaling Up Nutrition (SUN) initiative in 2010 and developed and launched the 1st 1000 Most Critical Days Programme to specifically address stunting and other forms of malnutrition. The programme helps

to achieve the World Health Assembly's global nutrition targets, which were recently updated to be met by 2030.

In Vision 2030, the United Nations member states, including Zambia, pledged to address all forms of malnutrition at the World Health Assembly (UNGA, 2015). SUN countries identify the right people for long-term change, by bringing together a diverse range of stakeholders including Academia, key line ministries, civil society alliance, SUN Business Network and UN agencies. Zambia is developing a Common Results Framework (CRF) with appropriate action plans to translate goals into reality. The CRF guides the alignment of sectoral policies and investments towards common nutrition objectives, monitors plans and tracks progress.

Zambia, like other SUN countries, is working to establish consistent policy and legal frameworks, which are critical for long term human impact. This article focuses on nutrition policies and legal frameworks centered on the interventions being implemented in accordance with the pyramid of interventions framework (Figure 2).

Methodology

The pyramid of interventions framework was used to discuss the nutrition and nutrition-related policies in place to help in stunting reduction. A review of literature on the current global, regional and local levels of stunting was conducted. A desk review of various policies was conducted in order to identify those aimed at improving

food security and stunting reduction. Key informant interviews were undertaken on certain issues in order to better understand how certain sectoral policies are implemented. On economic empowerment, for example, some women in Mwinilunga district who belong to some economic empowerment groups were interviewed to learn how the groups are formed, operate, sustained and benefit them. A staff member from the Ministry of Agriculture was interviewed on the programmes being implemented to address food insecurity issues. Food security is one of the underlying causes of malnutrition at both the family and household levels (Figure 1). The monitoring reports in the 42 districts were reviewed to determine the status of target outputs against the inputs in the 42 SUN districts. The previous action was carried out by the stakeholders from various key line ministries due to their in-depth knowledge of sector policies, targets and outcomes.

1. Response to critical situations

In critical situations, Government's primary focus is to respond to critical needs among nutritionally vulnerable households directly or through referral, productive inputs, food relief and Severe Acute Malnutrition (SAM) treatment. It is Government policy to intervene in emergency situations, among other things, to prevent SAM cases. SAM has an adverse impact on stunting reduction. For example, in a literature review conducted by Bahwere and others (2012), the major finding in the eight studies was persistent post-SAM stunting in children between 6 and 18 months after discharge from SAM treatment. According to the same report, a combination of evidence from their study and existing evidence from the Developmental origins of Health and Disease theory (DoHaD) suggested that survivors of SAM exhibit traits of so-called thrifty growth. Wasting, caused by lack of nutrients and / or disease (Figure 1) is a fatal condition in children (UNICEF, WHO, WB, 2019). Wasting predisposes them to weakened immunity, long term developmental delays, and an increased risk of death when severe.

These children urgently need nutrition and medical management, and maintenance to survive. In 2019, 47.0 million children under the age of five were wasted, out of which 14.3 million were severely wasted (UNICEF, WHO, WB, 2019). In the reporting period (2021), 15,461 SAM cases were admitted with 78% cure rate, 20% defaulter rate and 2% mortality, while 47,637 moderate malnourished cases were admitted with 83% cure rate and 16% defaulter rate. No mortality was recorded among the moderately malnourished cases (HMIS, 2021).

2. Agriculture

In the pyramid, the purpose of agriculture activities is to facilitate year-round production, preservation, processing and utilization of nutritious food with market production (Figure 2). This is in line with the purpose of the Second National Agricultural Policy (SNAP, 2016), which is "to ensure national and household food security through all-year-round production and post-harvest management of adequate supplies of basic foodstuffs at competitive costs". The MCDP II has been supporting the production of a variety of food crops, fish and small livestock. Crops include cereals and grains like orange maize, millet, sorghum and rice; roots and tubers such as cassava, sweet potatoes and Irish potatoes; legumes, pulses and oil seeds like soya beans, common beans, iron-rich beans, Bambara nuts and cowpeas, as well as fruits and vegetables. The small livestock production supported by the SUN/MCDP II programme include chickens, rabbits and goats through the pass-on-gift, an initiative expected to benefit all the eligible target group members. The chicken, goats and pig refuse, can be used as organic manure, a practice that is important for sustainable food systems (Ndambi, Pelster, Owino, 2019). The purpose of the pass-on gift is to eradicate poverty among target members and address both current and future malnutrition at the household, community and national levels.

At the national level, the Government initiated the Farmer Input Support Programme (FISP), implemented through direct input supply and the e-voucher system. Different cooperative members were accessing inputs through the direct input supply, where three bags of D-compound, three bags of urea and a 10kg bag of maize were provided. The e-voucher provided maize, sorghum and millet, fertilizer, sprayers or any other agricultural input, which were supposed to total K2000.00. Currently, all farmers are receiving inputs through direct supply which covers either soya beans, groundnuts or sorghum. Farmers who receive soya beans also receive two bags of D-compound whereas those who receive groundnuts or sorghum get one bag of D-compound. The two leguminous and one cereal crop are provided for dietary diversification purposes which the MCDP II is striving to promote among the target population. Sorghum is specifically meant for drought-resistant districts. The MCDP II targets groups belonging to the eligible cooperatives.

Diversification of FISP and FSP contribute to diversified diet and increased income for SUN households. Through training and follow-ups, agricultural extension services are provided to the farmers to support them with good farming practices, including control of pest and diseases,

to increase yields. Although the Government provides a market for maize through the Food Reserve Agency (FRA), this is a challenge because farmers shun maize production and venture into other crops which do not readily have a market.

Unfortunately, fewer women than men benefited from the FSIP in the 2005 – 2009 period (SNAP, 2016). The policy has also provided agricultural extension services to the farmers to achieve high yields.

The Ministry of Fisheries and Livestock has been active in contributing to reducing stunting levels in Zambia. The MCDP II has been distributing fingerlings to the communities in all districts supported by the programme. Fingerlings are stocked in ponds till they grow into fish and consumed as animal protein. For example, in 2021, Kaoma procured 37,000 fingerlings to distribute and stock 8 different ponds. The beneficiaries were 45 females out of the targeted 450 for 2021.

At national level, the Ministry banks on the National Aquaculture Strategy 2006. Through this, the Department of Fisheries, guided by its National Aquaculture Development Plan, is running the Zambian Aquaculture Enterprise Development Project, meant to increase fish production and reduce the gap between demand and supply. The project builds capacity among members of staff and also trains fish farmers on fish production, postharvest, fish processing, preservation and marketing. This will translate into increased per capita production and consumption to levels recommended by WHO.

In addition, the Department of Livestock has the Livestock Development Policy, 2020, which highlights its implementation plan, programs and methods to increase livestock production, consumption, marketing and financing. Aquaculture and livestock development activities cover SUN districts. To increase the number of beneficiaries reached, each district is encouraged to spread the programme to other areas in the district not covered by the programme.

3. Health and nutrition

In the pyramid, the health and nutrition component purpose is to promote good maternal, infant and young child, as well as adolescent health, nutrition and caring practices. The policies and actions discussed in this article pertain to maternal, infant, child and adolescent health, which are target populations under the MCDP II. The article specifically focuses on breastfeeding, vitamin A and zinc provision in diarrhea management.

Supporting, promoting and protecting breastfeeding

In order to support, promote and protect breastfeeding, the Government of the Republic of Zambia, enacted the Food and Drugs (Marketing of Breast Milk Substitutes) Regulations, 2006, as Statutory Instrument (SI) # 48 of 2006, Vol. 17 CAP 303, hereinafter referred to as the Code (GRZ/MOH, 2006). The regulation is consistent with the International Code of Marketing of Breast Milk Substitutes, a set of recommendations to regulate the marketing of breast milk substitutes, feeding bottles, pacifiers and teats (WHO, 2017). The International Code was adopted in 1981 at the 34th Session of the World Health Assembly (WHA) as a minimum requirement to protect and promote appropriate infant and young child feeding (WHA, 1981) by controlling the marketing and distribution of breast milk substitutes and other designated products such as dummies, feeding bottles and teats.

Under A69/7 Add.1 Provisional agenda item 12.1, the World Health Assembly issued additional guidance on inappropriate food promotion for infants and young children in May, 2016. The goal was to promote, protect, and support breastfeeding, to prevent obesity and non-communicable diseases, to promote healthy diets, and to ensure that caregivers receive clear and accurate feeding information. As a result of this guidance, the Ministry of Health, in collaboration with stakeholders, has begun the process of reviewing SI 48 of 2006.

Breastfeeding is important in the fight against stunting because breastmilk is rich in nutrients, provides a child's first immunization, and protects a child from respiratory infections, diarrhoeal disease, and life-threatening ailments. Breastfeeding exclusively also protects against obesity and certain non-communicable diseases later in life. It provides a healthy start to life. It promotes ideal child growth and development, protects child from common childhood illnesses, fosters cognitive functionality development and fosters psychological bonding between mother and the baby. Exclusive breastfeeding is the best way to feed infants and young children, especially in the first 6 months of life, before other foods are introduced to complement breastmilk.

There are important breastfeeding indicators that are tracked and reported on a regular basis, in the Health Management Information System (HMIS) and other periodic survey reports. Breastfeeding promotion, protection and support has a set of recommended actions that include initiating breastfeeding early within one hour of delivery, and practicing exclusive breastfeeding, from birth to up to six months, and continuing breastfeeding for two years or longer, regardless of the mother's HIV

status (MOH, 2018 & MOH, NAC, 2014). One of the United Nations Health Assembly targets for 2030 is to achieve at least 70% exclusive breastfeeding (WHO/UNICEF, 2019). According to the Zambia Demographic and Health Surveys 2013/14 and 2018, Zambia has already achieved the set target, which moved from 50%, (2025 target) to 70 %, (2030 target). Zambia, on the other hand, is working hard to achieve rates higher than 70%, revitalization of the Baby Friendly Health Facility Initiative (BFHFI), an initiative that promotes, supports and protects breastfeeding.

In maintaining the positive progress made thus far, Zambia is implementing a number of high- impact interventions including, promotion of early initiation of breastfeeding within the first hour of birth, exclusive breastfeeding for the first six months of life and provision of timely and age-appropriate complementary feeding, with continued breastfeeding up to two years or beyond.

The health sector promotes nutrition using its extensive, well connected and coordinated structures, via the maternal, and child health, and nutrition platforms, which are part of health service delivery in health facilities and communities respectively, using trained professional staff and trained /oriented community-based volunteers.

A multisectoral approach in the MCDP II has necessitated the need to strengthen and target delivery of interventions to households in a convergence manner. The Care Group Model, which has been tried and tested to bring positive change to targeted households, has been adapted, as Nutrition Support Group (NSG), to help with the approach. The NSG model was developed to allow for the convergence of interventions at the same household, community and target population (NFNC, 2016). Beneficiary registration in all targeted areas; identification and zoning of catchments areas, provision of enablers and motivation materials, training of NSG staff and volunteers have all resulted in the progress in the implementation of the NSG model.

Vitamin A Supplementation Policy

Another policy pronouncement by Government in relation to health and nutrition is the provision of vitamin A capsule supplementation to children aged 6 to 59 months old, through Child Health Week events (CHWks), which are held biannually and delivered through routine MCH services at health facilities. The goal of VAS was to contribute to the reduction in child morbidity and mortality. Over the last two years, the target population's vitamin A coverage among has been performing very well with a rate standing at more than 90% (MOH, Programme Report 2021). The impact of

vitamin A capsule supplementation is evident in the reduced mortality rate among children under the age five, which stands at 61.7 deaths per 1000 live births in 2019 from 179.9 deaths per 1000 live births in 1970 (UN, 2021). According to a systematic review by Imdad, A and others, a periodic high-dose vitamin A supplementation is a proven, low-cost intervention that has been shown to reduce all-cause mortality by 12 to 24% (Imdad, Herzer, Mayo-Wilson et. al., 2010).

Iron and Folic Acid Supplementation

Pregnant women in Zambia, are given iron/folate supplements as a matter of policy. Folate is essential for brain formation during the early stages of fetal development. Folate deficiency has been associated with neural tube defects in newly-borns. Because the impact of folate supplementation is early in fetal development, it is recommended that it is given peri- pregnancy or early in pregnancy when brain development is rapid.

Iron is required for the formation of haemoglobin in the bone marrow, a lack of which causes anaemia. The body cannot produce enough haemoglobin for red blood cells if iron levels are low. As a result, iron supplementation is critical in this type of anaemia, which is common in pregnant women. In Zambia and elsewhere, iron deficiency is the most common cause of anaemia. Iron is also required for oxygen transport in the blood. If untreated, it may lead to severe fatigue that interferes in the daily activities. Anemia, especially due to folate deficiency, can cause various complications in pregnancy including defective development of the baby and premature delivery. In children, anemia affects children's school performance, cognitive development, growth, ability to think, and other complications. Generally, it prevents children's expected development and progress at any age. (WHO, 2012).

According to the latest Zambia Demographic and Health Survey (CSO, 2018), 58% of children were estimated to be suffering from some degree of anaemia. Younger children were more affected and statistics for those in age groups 9-11 months and 12-17 months stood at 77%. Anaemia is higher in pregnant women (41%) than in non-pregnant and non-lactating women (31%) and lactating women (28%).

The concentration of low hemoglobin in the children age groups highlighted above, maybe a reflection of an inadequate diet during complementary feeding for the age group or insufficient iron/folate intake by the mothers who transmit the mineral through breast milk. According to the ZDHS 2018, only 73 % pregnant women received iron supplementation for 90 days.

However, the current policy does not cover iron/folate supplementation for infants and young children, as well as adolescents, leaving these vulnerable to anaemia.

Zinc is part of the treatment protocol and management of severe acute cases of diarrhoea. Zinc reduces the severity of diarrhoea infection and prevents death arising from diarrhoea (MOH, 2019) I). Availability of Zinc tablets in facilities is irregular due to resource constraints. Ministry of Health, with support from MCDP could consider providing this commodity to improve availability and access in the targeted districts.

4. Economic dimensions

The economic dimensions are about the formation and support of community savings and lending groups, and other empowerment initiatives. A number of groups have been formed in the MCDP II districts with the aim of empowering the communities and uplifting their lives from dire poverty. Below are some of them:

According to the Government Gazette Notice No. 1123 of 2021, some of the mandates of the Ministry of Community Development and Social Services (MCDSS) include the Child Development Policy, Community Development Policy and Training, Food Programme Management, Non-Formal Education Skills and Skills Training, Persons with Disabilities, Social Welfare Policy and Supporting Self Help Initiatives.

These departments and programmes have a bearing on nutrition, which should be mainstreamed and incorporate nutrition interventions targeting the poor and vulnerable.

Zambia has identified social protection as being central to social policy as it holds immense potential for improving nutritional outcomes of vulnerable populations. The 7th National Development Plan has prioritised social protection as a mechanism for targeted poverty reduction and recognizes the role of good health and nutrition in development.

This is in line with National development plans which have recognized social protection as a key sector to sustainable growth and development.

The National Social Protection policy recognizes that the process of improving the wellbeing and livelihoods of vulnerable persons is a challenging task requiring concerted efforts. Therefore, the Ministry has embarked on mainstreaming nutrition- sensitive interventions in all social protection programmes in order to reduce stunting of under five children (especially those below 2 years), vulnerability and poverty in communities.

Initiatives like Village Savings and Lending Groups (VSLGs) reflect the National Social Protection policy which aims at breaking the intergenerational transmission of poverty and reduction of both social and economic inequalities.

The purpose of the groups is to build business for each member, and some have since grown.

VSLG members are able to come up with initiatives like using their own money to establish the groups by contributing some share amounts monthly. In addition to the monthly contributions, the groups have been agreeing to add some amounts such as K5.00 as educational fund and another K5.00 being social funds.

The contributed money is loaned to the members at 20% interest per amount borrowed. At the end of the year, the money is shared according to the shares each group member holds. The Government, through MCDSS and partners, has been training the groups using models such as Saving for Change and offering financial and technical assistance where need arises.

The groups are using social funds to support members in sickness and in moments of bereavements whereas educational funds are for assisting the invited government officers with transport, whenever there is need for training e.g. in financial literacy.

The money that the group members are making out of the shares is being invested in various business ventures such as farming.

However, the groups are calling on the government and other stakeholders to continue assisting them to grow their businesses further.

According to the Food and Nutrition Fact Sheet, an extract from Food Based Dietary Guidelines, the human body needs 50 different nutrients, and therefore integration of nutrition services will help beneficiaries appreciate the importance of consuming variety of diets according to six healthy food groups.

Care givers should ensure that children receive adequate amounts of wholesome and nutritious food in accordance with the local dietary habits and relevant dietary standards (National wide Assessment Report on Child Care Facilities- July, 2017).

Non-Formal Education Skills and Skills Training programmes, for example, are platforms that have been used to disseminate nutrition messages to community members to increase literacy levels on appropriate

feeding.

Since most care givers responsible for preparation of meals had low education attainments (National wide Assessment Report on Child Care Facilities - July, 2017) So far the Ministry has been lead in the development of the Nutrition Sensitive Interventions for Social Protection Guidelines, a training manual and flip charts, key documents in the implementation of 1000 Most critical Days Program (MCDP II) for Women Economic Empowerment programmes which are aimed at reducing stunting in children up to two years.

The materials are earmarked for dissemination in the Social Protection sector at Provincial, District and Sub- District levels for staff to use as they interact with targeted beneficiaries.

The programme of formation of nutrition sensitive groups will be done in 3 years.

As the Ministry introduces nutrition objectives in its programming in order to address determinants of under nutrition, there is need to create Nutrition-sensitive Groups which will have to be implemented in the next three years.

There is also need to develop Management Information System (MIS) for Food Security Pack (FSP) and the empowerment of vulnerable but viable farmers with Non-Crop Inputs like improved breed of goats and chickens.

Revamping of the Post-Harvest Loss Management programme for FSP beneficiaries and capacity building among programme managers is also a priority.

Kukenga savings group in Mwinilunga

The Kukenga savings group was established in January, 2020. It is divided into two. One group near Kachabara river has a membership of 27 and the other is based in Kanyama central. The purpose of the group is to build members' businesses. Group 1 members used their own money to establish the group by contributing K1500.00 each and the government did not put in anything amount. A share is K100.00. As part of the monthly contributions, K5.00 is an educational fund and K5.00 is for the social funds.

Group 2 was government-sponsored; K1700, 200 was for transport for 26 members. The money is loaned to the members @ K20.00 interest per every K100.00 borrowed. At the end of the year, the money is shared according to the shares somebody holds.

Benefits

Businesses have grown for every member. The

educational and social funds are for activities to support members in sickness and at funerals.

Unnamed group

Supplies such as the money storagebox and other materials have been bought. Plans to establish the group are advanced. Transactions have not yet begun. The government will train the group under Social Cash Transfer. The members will be saving money for growing up their businesses.

Wana saving group

Wana means gift (in which language?) The group has 25 Members 25 under the social transfer programme. Each member received telephones from the government in which K1,700.00 was deposited. Each member contributed a K50.00 and plates, small books, pens and a ruler. The group has three (3) locks and three (K3) keys. A share for saving is K100.00 per month, and every borrowing attracts a K20 per every K100.00 borrowed. Some members were having problems paying back, so they are just saving. The interest was different for people because it depended on the amount borrowed, but during the share-out, all the members received the same amount.

The members' businesses have grown. And they do different things and are saving k150 per month. After the share out in December 2021, the cycle continues in January 2022. The members are very happy as they are able to save. If there is a problem in the community, funeral or sick people, the money helps them in sorting out their problems. However, they are requesting the government to assist or to enhance their businesses to grow further.

Kukenga group (love)

The group has 46 members. The respondents disclosed that the group members heard from their friends about the saving groups and did all the necessary preparations and started the group on their own. They selected the leadership and began the transactions with a share of k50.00 per member, per month. Each member has a book where they indicate their savings and the chairperson also indicates in the group's book. The group has also registered with the chief. The cycle is a 6-month period, and it began in January started ended in June, with a share-out. They were borrowing funds from the group and for each K1000.00, an interest of K200.00 is attracted and is supposed to be paid in two months. When it comes to sharing, sharing, if one puts in a K5000.00, that person earns a K7500.00. This is money they make out of the interests from lending in addition to the shares.

Benefits

The programme was reported to be good because it gives them capital for their businesses. The money that they made out of the shares, they have invested in farming. However, they requested more Government support for them to grow their businesses further.

A report of information from 13 districts (Ndola, Nchelenge, Samfya, Mbala, Mbala, Mansa, Luwingu, Mumbwa, Kabwe, Kaputa, Kasama, Kapiri Mposhi, Chibombo and Kitwe) indicated that 2, 096 women's saving groups have been formed.

5. WASH

Facilitate access to clean water and promote sanitation and hygiene behaviours: CLTS and baby WASH. The current National Water Supply and Sanitation Policy of 2020 provides for the supply of adequate access to clean and safe water, coupled with curbing poor sanitation and hygiene (WASH) practices which have been identified as major contributing factors to diseases outbreaks such as cholera and diarrhoea. On access to water, Zambia Demographic and Health Survey (2018) indicates that 72% of households (92% urban and 58% rural) obtain drinking water from an improved source. The WASH policy supports nutrition as a cross-cutting issue and all Water, Sanitation and Hygiene interventions will, directly and indirectly, fulfil this sub component. In 2021, the WASH sector had reached 360,000 individuals in sanitation and hygiene promotion activities such as using the toilet instead of the bush, hand washing with soap, proper disposal of baby faeces and water storage. The sector also reached 62,991 refugees in the four camps in the country who benefitted from critical WASH supplies including soap, jerry cans, chlorine, Menstrual Hygiene Management Kits, and so on. Over 98,552 people (50,262 females and 48,290 males) gained access to basic sanitation services which was above target. Over 12,500 new Sanitation facilities were constructed.

The Government plans to have an Open Defecation Free country by 2030. So far, 29 districts and 2,885 communities out of 108 districts have been designated Open Defecation Free places. The government has further planned to have 930 villages verified as Open Defecation Free. Of the 42 SUN/ MCDP II districts, Chiengi, Choma and Kaputa and ODF districts with a total of 288 chiefdoms of which 56 are ODF.



Squatting toilet you can pour water into



Example of a tippy tap



Discussion

Policy is a law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other institutions (CDC, 2008). The Government of the Republic of Zambia has put in place policies to guide the implementation of food and nutrition activities. This article shows cases the existing food and nutrition policies and how they have been translated into action for reducing stunting and other forms of malnutrition.

With regards to response to critical situations, the Office of the Vice President, through the Disaster Management and Mitigation Unit (DMMU), is facilitating the implementation of response activities in emergency situations. Key line ministries are in charge of coordinating the activities that are directly related to their mandate. For example, the Ministry of Health is responsible for planning and management of severe cases of malnutrition in emergency situations. The Ministry of Agriculture is responsible for ensuring that affected populations are food and nutrition secure. The meteorological department is responsible for ensuring that the population is provided with information on the weather patterns so as to help the population plan better. In addition to response when disasters strike, the Disaster Mitigation and Management Unit (DMMU), in collaboration with other stakeholders and partners, has developed a resilience plan to help affected populations to become resilient to future disasters by empowering them to be able to recover from the current disasters and to avoid the negative impact of future disasters when they strike.

In relation to Agriculture, the Ministry of Agriculture and its partners are implementing a number of nutrition-sensitive interventions such as promotion of biofortified foods (orange maize, orange feshed sweet potatoes, mbereshi beans), and production of a variety of fruits and vegetables. In 2021, the Ministry of Agriculture, working with FAO, introduced the Community Centres of excellence, models meant to facilitate a quicker adoption of innovations that improve nutrition such as post-harvest technologies, keyhole gardens and moringa tree planting. The Ministry of Fisheries and Livestock is supporting the pass-on the gift and fish farming. The Ministry of Community Development and Social Services is also implementing nutrition-sensitive social cash transfer to promote adequate nutrition among the vulnerable groups. However, there are some challenges in the implementation of the above mentioned policies. For example, in terms of promotion of the biofortified foods, there is a challenge of inadequate seed, and the orange feshed sweet potato cuttings and the mbereshi beans are not adequate to cover the entire country.

Noteworthy, is the fact that there are a number of seed companies who are producing the orange maize seed and it is already on the market and anyone can access the seed. However, more promotion of the orange maize is required to increase adoption by most of the people. Bio-fortified foods are important in the eradication of micronutrient deficiencies especially of vitamin A, iron and zinc, estimated to be affecting about 2 billion of the population globally. Vitamin A, iron and zinc are important micronutrient in the control of stunting among the vulnerable populations.

In the recent past, fish farming promotion has been heightened in the country. In the MCDP II districts, fish farming is being promoted among the target populations. However, the challenge is inadequate fingerlings to ensure that all the vulnerable populations and the entire population at large have access.

The Government is reviewing the current Farm Input Support Programme (FISP) to make it more equitable and responsive to different categories of farmers. Government, therefore, plans to implement a new Comprehensive Agriculture Support Programme (CASP) commencing 2022/2023 season, which will aim at ensuring equitability between different categories of farmers, cost effective, and will have a clear criterion for targeting beneficiaries.

Furthermore, the Government of the Republic of Zambia will remain committed to support small scale farmers on one hand. On the other hand, Government will also establish large scale estate production for both the local and export markets in the different provinces, based on comparative and competitive advantage of each product and agro-ecological zones.

The health sector has a well-developed mechanism for the promotion and delivery of the nutrition-specific interventions. In the past, the country has performed well in the delivery of vitamin A capsule supplements to the target population. Current levels stand at over 90%. The country is also performing well in terms of stocking zinc for diarrhoea management. However, this is inadequate in comparison to of vitamin A capsules supply. In as much as iron/folate supplies maybe well stocked and provided to eligible women, the uptake has been low due to factors associated with side effects such as nausea, black stool, diarrhoea, dizziness and even the fear of giving birth to a big baby.

In terms of economic empowerment, the government has put in place a number of empowerment activities aimed at poverty reduction among the population. Once poverty is reduced, families will have more disposable income that will also enable them access to a diversified

diet for stunting reduction. Women have been equitably targeted under the economic empowerment projects. There is a relationship between women empowerment and child nutrition.

In terms of WASH, the government has performed well in line with the set policies. More communities have access to clean and safe water, and are adopting positive WASH behaviours such as washing of hands after toilet and before preparing meals; use of toilets instead of the bush which has translated into a high number of villages being designated open defecation free. There is a relationship between adequate WASH and adequate nutrition. Therefore, a discussion on nutrition matters cannot divorce issues of food and WASH.

However, despite the strides that the country has scored in various sections of society, the extent to which the level of stunting has reduced from the targeted districts is still not known. The country has made a stride by developing a common results framework that will be providing information in real time. The score card and the dash board are also in place. However, all these tools have to be adopted before widespread utilization. The country is also working towards the atomization of the Zambia Nutrition Information System that will also be providing nutrition information in real time. There has to be continued implementation of the discussed interventions to reduce stunting and all other forms of malnutrition.

In light of the cited challenges, the following are recommended: for the recurring disasters, the population should be assisted to be more resilient to the eminent disasters. Regarding the seed for the bio-fortified foods (OFSP and Mbereshi beans) which are critical in micronutrient deficiency reduction, there should be more advocacy to woo more partners to come on board and work with Government in the seed multiplication and distribution. With regards to health and nutrition, for the inadequate zinc supplies, there is a need for more advocacy with partners to assist in the procurement and distribution of the zinc supplies.

Regarding WASH, more communities and villages should be persuaded to become open defecation free. Open defecation is an important critical point in disease transmission, especially for diarrhea, with the flies as vectors. Therefore, it is important to ensure that the practice is brought to a halt.

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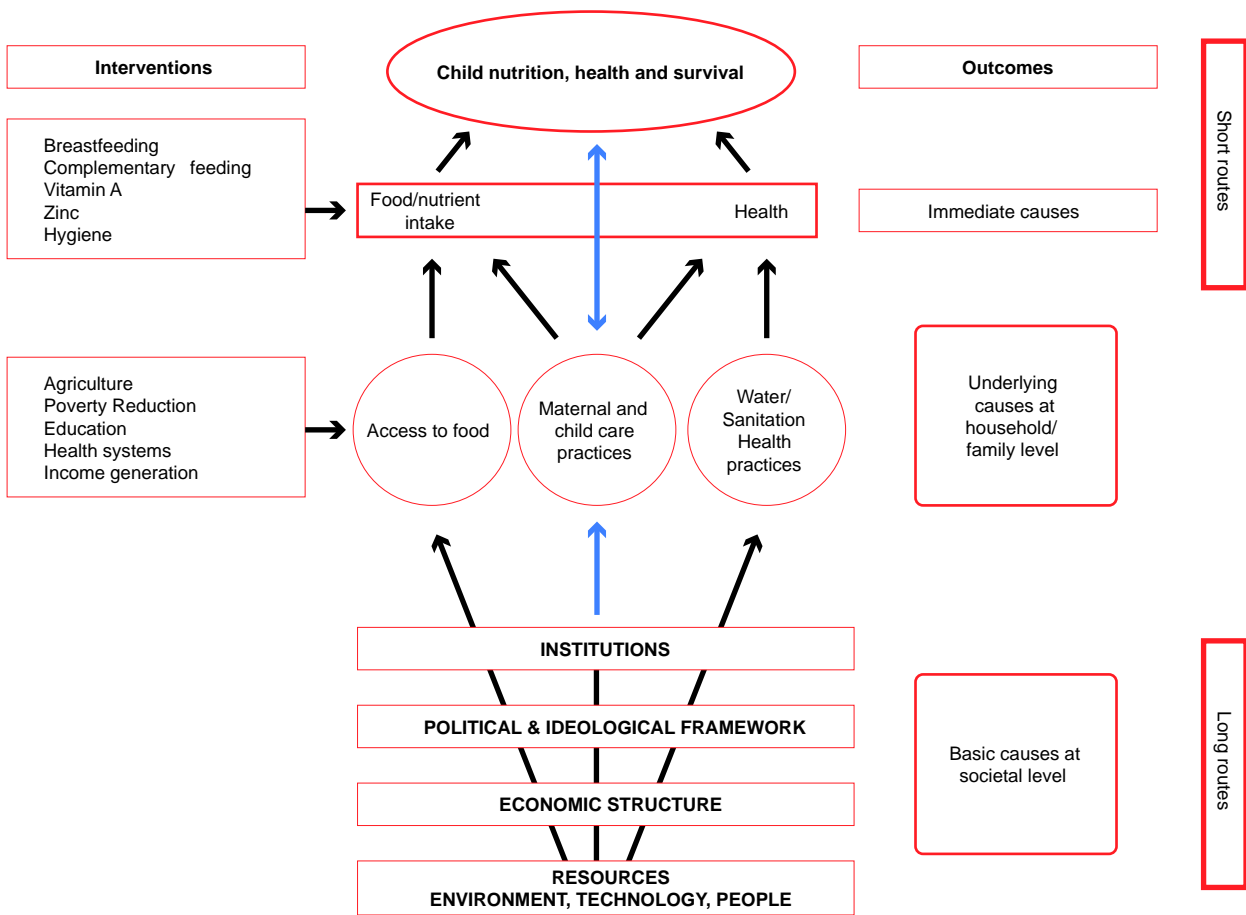


Figure 1: UNICEF conceptual framework



Figure 2: minimum package of interventions



CHAPTER 4

Healthy local dishes in Zambia

Muzauli porridge

Background: The Muzauli tree commonly known as Rosewood tree (*Guibourtia coleosperma*) is commonly found in Western and North-western Provinces. The tree is also scarcely found in Southern province in Namwala area. According to observers, Muzauli tree is under threat due to its most loved hardwood usually exported to other countries threatening the livelihoods of local communities (Chisanga, 2017)(Cerutti *et al.*, 2018). “The tree flowers between December and March, giving way to beautiful and lightly scented white blossoms that attract myriad birds, insects and reptiles”(Chisanga, 2017). Apart from the tree being important for seed that is used to make oil or paste used in various dishes, it has also a medicinal and construction uses. It is also locally used for making drums, roofing poles, canoes, paddles, wooden dishes, stools and the traditional piano (Meister, 1981).

How muzauli is used in food preparation: Muzauli can be added to various relish dishes just like the groundnut/peanut flour or paste and other seeds including pumpkin and cucumber seeds. For instance, soaked muzauli seed can be pounded together with cooked cassava leaves and served as relish. Muzauli seed covers can be mixed with roasted or boiled cassava or sweet potatoes and pounded together and served as a snack. Muzauli seed covers may also be boiled until oil collects at the top of the hot liquid. The oil is then skimmed off and boiled again to ensure all water is removed to increase shelf life or for longer storage.

Our special dish – Cassava-Muzauli porridge: The porridge is prepared by soaking the Muzauli seed into warm water or soaked overnight in cooled water. When soft, mash the seeds. Prepare cassava porridge. When the porridge is ready, remove from the fire. Add the mashed seed paste and sugar to the porridge according to your taste and serve. “A lady from Zambezi district indicated that she prepares the Muzauli porridge by measuring 3 cups of mashed seeds and uses one and half cups of cassava flour to prepare the porridge. It is important also to note that the seed is made of the red cover called aril and the hard part inside which is the actual seed. When mashing, the seeds are not removed, they are removed by spitting them while eating the food with Muzauli.

Nutrient content: Muzauli seed is high in calories providing about 486 cal, protein 12.09g, fat about 35g, calcium 1.29 mg, iron 13.7 mg, zinc 0.09 mg and vitamin C 48 mg per 100g (NFNC, 2009). Muzauli can be a perfect combination with vegetables and mushrooms that are low in calories and fat yet provide the minerals and the vitamins that are required for



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adequate function of the body. For instance, it has been reported to be added to pumpkin and cassava leaves. they can either be cooked with other food items or separately as a dish but eaten at the same meal or not. The Muzauli seeds tend to be very rich in phytochemicals also called phytonutrients (compounds produced by plants and found mainly in vegetables, fruits, nuts, legumes, and whole grain (Leitzmann, 2016)) particularly the saponins and alkaloids while other phytochemicals (flavonoids, saponins, phenols, tannins and alkaloids) are available in lesser or small amounts (Songwe, 2018). The phytochemicals help to build immune systems and prevent some conditions such as heart diseases as they function to lower cholesterol levels (Leitzmann, 2016) (Songwe, 2018).

Common local names of Rosewood: Muzauli (L), Mushibii (Nkoya), Jicha, Jishivi (Luvale), Shiyyi (Lunda)

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Abigail Mbuji
Master chef

2. Interview with master chef



Abigail Mbuzy
Master chef

1. What is your favorite local but healthy dish? _____

Response: My favorite local vegetable is Kalembula _____

2. What do you like about it? _____

Response: I love that it is not expensive to buy and can be cooked in different ways to suit your taste buds. _____

3. How can Zambians maintain healthy diets? _____

Response: By eating a lot of fresh fruit and vegetables. We are blessed to have an abundance of different fruits and vegetables around especially during the rainy season. We need to avoid fatty foods and find different ways to cook our favorite proteins. Go for grilling and poaching instead of frying. Avoid processed foods and eat more roller meal or cassava meal instead of breakfast meal for our nshima. _____

4. What are the benefits of traditional Zambian cuisine? _____

Response: Traditional foods are a healthy alternative to junk foods. The cooking process is different and we have a wide choice of vegetarian dishes. _____

5. How does it come that Zambians seem to prefer international restaurants and dishes in the recent years? _____

Response: I think Zambians have been able to travel

around the world a lot more in recent years and hence also learned the culture of eating out. There are limited fine dining establishments that actually serve local foods. I think mostly if people want to eat local food they have to go to the market. We need to show that it's cool to eat local food at a restaurant. Find exciting and delicious ways of serving and presenting the foods so that it's attractive and different from the way the food is served at home. _____

6. What should our Farmers and producers do to strengthen the image of locally produced food? _____

Response: There is need to educate our people through various channels on different recipes they can try out using local ingredients. Seeing celebrities and other chefs cooking with local ingredients will be a great way to get people excited about using local ingredients and learning to cook different recipes. _____

7. What can persons of interest, like yourself, and other chefs do to support local dishes? _____

Response: Using our social media and other platforms to talk more about local foods and its health benefits and also showing the public some new recipes for them to try out at home. _____

3. Interview with Drimz

1. Tell us a bit about yourself?

Response: My Government names are Lota Mandevu, otherwise known as Dreams Mr. Music, I am an artist, an entertainer and a brand influencer as well. I hail from Kabwe at the time of this interview, I am married and I possess a higher diploma in an information systems course under IMIS. I have a huge following on different social media spaces my biggest being face book. I have over half a million followers on face book.

2. What kind of food do you like eating

Response: I love having traditional foods. I grew up in a typical, typical Zambian family set up where eating traditional foods was the order of the day and since then I have not looked back. I love Kapenta. I love beans, I also love soya chunks, rape and a little bit of some chicken.

3. Do you still like this food?

Response: I still love this food and beans has always stood out to be the best and for me a week cannot go by without having some beans.

4. If you like it, tell us why you like this food?

Response: I still love traditional foods like I said I grew up in a typical, typical Zambian family set up and obviously understanding the health benefits that come with traditional foods, I mean we are here today obviously partly because of the type of food we were being fed when we were growing up and I have continued with this practice even in my home set up.

5. If you don't like it anymore, tell us why?

Response: I still like it

6. What special memories does this food bring to you?

Response: Special memories, it reminds me a lot of my late mum she used to cook a lot of beans and beans was my favourite when I was growing up, it's still my favourite right now. I think this is one of the foods that used to be enough for everybody when we were growing up, unlike chicken where others would get small pieces and others would get big pieces. But I also appreciate the nutritional and health benefits that beans has.

7. In your view do you think Zambians like eating their local foods?

Response: So, in my view there is a large cross section of Zambians that love their local foods but not fully, fully loving it because obviously there is a certain artificial stigma that is attached to certain foods. In a typical Zambian or rural set, up you find that maybe over 90% of the food that is consumed is local foods and then, when you come to the urban set up or town set up there is a mixture, people mix local foods and maybe for lack of a better term western foods.

8. If they like it, what could be the reasons?

Response: There are different reasons that I could give especially when it comes to the two scenarios that I have given, in the rural or village set up you find that a lot of our people love this food because maybe they don't have a wider choice, others love this food because of the nutritional benefits that his food have. When you come to the town set up, people here have a choice and others love the food obviously because they understand the nutritional and health benefit that this food comes with and others love it because they just want to have a balanced diet and have the option.

Even in urban areas where we live where poverty levels are high a lot of our people find themselves having local foods because obviously they are easily accessible and it is the only thing that is available at that particular time

9. If they don't like it, what could be the reasons?

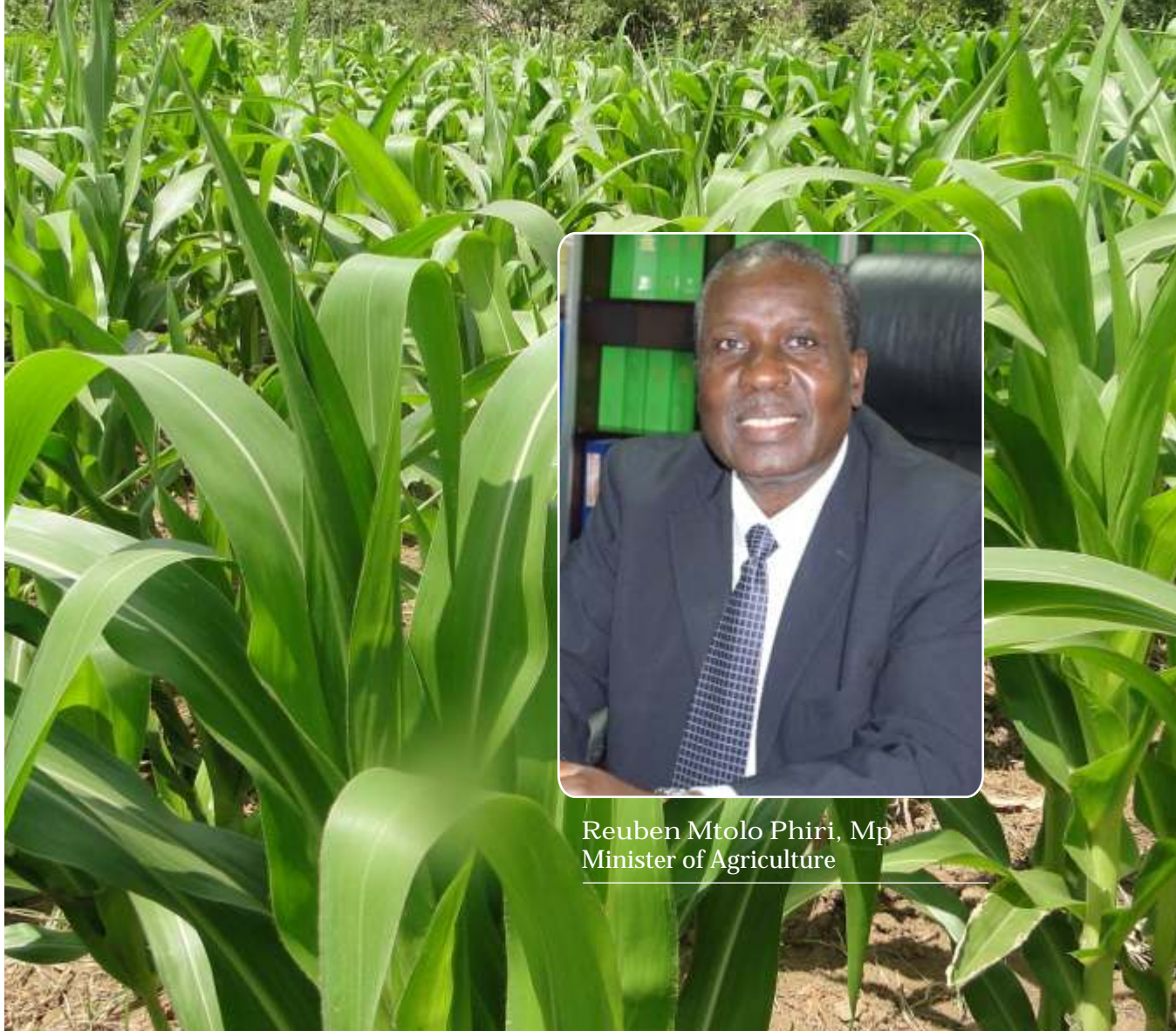
Response: The reason why a lot of people don't like local foods is because of artificial stigma that is created around certain local foods. There is a certain prestige that is attached to processed foods and these western foods like the Pizzas and a lot of these junk foods. So, for me it's a question of stigma and prestige attached to different foods respectively. A lot of our people feel like there are certain foods that carry this artificial tag of poverty. If someone bought Masuku on the street they feel like they will be exposing themselves to the world like they cannot afford to go into these chain stores and just buy an apple or they cannot go into these chain stores to buy straw berries. So, one of the reasons why maybe certain people don't like the food is because of that artificial stigma or

poverty that is attached to local foods.

10. What do we need to do to promote consumption of our local nutritious foods?

Response: so we actually need to do more to promote consumption of our local nutritious foods obviously like I said we need to break this artificial stigma that has been created around a lot of our local nutritious foods by our people and this campaign has to be vigorous, it has to be brought down to community level, family set ups in communities need to be made aware of the nutritional benefits of most of our local foods have. I also believe that this should be included in our education curriculum because it also helps to change the narrative and the attitude towards local foods. I took part in the eat well campaign and in my time as an influencer at least I saw the impact that we did as ambassadors in trying to change the narrative and this was evident by the mere fact we could see a lot of people now coming out posting these traditional foods that they are having for lunch for supper because they saw a certain public figure like me, Dalitso and Chileshe Bwalya post a lot about the benefits of having traditional local foods so we do not need to relent and if this could be done on a regular basis I think we could be heading somewhere. Thank you.





Reuben Mtolo Phiri, Mp
Minister of Agriculture



CHAPTER 5

GOVERNMENT TO PROMOTE GOOD NUTRITION', AGRICULTURE MINISTER



Reuben Mtolo Phiri, Mp
Minister of Agriculture

Minister of Agriculture, Mtolo Phiri says the Zambian Government plans to improve food security and nutrition for the majority of Zambians, and reduce malnutrition, especially for children below the age of two years and women of child bearing age. This improvement will entail government increasing production of nutritious foods such as pulses like iron-rich beans, cereals like orange maize, roots and tubers such as orange-feshed sweet potatoes, and fruits and vegetables.

Government will promote diversified agricultural production and move away from mono-cropping. "The Government will build the resilience of farming communities to climate change-related hazards such as droughts, floods and other hazards that affect agricultural production," Phiri says, adding that it is also important to remember that issues of nutrition are multi-sectorial and, therefore, the Ministry of Agriculture needs to collaborate with other relevant sectors such as Health, Community Development and Social Welfare, Water and Sanitation to achieve nutrition goals.

Below is the interview with the Minister of Agriculture:

Q1: What plans does government have to enhance local and nutritious diets?

A: To improve national and household food security and nutrition, the Government is reviewing the current

Farm Input Support Programme (FISP) to make it more equitable and responsive to different categories of farmers. Government plans to implement a new Comprehensive Agriculture Support Programme (CASP) commencing in the 2022/2023 season. This aims to be more equitable to different categories of farmers, cost effective, and will have a clear criteria for targeting beneficiaries.

Furthermore, the Government will remain committed to supporting small-scale farmers and will also establish large scale estate production for both the local and export markets in the different provinces, based on comparative and competitive advantage of each product and agro-ecological zones.

All these will support the increased availability of nutritious food for the Zambian population and, ultimately, result into healthy diets.

In the 2022 Budget Speech, Government committed to promote appropriate and affordable irrigation technology to small-scale farmers in order to promote all year round production of food and reduce dependency on rain-fed agriculture production.

In addition, the Government, through the Ministry of Agriculture, has been promoting improved post-harvest handling, storage and value addition among small-scale farmers to improve household food security. This is meant to enhance the quality of food crops and promote

value addition among small-scale farmers, thereby, increasing their income sources. The Ministry is also promoting the use of improved storage technologies such as metal silos to increase availability of food at household level, all year round.

We cannot overemphasize the promotion of Climate Smart Agriculture (CSA) at a time such as this. Government is committed to promote agriculture that is responsive to the changing environment and build resilience of the communities against climate change-related hazards.

Government will, therefore, promote agricultural farming methods that conserve natural resources such as water, land and air, and are consistent with mitigation measures against climate change.

Government is aware of the fact that the COVID-19 pandemic can easily be transformed into a food crisis. Therefore, Government is making headway in finding ways to sustain production, processing, marketing and access to nutritious foods in the midst of the pandemic. Some of the plans that government has are to:

- Empower local agro-dealers so that they can stock more agricultural inputs at affordable prices. This can reduce the movement of farmers to COVID-19 high risk areas in search of agricultural inputs.
- Improve rural infrastructure, especially feeder roads and local markets, including road side markets, in order to reduce movement of farmers from their localities to cities in search of markets.
- Increase production, processing and utilization of nutritious foods to improve diets, which directly improve human immunity.

Q2: How relevant is nutrition to the new government?

A: The Zambian Government recognizes malnutrition as a major public health concern affecting majority of the Zambians. While the Government and its Development Partners have achieved some milestones in addressing malnutrition, the results of such efforts have been mildly evident as the burden of all forms of malnutrition remains high. For instance, according to the 2018 Zambia Demographic and Health Survey, the country recorded 35.6 % stunting in children under five years of age, 15% of children under five years old are underweight and 5% are wasted. Over 54 % of children under five and 13 % among women of child bearing age still suffer from micronutrient deficiencies such as anemia.

Government is alive to the fact that malnutrition cannot

be combated by one sector. Therefore, the Ministry of Agriculture, one of the key sectors involved in reducing malnutrition, has partnered with other line Ministries and NGOs working to combat malnutrition. The Ministry of Agriculture should be termed the 'Number One Ministry of Health' since it works to prevent malnutrition, which is costly to combat if it occurs. The role of my Ministry is to promote preventive measures such as increasing access to nutritious food and prevent malnutrition to occur. In this case, prevention is better than cure; curing malnutrition costs Government millions of Kwacha yearly.

The Scaling Up Nutrition (SUN) initiative further enhances Government's capacity to improve nutrition of the small-scale farmers and their families and improves its delivery of nutrition-sensitive agriculture. The Ministry of Agriculture is determined to promote nutrition-sensitive agricultural programmes that ultimately yield nutrition outcomes such as improved nutritional status of its targeted farmers.

Government, working through the National Agriculture Information Services (NAIS), undertakes programmes and activities to enhance Behavioural Change Communication (BCC) towards food consumption patterns that ultimately improve nutritional status among the farming communities and the general public. These are done through the Lima Time TV programme, Radio Farm Forums, and other information dissemination programmes.

Q3: What steps will Government put in place to support and promote diversification of food production in communities?

A: The Government's intentions to diversify agricultural production is a reflection of its interest in ensuring that Agriculture is responsive to nutrition.

Previously, as a response to dietary diversification, the Farmer Input Support Programme (FISP) was modified to allow farmers access to inputs for diverse crops and livestock with a limitation to maize and rice. Today, Government has included nine crops in FISP, namely white maize, rice, sorghum, groundnuts, soya beans, sunflower, cotton, beans and orange maize, bio-fortified with a pro-vitamin A. The Government will continue to improve the crop diversification programme by promoting diversified seed.

Previously, the biofortified crops such as orange-fleshed sweet potatoes and iron-rich beans was being promoted only in few districts, mainly due to inadequate seed or planting materials that could reach many farmers. The Ministry and its partners are working together to

introduce seed multiplication of nutritious crops such as iron-rich beans and orange-feshed sweet potatoes.

The Ministry is also promoting the production and consumption of diverse foods at household level for improved nutrition. Thus, crop diversification programmes that emphasize the production of nutrient-dense crops such as soya beans, groundnuts, common beans, orange-feshed sweet potatoes, fruits and vegetables are being promoted. The emphasis has been on utilization of legumes and vegetables such as pumpkin leaves, rape, common beans, soya beans, groundnuts, bambara nuts and cowpeas to provide micronutrients and proteins to communities in rural areas. Government is also promoting vegetable gardening and fruit tree orchards.

Q4: How is Government going to ensure that it reaches out to the most vulnerable communities in promoting local and healthy diets?

A: Government has many wings charged with the responsibility of looking after the vulnerable communities, and these include the Disaster Management and Mitigation Unit (DMMU) and the Ministry of Community Development and Social Welfare. As Ministry of Agriculture, our mandate is to promote food security and good nutrition. However, the Ministry in terms of good security and nutrition, still collaborates with the wings of Government in charge of vulnerable groups in order to support their mandates.

We are aware that vulnerable communities are all over the country, and the Ministry endeavors to specifically target vulnerable groups through special programmes such as the Food Security Pack (FSP) and FISP, which target vulnerable, but viable farmers.

The Ministry of Agriculture, in collaboration with other Ministries carried out some activities targeting vulnerable communities. These include the following:

- Working closely with Ministry of Education in promoting Home Grown School feeding programmes.
- Working closely with Ministry of Community Development and Social Welfare, and the Programme Against Malnutrition, in the Food Security Programme, and other programmes for vulnerable communities.
- Working with DMMU when disasters like Army worm occur.

CHAPTER 6

Nutrition, a profession with a future



Dr. Bernard Moonga
University of Zambia food
science and nutrition lecturer

Interview questions:

1. Dr Moonga, if I decide to study nutrition at UNZA, what kind of topics can I expect?

Response: The nutrition program is diverse at the University of Zambia. You would expect the following main themes;

- Public health nutrition
- Community nutrition
- Clinical nutrition
- Food Science & nutrition
- Some sub-topics include:
 - o Dietetics, diet management
 - o Basic principles of human nutrition, metabolism
 - o Research methods & Epidemiology
 - o Nutrition disorders
 - o Nutrition & health promotion
 - o Medical nutrition therapy
 - o Nutrition in emergencies
 - o Food preservation
 - o Food analysis
 - o Food safety
 - o Food microbiology
 - o Food & nutrition security

2. What are the benefits for my son / my daughter if they decide to study food & nutrition?

Response: Some benefits include the following:

- The fact that, we live in an environment that is saturated with readily available information that is packaged differently on the internet, for a student who has studied nutrition at UNZA, he or she can easily sieve through this information and be able to select relevant scientific information on nutrition
- A graduate of nutrition understands the principles of nutrition better and can apply them
- A graduate of nutrition has a wealth of knowledge on nutrition and can advise parents/families/communities on healthy foods to consume
- A graduate of nutrition could contribute at both national and global levels in different ways

3. What are the latest developments within the curriculum?

Response: The University of Zambia keeps track of the latest developments at global and regional level in nutrition and periodically updates its curriculum in order to ensure that students are up to date with current trends. The most recent and pronounced topic is the global food systems, which relates to nutrition. The UNZA Dept of Food Science & Nutrition is in the process reviewing its curricular and some topics on the global food systems have been incorporated. In addition, courses with overlaps have been merged.

One other important addition to the curriculum is a course on Nutrition Anthropology. Thus far, the University of Zambia is on course in updating the curriculum to meet the new demands.

4. How does UNZA promote gender diversity for food & nutrition?

Response: The subject of gender is one important issue which the University of Zambia has taken seriously. In the recent past, UNZA has made significant strides in bridging the gap between male and female enrolment ratios at the institution. Unlike in the past, especially in the 1990s, the institution was mostly dominated by

male students. However, in the last 20 years, the institution has achieved its gender parity by achieving a 50:50 ratio of male to female students and perhaps, the female ratio could even surpass the male ratio by 1% in enrolments.

In the area of nutrition, the course was mostly dominated by female students and male students shunned the course because they thought that it was a course for females. They associated the course with cooking and that time cooking was thought to be for females. However, over time, through sustained education campaigns, we have seen a lot more males enrolling for the course. The nutrition course is an all-encompassing scientific course and both male and female could be part of it.

5. How does UNZA ensure the curriculum resonates with the latest development supporting local foods in a global system? (How does the curriculum prepare students to work in various organizations and fields?)

Response: The course has a global feel, but we use a lot of examples from our local foods when teaching our students to better illustrate the points. For instance, we use examples of mbeba, vinkubala and others to make our students understand the relevance of local nutrition.

We are also in constant research on the contribution of local foods to nutrition such as mabisi, munkoyo etc.

Much more, we use the laboratory to demonstrate the relevance of local foods to nutrition.

I also need to add that the academic program has different courses that prepare students adequately for their nutrition roles which are mixed with practical sessions.

The students also are required to carry out research on nutrition and present their findings through reports and oral presentations.

6. What are prospects for a graduate on the labor market (in Zambia and Internationally)? (What can I expect if I am a freshly graduate?)

Response: The prospects are enormous! The starting point is that the country has high stunting levels at 35% and this already presents an opportunity for a graduate of nutrition to raise awareness on nutrition in communities.

When viewed from an angle of government

opportunities, the opportunities are twofold; one could join the Ministry of Health or the Ministry of Agriculture as a nutrition officer or as a dietician at a hospital. Not too long ago, government made an announcement that they would employ about 11,000 staff in the Ministry of Health and the recruitment would possibly include nutritionists.

The NGOs are also among those that in need of nutritionists as well as the UN agencies especially those that are implementing scaling up nutrition programs. For instance, some nutrition graduates are working for WHO, WFP, FAO while others are in diaspora working as nutritionists.

The increase in the number of universities and colleges that are offering courses in nutrition could also provide an opportunity for nutritionists who want to take up an academic path to lecture the course.

It is also possible to work as a free-lance nutritionist consultant after getting more experience in the field of nutrition.

More importantly, in this era where people are promoting entrepreneurship, some could work in this field and be able to manufacture certain food types that are nutritious with health benefits. Others can provide nutrition advice as well as formulate diets for specific groups or individuals. They can also conduct nutrition awareness campaigns.



Mr. Isaac Mwanza, University of Zambia 5th year student

FOOD AND NUTRITION DEPARTMENT

1. What is the name of the program you are currently pursuing at the University of Zambia?

Response: BSc Human Nutrition

2. Why did you decide to pursue this course/program?

Response:

- I. I am concerned about the rising prevalence of non-communicable diseases (mostly cardiovascular and diabetes cases) in the country, with diet being one of the important contributing factors, therefore I wanted to learn how it (diet) it contributes to disease and how to prevent these.
- II. To understand the food and nutrition security systems, am always fascinated at how Zambia seems to be recording bumper harvests almost every year but always seems to record high malnutrition cases/ slow progress in tackling malnutrition.
- III. I want to contribute in reducing food and nutrition insecurity in the country as well as contribute in reducing the prevalence of non-communicable diseases, especially cardiovascular diseases and diabetes

3. What are the current nutrition challenges do you see in Zambia which the course/program responds to?

Response:

- I. Food insecurity despite the country continuing to record bumper harvests
- II. Under nutrition challenges in the country i.e. Stunting, underweight wasting
- III. Hidden hunger challenge (micronutrient deficiency)
- IV. Over nutrition challenge (increasing obesity and overweight challenge)

4. What is the relevance of the curriculum to today's nutrition challenges?

Response: The curriculum helps answer to the nutrition challenges by training students in clinical nutrition, community nutrition, food security and food processing and preservation as well as research methods.

5. What is it that makes the course interesting that you have gotten from the curriculum?

Response: The research methods course helped open my mind to diferent methods and approaches in the feld of nutrition. I believe it has provided a solid foundation in this area going forward.

6. What should be done to make the curriculum more relevant to the Zambian nutrition situation?

Response: Make the programs more specialized i.e. into (i) clinical nutrition/ dietetics and (ii) public Health Nutrition and (iii) Food and nutrition security to produce more specialized personnel who will respond to specifc challenges.

7. What would you say to encourage more young people to have interest and pursue this course and where can they fnd the source of information regarding nutritional programs?

Response:

- I. Improve the outlook of the department of Nutrition page on the UNZA website by providing more information on the programme content and structure.
- II. To develop an ofcial departmental Facebook page which is to be run by the department member of staf or the department Student Union leaders (UNZANUFSA), who will help provide more information and make it more interactive for prospective students with questions and concerns.

8. What do you think should be done to have more Zambians eat local healthy nutritious foods?

Response:

- I. Scale up nutrition education of the existing recipes in the communities.
- II. Conduct home/community cooking demonstrations with these locally available foods.
- III. Make food more interesting by investing time in developing new recipes and researching recipes of other cultures outside of Zambia with the locally available foods.

9. What do you think should be done to have more Zambians eat locally affordable healthy nutritious foods?

Response: I thought the above question was the same as this one

10. What local foods would you recommend to eat by the Zambian community and why would you recommend this food?

Response:

- I. African horned melon/kiwano melon- rich in vitamins and minerals, antioxidants (zinc, vit A,C and E) iron and proteins and it is low in calories.it is very tasty.
- II. Cassava leaves cooked with groundnuts-a good source of vit C, iron, zinc and proteins.
- III. One of my favourites is lumanda leaves cooked with groundnuts. It is a good source of protein and iron, it also contains some calcium and vit. C

11. Do you know any nutrition projects that nutrition sectors like NFNC work with in scaling up nutrition programmes and how they are helping the communities in Zambia?

Response:

- I. I know of the Food and Nutrition Security for Enhanced Resilience (FANSER) PROJECT, an initiative of the GIZ. which aims to improve the Food and nutritional situation of people living in food insecure households, especially women of reproductive age and children under age of two.
- II. Scaling up Nutrition Technical Assistance (SUN TA). SUN TA mainly aims to help reduce stunting among children under under 2 years of Age by putting up interventions in nutrition, health, Agriculture and water, sanitation, and hygiene (Wash)





Benefits of Safe Water

QUICK FACTS

Project Name:

REHABILITATION OF DEFUNCT BORE HOLES



Implementing organization:

LOCAL GOVERNMENT/
UNICEF | FANSER



Implemented since:

01/01/2021



Province:

Luapula



Topic:

WASH Trainings



Challenges addressed:

WATER SUPPLY/
QUALITY, HAND PUMP
SPARES



Benefits:

1. IMPROVED USER FEE MANAGEMENT
2. IMPROVED WATER SUPPLY AND SANITATION
3. IMPROVED HEALTH



Resources:

D-WASH



Contact:



Morgan Chilenga
MOA - Mwense



Description of the activity

The Food and Nutrition Security, Enhancement Resilience (FANSER) Project aims to improve nutrition and reduce stunting for women in the reproductive age and children below 2. One of the FANSER output areas is around improving hygiene practices.

Mr Daniel Mbola is a Health Promoter (HP) who lives in Chinyanta village of Chieftainess Lukwesa and has received trainings from FANSER project.

Mr Mbola gives us the background of his life before receiving trainings on the best practices in hygiene and nutrition. He explains that due to limited water supply and quality a lot of diseases were experienced. Additionally, when it comes to having a meal as a family washing hands was done in one dish.

During a meal, he did not know that there was need to have a balanced meal from different food groups. He did not know the importance of adding vegetables to every meal but thought that nutritious foods were those bought from shops. Moreover, he thought that pregnant women have to eat clay soils from the anthill.

Mr Mbola has appreciated the trainings and has really changed his approach to:

- Practicing hygiene due to the bore holes rehabilitation project to have constant water supply and safe water which has helped to reduce diseases like diarrhea and cholera by cleaning utensils used for cooking and eating and treating drinking water with chlorine or boiling water.
- Improved health by having Diverse meals through combining food from different food groups. This means that every meal should be accompanied with vegetables that are grown in the backyard gardens. Pregnant or lactating mothers, children between 6 - 24 months should take iron and not clay soils from the anthill.
- Through WASHA training he ensured to have enough water and good quality. This has made him to grow indigenous foods and helped others in the community too, as he shared his learnings.
- Improved user fees that will help in the maintenance of the bore holes for continuous supply of safe water while working together with the Sanitation promoters.



Borehole Rehabilitation by APMs in Mpika

QUICK FACTS

Project Name:

Scaling Up Nutrition 2



Implementing organization:
Ministry of Local Government



Implemented since:
19/07/2021



Province:
MUCHINGA



Topic:
Training of APMs



Challenges addressed:
Access to clean and safe water for domestic use is a challenge in most areas of Mpika



- Benefits:
1. Conducted a training of 48 Area Pump Menders
 2. Area pump menders have proven to be helpful in repairing the once defunct boreholes
 3. Sustainable water supply



Resources:



Contact:



Sandra Kabwe



Description of the activity

Access to clean and safe water – Success story

Access to clean and safe water for domestic use is a challenge in most areas of Mpika. This has contributed poor hygiene standards and high levels of waterborne diseases thus affecting food utilisation and compounding malnutrition leading to stunting

Responding to the above problem, WASH trained 48 Area pump menders.

Area pump menders have proven to be helpful in repairing the once defunct boreholes. Thereby sustaining the supply of clean and safe water for domestic use.



Promoting sustainable production, processing and storage of food in Mpika

QUICK FACTS

Project Name:

SCALING UP NUTRITION 2



Implementing organization:
Ministry of Agriculture



Implemented since:
19/07/2021



Province:
Muchinga



Topic:
Promotion of
Sustainable production,
processing and storage
of food



Challenges addressed:
Lack of knowledge
in food processing,
storage and postharvest
management



Benefits:

1. Conducted a training in Promotion of sustainable production, processing and storage practices in food in 13 camps targeting lead farmers who would be linked to NSGs for knowledge sharing
2. farmers have started growing nutritious crops such as orange maize, orange sweet potatoes and mbereshi beans, they now know how to prepare a balanced meal using different types of foods for example preparing kapenta with orange sweet potatoes with tomato/onions/ green pepper
3. The Community are now drawing water from the boreholes that were rehabilitated



Resources:



Contact:



Sandra Kabwe



Description of the activity

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- Improved health by having Diverse meals through combining food from different food groups. This means that every meal should be accompanied with vegetables that are grown in the backyard gardens. Pregnant or lactating mothers, children between 6 - 24 months should take iron and not clay soils from the anthill.
- Through WASH training he ensured to have enough water and good quality. This has made him to grow indigenous foods and helped others in the community too, as he shared his learnings.
- Improved user fees that will help in the maintenance of the boreholes for continuous supply of safe water while working together with the Sanitation promoters.



Rehabilitation of hand pumps in Mpika

QUICK FACTS

Project Name:

Scaling Up Nutrition 2



Implementing organization:

Ministry of Local Government



Implemented since:

19/07/2021



Province:

Muchinga



Topic:

Training of Area Pump Menders



Challenges addressed:

The community of Nabwalya-Chifungwe ward had challenges with accessing clean and safe water due to non-functional boreholes



Benefits:

1. Conducted trainings of Area Pump Menders
2. Rehabilitated non-functional borehole
3. The Community are now drawing water from the boreholes that were rehabilitated



Resources:



Contact:



Sandra Kabwe



Description of the activity

Access to clean and safe water – Success story

Access to clean and safe water for domestic use is a challenge in most areas of Mpika. This has contributed to poor hygiene standards and high levels of waterborne diseases thus affecting food utilisation and compounding malnutrition leading to stunting

Responding to the above problem, WASH trained 48 Area pump menders.

Area pump menders have proven to be helpful in repairing the once defunct boreholes. Thereby sustaining the supply of clean and safe water for domestic use.



FANSER training changing lives

QUICK FACTS

Project Name:

SCALING UP NUTRITION /MCDP II PROGRAMME



Implementing organization:
Ministry of Agriculture



Implemented since:
01/10/2021



Province:
Luapula



Topic:
Agricultural Trainings



Challenges addressed:
Low Dietary
Diversification nutrient-
dense food



Benefits:

1. Continuous supply of green leafy vegetables at house hold
2. Access to nutritious dense food translating into reduced malnutrition cases.
3. Improved Dietary Diversification



Resources:



Contact:



Mrs. Sara Chansa



Description of the activity

The Food and Nutrition Security, Enhancement Resilience (FANSER) Project aims to improve nutrition and reduce stunting for women in the reproductive age and children below 2. One of the FANSER output areas is around improving hygiene practices.

Mr Daniel Mbola is a Health Promoter (HP) who lives in Chinyanta village of Chieftainess Lukwesa and has received trainings from FANSER project.

Mr Mbola gives us the background of his life before receiving trainings on the best practices in hygiene and nutrition. He explains that due to limited water supply and quality a lot of diseases were experienced. Additionally, when it comes to having a meal as a family washing hands was done in one dish.

During a meal, he did not know that there was need to have a balanced meal from different food groups. He did not know the importance of adding vegetables to every meal but thought that nutritious foods were those bought from shops. Moreover, he thought that pregnant women have to eat clay soils from the anthill.

Mr Mbola has appreciated the trainings and has really changed his approach to:

- Practicing hygiene due to the bore holes rehabilitation project to have constant water supply and safe water which has helped to reduce diseases like diarrhea and cholera by cleaning utensils used for cooking and eating and treating drinking water with chlorine or boiling water.
- Improved health by having Diverse meals through combining food from different food groups. This means that every meal should be accompanied with vegetables that are grown in the backyard gardens. Pregnant or lactating mothers, children between 6 - 24 months should take iron and not clay soils from the anthill.
- Through WASH training he ensured to have enough water and good quality. This has made him to grow indigenous foods and helped others in the community too, as he shared his learnings.
- Improved user fees that will help in the maintenance of the bore holes for continuous supply of safe water while working together with the Sanitation promoters.



QUICK FACTS

Project Name:

HOMESTEAD GARDENING



Implementing organization:
Ministry of Agriculture



Implemented since:
2021



Province:
Kalabo, Western.



Topic:
Agricultural Trainings



Challenges addressed:
Scarce availability, poor quality, unsafe and non-nutritious foods.



- Benefits:
1. Increases availability accessibility and utilization of nutritious foods.
 2. Enhances food and nutritional security.
 3. Controls vitamin and mineral deficiency.



Resources:



Contact:



Ms Mayeya Mupano,
N'uma Rural Health
Centre
(+260955476169).

Pregnant mother finds delight in homestead garden



Description of the activity

Homestead gardens have become a common sight. This is because the practice increases availability, accessibility and utilization of quality as well as safe nutritious foods on a continuous basis thereby addressing malnutrition. In Kalabo district of Western province, the promotion of homestead gardens has gained momentum. Recently, the Ministry of Agriculture trained 10 Camp Extension Officers (CEOs) from 10 agricultural camps out of the 19 camps available in the district. The CEOs in turn conducted residential trainings in their respective localities. A total of 100 farmers comprising of 48 females and 52 males were trained.

Mayeya Mupano, 26, is a pregnant mother based at N'uma Rural Health Centre. Ms Mupano, who is also a mother of 2 boys and 1 girl, is one of the beneficiaries who received trainings on homestead gardening.

"Vegetables are endowed and a rich source of numerous micro nutrients. A variety of vegetables is good because it widens the intake of nutritional ingredients such as vitamins and minerals which a pregnant mother requires for her essential health and optimum growth of the unborn child. A balanced diet of a pregnant mother must therefore include micro nutrients such as vitamins and minerals. And my homestead garden guarantees me of a reliable and continuous supply of a variety of vegetables," she shared her delight.

Ms Mupano expresses delight now that she enjoys eating Chinese cabbage, rape, sweet potato leaves and pumpkin leaves obtained right from her homestead garden. She says her way of life has transformed due to the proximity of vegetables the homestead garden provides.

"As a pregnant mother, I need a lot of micro nutrients such as vitamins and minerals, particularly iron which boosts the body's blood level to prevent anemia. Being a community health volunteer, I practice what I preach. I encourage pregnant and lactating mothers to take pride in establishing homestead gardens in their backyards as a way of promoting healthy living and improve nutrition among children below the age of 5 years," she stressed.

Indeed homestead gardens play a significant role in improving household food security as well as controlling vitamin and mineral deficiency. The practice of homestead gardening provides social benefits of enhancing food and nutritional security. By utilizing spaces around a house, a homestead garden enables a household to enjoy a regular consumption of vegetables and improve nutrition while selling surplus produce to earn income for procurement of other essential foodstuffs.



Small livestock pass-on program empowering rural households with goats

QUICK FACTS

Project Name:

SMALL LIVESTOCK PASS-ON PROGRAM



Implementing organization:

Ministry of Fisheries and Livestock



Implemented since:

2017



Province:

Kalabo/Western



Topic:

Implementation Methods



Challenges addressed:

Stuntedness in children below 2 years of age



Benefits:

1. Increased access to cheap source of protein
2. Increased farmer income after sales
3. Increased production and productivity of small livestock



Resources:



Contact:



Sholo Bishoni, 29, of Kapulanga village in Chief Malala's area, Kandambo ward.
Mobile- +260954328313



Description of the activity

The impact of goat rearing on the nutrition of households with children falling within the 1000-windows cannot be over emphasised. This is because dairy product such as goat milk and meat are a cheap source but rich in proteins and essential micro nutrients while manure serves as organic manure for conservation farming.

Scaling Up Nutrition (SUN) has been implementing a small livestock pass-on program in a bid to enhance availability and access of organic homestead goat products among pregnant and lactating mothers.

Mutango Njamba, 22, of Chintimbu village in Chief Malala's area, Kandambo ward, is a mother of a 5-year old boy. Ms Njamba is a beneficiary of the pass-on program and received a set of he and she goats, in 2020, when her baby required complementary feeding. She explains how the intervention is one of the best practices towards addressing malnutrition among children below 2 years of age. She further shares her insights on how rural households have been empowered with goats, dietary diversity and consumption of livestock products.

"SUN empowered me with two goats as a startup. I now have 12 healthy goats. Rearing goats has improved the wellbeing of my child. He has access to cheap yet nutritious supply of goat milk and meat. I apply goat manure in my garden where I plant cabbage, onion, tomato and okra for household consumption and sale. Our household currently has eight members, inclusive of a 1-month old baby. Due to dietary diversity, all the children have good health."

Chikali Tobolo of Muhato village, Chief Malala's area in Kandambo ward, is an NSG volunteer and 41-year old mother to a 1-year old baby boy. She is another beneficiary and recounts her success story.

"Homestead milk is organic yet nutritious. When my baby was on complimentary feeding, I fed him with boiled goat milk."

The pass-on program is a revolving scheme. Sholo Bishoni of Kapulanga village in Chief Malala's area, Kandambo ward, is a 29-year old mother of two girls one of which is 2 years old. Ms Bishoni, who in 2017 received a set of goats, encourages fellow beneficiaries to emulate her and pass-on their goats to mothers in order to address child stunting.

"Goats are viable due to their higher breeding rate. This intervention requires that a beneficiary household gives the goats' offspring to a pregnant or lactating mother who must also reciprocate the gesture and empower others in similar manner."



Plastic silo bins improve grain storage

QUICK FACTS

Project Name:

POST HARVEST MANAGEMENT



Implementing organization:
Ministry of Agriculture



Implemented since:
2021



Province:
Kalabo/Western



Topic:
Agricultural Trainings



Challenges addressed:
Household food insecurity, low dietary intake and diversity.



- Benefits:
1. Smallholder farmers benefit from knowledge and technology in post harvest management to enhance their resilience to shocks and increase their income.
 2. Especially women have access to markets, enhanced resilience to climate shocks and diversified livelihoods.
 3. Increase availability, access, quality and safety of nutritious foods for household level.



Resources:



Contact:



Linyandi Nangula,
Sitewe village of
Kalabo district, Western
province.



Description of the activity

Grain storage loss, particularly maize, is a major post-harvest setback and causes food insecurity among households. The SUN LE 2019 baseline survey established 2.4 percent as the prevalence rate of households practicing safe food preparation and improved storage practices in Kalabo district. The situation inhibits the fight against malnutrition in the district, particularly stunting which stands at 29.1 percent among children below 2 years of age. In the agricultural sector, food security has encompassed improved storage. This practice augurs well with the 2030 Agenda for Sustainable Development Goal number 2 which seeks to “end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women...”

Efforts are thus being dedicated to adoption of best practices which can evade the seasonality of harvests, crop losses and household food insecurity. In Kalabo district of Western province, the barn has for several decades been a traditional and widespread method of storing maize produce despite the grain being susceptible to pests and diseases. Good enough, the Ministry of Agriculture, with technical support from UNICEF, is changing the tide. The plastic silo bin is being promoted as an improved storage method.

Linyandi Nangula is a 40-year old mother of Sitewe village in Mapungu ward of Kalabo district. Ms Nangula is one of the 1,253 follower farmers comprising of 304 pregnant and 949 lactating mothers who have been trained in post harvest management. She now explores her newly acquired storage technique.

“Plastic silo bins present an improved, effective storage method. This new technique can store maize produce so that the grain last beyond the time of harvest. The bin is both airtight and waterproof. It also protects the grain from mould (caused by moisture) and spores. Unlike the barn, the sealed silo bin cannot be invaded by pests particularly rats, termites and weevils.

“As a lead farmer and mother, our household had received and planted orange maize which is high in nutrients and gifted us with a good harvest. Unlike in the past, the introduction of this modern storage facility guarantees household food security of this staple food (maize),” she narrates.

Plastic silo bins have, thus, set the turning point towards minimizing crop losses and secure maize grain between harvest and consumption. The impact has potential to address malnutrition among SUN II beneficiaries such as children under-2-years of age, adolescent girls and women of reproductive age.

1.0 Progress on Programme Performance

Nutrition Governance, Capacity Building and Partnership

The nutrition programme areas which guided the institution in undertaking activities are (i) Nutrition Governance, Capacity Building and Partnerships; (ii) Advocacy and Communication and (iii) Nutrition Research Monitoring and Evaluation. The progress on key outputs in these three (3) programme areas are shown below.

Key Output Achievements

Policy coordination and implementation enhanced

- I. A series of virtual and physical technical bilateral meetings were held with various stakeholders to discussing implementation modalities around the 1st 1000 MCDPII. These included GIZ, UNICEF and WFP. The emphasis of these meetings was ensuring uniform implementation approaches for all nutrition activities/project will respond to the main government agenda for nutrition.
- II. A Zero Draft stakeholder management plan was drafted during the period under review. The document highlighted four phases (i.e. stakeholder mapping, listening, profiling and engagement) of stakeholder management to enhance effective coordination of stakeholders in the implementation of nutrition programmes and interventions
- III. A template was designed and shared with coordinators to populate details on the number of functional DNCC and establishment of WNCCs in the MCDP II districts. This will serve as a Directory. Information was received from 18 districts (17 under UNICEF support and one SUN TA-Samfya). A total of 225 WNCC have been established and 187 oriented in MCDPII; 98 ZNCC established and 49 oriented in MCDPII for the period under review. The exercise will be extended to all other MCDPII district.
- IV. The concept note on the leadership and management training was developed and reviewed. The primary purpose of the training to provide complete understanding and skills to the PNSC/DNSC on effective communication and transformational leadership and management in a wider perspective for attainment of MCDP II goals. There is need to expedite the technical and financial support from the funder (UNICEF) for the implementation of the activity. The activity is yet to be conducted.
- V. The stakeholder management plan that shows guidelines and procedures for the management of stakeholders at National, Provincial and District levels was drafted in the first quarter. It is now available awaiting management approval.
- VI. NFNC updated the directory of organisations involved in Food and Nutrition in Zambia. The challenge has been the collection of data online. With this method, the response has been very slow. A draft update has been produced and will be submitted to management soon in the third quarter.
- VII. Two DNCCs were established during the period under review. These were Mwansabombwe and Sinda DNCCs. They were formed with assistance from the GIZ who are supporting some of the MCDP 2 interventions which include; crop and dietary diversification, WASH, MYCIN. The DNCC will strengthen coordination of food and nutrition programmes in these districts
- VIII. Capacity building of 20 DNCCs on MCDP 2.: The unit facilitated the orientations of newly formed Mwansabombwe and Sinda District Nutrition Coordinating Committees on their roles and implementation of the MCDP II. This activity was combined with planning sessions for the second half of 2021.
- IX. NFNC held a number of virtual and physical technical bilateral meetings with UNICEF and Jesus Cares Ministry to discuss the implementation modalities and coordination of the 1st 1000 MCDPII and nutrition in General.
- X. Hold quarterly GRZ Network meetings: The GRZ Network meeting was held during the period under review. The Meeting was chaired by the Director of Agriculture from the Ministry of Agriculture. During the meeting, members were updated on the following: quarter 4 2020 MCDPII implementation of activities, National and Provincial SUN/MCDPII plans and implementation modality, JAA Report April 2019 to April 2020 and preparation for April 2020 to April 2021, Action points from last Special Committee of Permanent Secretaries on Nutrition, ZMW 400 per-Costing frame Review, Nutrition Support Group Model, Intervention

- Pathways and Plans for Joint Technical backstopping to districts, Preparations for Food Systems Summit country dialogues, and Terms of Reference for the GRZ Network.
- XI. The leadership and Management training modules were drafted and yet to be shared for review. Once the materials are reviewed and approved, they will be used as capacity building tools in the area of leadership, management and coordination of multisectoral food and nutrition programme.
- XII. NFNC continued updating the directory of organizations involved in Food and Nutrition in Zambia. An updated directory will be submitted to management in quarter four, 2021. The directory once finalized will strengthen coordination of food and nutrition programmes.
- XIII. NFNC facilitated the orientations of Lunte District Nutrition Coordinating Committees on the implementation of the MCDPII and their roles. This activity was combined with the development of a district nutrition multisector plan for the period September to December 2021. The activity was supported by Jesus Cares Ministry with support from the German Government. Other activities conducted as a way of Capacity building the DNCCs included;
- XIV. Coordinators Monthly Meetings: virtual monthly meetings with coordinators were held. Two meetings (July & September) were held during the period under review with minutes generated. The main focus of the meetings was to review progress on the implementation of activities based on the action plans and also isolate key challenges that may affect the execution of the planned activities. The most important element is coordination and harmonized implementation of activities at district level.
- XV. NFNC commenced the review of the Terms of References (ToRs) for nutrition coordinating structures with the purpose of strengthening the nutrition coordination. The reviewed ToRs were shared among NFNC staff for comments and further review. They will be finalized in the 4th Quarter.
- XVI. The roles and responsibilities of the provincial and district nutrition support coordinators were reviewed to strengthen their coordination function in MCDPII. The roles and responsibilities of other key partners (SUNII NGO Fund Managers, Key line ministry district officers and P/DNCC's) in MCDPII were also reviewed. The revised roles and responsibilities will be shared to the coordinators and partners during meetings in the fourth quarter.
- XVII. NFNC in collaboration with UNICEF developed an orientation package focusing on coordination and communication at district level on MCDPII. The purpose of orienting the districts staff in coordination and communication is to strengthen coordination and communication in MCDPII districts. The orientations will be conducted in the fourth quarter.
- XVIII. NFNC held bilateral meetings with UNICEF and NGO's (Plan CARE, WVZ, CRS and Save the Children) who are Fund managers for MCDPII. The meetings focused on conflicts on the roles and responsibilities between the Nutrition Support Coordinators and the Fund managers. The output of the meeting was that NFNC and UNICEF to provide guidance on roles and responsibilities of key players in the MCDPII/SUN II
- XIX. The leadership and Management training modules were drafted and will be shared for review in quarter one, 2022. The modules will be used as capacity building tools in the area of leadership, management and coordination of multisectoral food and nutrition programme at national, provincial and sub district levels.
- XX. NFNC lead the development of National, Provincial and District Multi-sectoral Plans for 2022. The planning cycle for 2022 Multi-sectoral Plans for SUN 1000 MCDP-II commenced with the district learning and dissemination workshops. The plans once finalized will ensure that there is coordinated implementation of nutrition specific and sensitive interventions at national and sub national level.
- XXI. NFNC finalized updating of the directory of organizations involved in Food and Nutrition in Zambia. The directory will strengthen coordination of food and nutrition programmes.
- XXII. NFNC facilitated the establishment and orientation of Kalumbila DNCC (North Western) and Lunte DNCC (Northern) on the implementation of the MCDPII and nutrition programme. The DNCC's will strengthen coordination of food and nutrition programmes.

XXIII. NFNC in collaboration with UNICEF conducted leadership and coordination meetings in the 8 districts (Chongwe, Monze, Choma, Solwezi, Zambezi, Mwinilunga, Chipata and Lundazi). The meetings strengthened coordination and communication at district level on MCDPII.

XXIV. NFNC reviewed and shared the revised Terms of References (ToRs) with DNCC. The revised ToRs will strengthen the nutrition coordination at national and sub national level.

Nutrition Action strengthened at all levels (national, provincial, district and sub district)

- I. The NFNC working in collaboration with UNICEF and line ministries developed the implementation guidelines for quarter 4 activities. The document was used to orient all the 17 MCDPII districts. The main focus of the implementation guide was on modalities for quarter 4 activities and SOPs for specific programmes and intervention such as BFHI, MAIYCN and GMP, among others. These are activities that were approved. All coordinators from the 17 UNICEF supported districts were virtually oriented in the implementation guidelines for quarter 4 activities.
- II. Technical Committee Members reviewed the extra curricula activities and the evidence on Nutrition Friendly Schools Initiative that could be incorporated in the draft protocol for the Support establishment and implementation of school age Nutrition. Thereafter, a meeting will be held to reach consensus on which activities will be incorporated. Thereafter, the protocol will be processed for re-submission for ethical approval.
- III. UNICEF, which was responsible for facilitating the recruiting of a Consultant to develop a training package for the Nutrition Support Group, hired the Catholic Relief Services (CRS). Several meetings were held with Ministry of Health, CRS and SNV to discuss the process implementation of the task. CRS was given a go ahead to utilize materials, which they are currently using to capacity build their staff and volunteers in training the government staff who will be working on the programme. However, the materials had to be adapted to the Zambian situation, a task that the NFNC and Partners worked on. The CRS were scheduled to conduct a

training of master trainers, while the cascading trainings will be done by government. The trainings were scheduled to start in May, 2021 after the adaptation of the documents have been done.

- IV. The Nutrition Support group model has been agreed upon by Partners to enhance convergence of priority interventions. In order to facilitate the finalization of the Nutrition Support Group Implementation Guide, Partners undertook a fact-finding mission in Petauke, Lundazi, Kasama and Mungwi districts which had experience in the implementation of the Care Group Model that is being used to adapt the Nutrition Support Group Model. The fact-finding mission was undertaken with the provincial and district staff in the aforementioned areas. The information from the fact-finding mission will be used to inform the adaptation of the nutrition support group implementation guide.
- V. Standards to guide implementation of nutrition interventions were developed. The standards covered Institutional Feeding, Food and nutrition security interventions (Nutrition sensitive and Nutrition Specific interventions), Nutrition Assessment, Nutrition programme information, Nutrition Research and Nutrition coordination. This is an ongoing activity for the quarter.
- VI. Government Leadership for the MAIYCN and Community Training Packages Meeting was held on 2nd February, 2021 virtually. The objective of the meeting was to agree on the roles of Ministry of Health (MoH) and NFNC. Both the NFNC and MoH submitted the gaps in the current training package and tools to UNICEF and WHO. With regards to the roles, it was resolved that MoH provides technical assistance and NFNC plays a coordination role. The MOA, MCDSS and retired trainers were requested to submit their concerns on the current training package. The MCDSS and retired trainers have since submitted the gaps and, which have been forwarded to UNICEF.
- VII. Two meetings were held on the 11th and 12th March 2021 in preparation for the orientation on BFHI to National level staff, members from the cooperating partners from reproductive Unit and Provincial Nutritionist. The orientation was held on the 17th of March 2021. Following the above-mentioned training, a training to pre-test the materials supported Mpika district training in BFHI using adapted training materials. The training in Mpika was conducted as a pre-test of the materials before

- rolling out the use of materials in other districts.
- VIII. The First 1000 Most Critical Days Programme impact pathways were developed using the Intervention pyramid for scaling up of minimum package of interventions for 1000 most critical days (MDCP). Using this approach, six impact pathways were identified and developed namely: - response to critical situations; agriculture; health and nutrition; economic dimension; water, sanitation and hygiene (WASH); and nutrition governance. The document was distributed for in-house reviews and is now ready to be reviewed by external institutions.
- IX. Monthly meetings are held with coordinators where they were key updates on coordination activities were shared. Further, individual work plans and reports were shared.
- X. Two Nutrition Support Group (NSG) training material documents were reviewed: -the facilitator guide and the nutrition lessons. Three meetings were held to look at the facilitator's guide. The reviewers of the guide were representatives from the NFNC, CRS, UNICEF and MoH. After the review, the guide had seventeen sessions. To test the guide, the first NSG master trainer training was used as a pre-test for the guide. The CRS team collected the comments and incorporated them into the new guide. The review team will review the guide with all its annexes by August 2021.
- XI. Only one meeting has been held so far to review the nutrition lessons on the NSG. The review team was composed of representatives from MoH, NFNC, MoA, MFL, MCDSS, MWDSEP, UNICEF and CRS. the technical team reviewed the materials in groups according to the sector they were representing. The technical team was looking at the CRS lesson booklet from the MAWA project. The team was asked to adapt the material by looking at the key messages and the content to check if the content was matching with the MCDP strategic plan.
- XII. 3 NSG methodology trainings were held in the second quarter of 2021. The training was five days long and was held from 17th to 21st May, 31st May to 4th June and 8th to 12 June 2021. The trainings were called NSG master trainer training. The participants for the training was from the seventeen UNICEF supported districts. From each district, four people were trained. The next step is for the districts to conduct the NSG trainer of trainers. The district training is scheduled to start on the second of July, 2021
- XIII. NSG urban scoping was conducted in the period under review. CRS (through the institutional consultant hired with the support of UNICEF) was tasked to determine what changes needed to be made to the Nutrition support group methodology to able to work in the urban setting. The Care Group model from which the NSG is adapted is designed for the rural setting of the farming community. The CRS has been assigned to adjust the NSG methodology to suit the urban setting. Consequently, the first brainstorm meeting was held on the 29th June 2021. From the brainstorming meeting, the CRS is expected to develop a concept note to present to the technical group composed of represented by NFNC, CRS, UNICEF, MoH in the second week of July 2021.
- XIV. 1food and nutrition security standard specifically on agriculture and food security (dietary diversity, crop diversity, promotion of indigenous foods, processing and preservation, utilization-promotion of health diets) was developed. The objective of this nutrition standard is to increase production, access and consumption of food crops, fish and livestock to ensure improved household food and nutrition security and more diverse diets for the Zambian population especially the most vulnerable groups.
- XV. The health worker Baby Friendly Hospital Initiative (BFHI) training package was reviewed. The training package was pre-tested in Mpika. The package was adjusted based on the outcomes of the pre-test, and this will follow dissemination and scaling up to other districts.
- XVI. The Programme Impact Pathways were developed and circulated internally and externally for comments. Comments were received and incorporated into the main document. The document will be re-circulated to all the stakeholders and Partners for final input.
- XVII. The Provincial Nutrition Coordinating Committees (PNCC) and the District Nutrition Coordinating Committees' (DNCC) capacity in Nutrition Support Group Model implementation was built. The capacity building schedule was made, which required the PNCCs and DNCCs to implement the model in their provinces and districts. However, the suspension of workshops by the Government due to the COVID 19 situation has slowed the implementation.
- XVIII. The assessment of MCDP II district plan implementation was conducted. The targets

- against achievements were compared as part of the assessment. Challenges being faced by districts were identified and recommendations for the way forward suggested. Guidance on how to proceed on certain issues was provided via telephone. For example, some of the issues were policy and coordination related, and guidance on how to handle policy and coordination matters was provided to the Nutrition Support Coordinators.
- XIX. The convergence document was worked on and circulated for comments both internally and externally. The response has been very good, and the NFNC is still compiling submissions.
- XX. One joint monitoring and to PNCCs and DNCs technical supportive supervisory visit was conducted for Mazabuka and Monze DNCC. This was a joint exercise with WFP. This will strengthen coordination.
- XXI. The nutrition workforce plan for plan for MCDP II was developed. The workforce plan draft has been developed which will soon be circulated for comments.
- XXII. A concept note for the capacity building plan was drafted and submitted for review. The purpose of the of the capacity development plan is to outline the guidelines and develop training package to train PNCC'S on how to support the DNCC around the five (5) specific objectives of MCDP II.
- XXIII. A concept note on the food diary book on Zambia's traditional foods has been finalized in readiness for submission to UNICEF for funding. The diary has many foods from across the country. It is important to confirm their names in different local languages and how they are prepared. In addition, there is a need to take some of the missing photographs on certain foods, and for those which are not very clear, fresh photographs will be taken. It is important to have this information validated by people of different languages. Knowing the actual names of the foods in local languages and how these foods are prepared is important when it comes to promoting their consumption by various stakeholders and partners.
- XXIV. A draft protocol for feeding trials on improved feeding practices among children 6 to 59 months was developed. The protocol is almost ready for submission to Ethics. However, it needs to be reviewed by all stakeholders and partners to ensure that the content is in line with the World Health Organization feeding guidelines for children as well as the Food and Nutrition Policy and other suitable feeding guidelines. Once ethical approval is sought, an assessment on the protocol will be conducted to ensure the proposed feeding guidelines are culturally accepted. This will make it easy to promote among caregivers of infants and children less than the age of 5 years.
- XXV. The Nutrition Support Group (NSG) Training Package was reviewed under the quarter under review. In this package, the following materials were reviewed and branded: NSG promoter's and volunteer's guides and their annexes, NSG promoter and volunteer lesson booklets, facilitator's guide and its annexes, and the axillary materials (nutrition action cards, the good group poster, menu game poster, menu game miniature pictures, make my child a star placement mat, WASH action cards). The axillary materials were sent to the printers and dummies were produced for NFNC to review. With the help of the graphics ofcer, the materials were reviewed and sent back to the printers with the authority to print. In addition, the NSG-volunteer training package was also sent to the printers.
- XXVI. Orientation of the District NSG trainers on NSG group formation. A virtual meeting was arranged where the four trainers from each of the seventeen UNICEF-supported districts were oriented and an opportunity was taken where the structure that explains the role of the Ministry of Health was discussed.
- XXVII. The NSG methodology orientation to the DNCC and district level health staf, and the NSG methodology to the health workers at ward level and the NSG-supervisor commenced in the 17 UNICEF supported districts. As these activities are taking place, the national level is expected to provide technical backstopping and mentor the district staf as they implement the activities.
- XXVII. The Convergence document and Programme Impact Pathway documents have been finalized and aligned. The fund request for validation was made and waiting for feedback.
- XXIX. The Nutrition Friendly School Initiative Concept was drafted with a new focus on Nutrition Friendly School Initiative. The concept was agreed upon by the Ministry of Education, the National Food and Nutrition Commission and UNICEF. Currently, the concept is being developed into a full-fedged protocol for implementation. Once operational,

the strategy will strengthen implementation of the nutrition friendly initiative schools.

XXX. In the period under review, Chiengi, Chipata, Chongwe, Kalabo, Mpika, Shangombo, Mpika, Kaoma, Mwinilunga, Lundazi, Kaoma, Solwezi and Zambezi in the formation of the NSGs.

Institutional capacity Strengthened

During the period under review, the Administration unit paid utility bills and managed staff leave requests, payroll, and fees, among the many routine administrative tasks.

2.0 Communication and Advocacy

The operational objectives under this programme are as below: -

1. To increase knowledge and awareness among communities and other stakeholders in Zambia on food and nutrition issues by 2021

Key Output Achievements

Nutrition information dissemination for life cycle stages enhanced

- I. Development of national SBC strategy for nutrition

The Consultant, (M&C Saatchi Group) engaged by UNICEF Zambia on behalf of Government to develop the national SBC strategy for nutrition interviewed some of the members of the National Nutrition Communication & Advocacy TWG. In addition, a consultative meeting was held to look into key behaviours and barriers to be addressed under MCDP II. An inception report will be ready in April 2021.

- II. A meeting was held to facilitate the development of SBCC/IEC materials targeting smallholder farmers, adolescents and caregivers with the aim of improving uptake of nutritious foods at household level in addressing stunting in Zambia in improving the nutrition status in the country. A roadmap including nature of SBCC/IEC of the materials was finalized. The next steps is to finalize the key stakeholders to be involved in the actual development of the materials.

- III. The Eat Well Campaign Counselling Tool and Counsellor's Guide were developed and reviewed. These will be used by the Community Based Volunteers to sensitise households and communities on healthier eating habits in order to prevent premature morbidity and mortality across the lifecycle. Additionally, some businesses were identified on the Copperbelt that showed willingness to join the SUN Business Network. These businesses expressed interest in the Good Food Logo (GFL) and reformulation of their products so as to be certified by the Zambia Bureau of Standards.

- IV. Social media campaigns were conducted in the quarter under review. This was achieved through ongoing content development and routine update of the various social media handles (Facebook, Twitter & LinkedIn) which sustained interest from both implementing partners and the general public as evidenced from increase in social media engagement, likes and followers.

- V. Preparations for the launch of MCDP II and official opening of the National Dissemination Conference were conducted. A Speech for the Guest of Honor was drafted and shared with the Ministry of Health together with other relevant materials. Nutrition Radio programmes were conducted with Radio Christian Voice, Millennium radio, Radio Phoenix, and Komboni Radio.

- VI. Life style change diet plans were developed and were given to individuals who came to NFNC looking for such information.

- VII. Recipes targeting Pregnant and Lactating women and children were reviewed to be loaded on the 667 MTN Platform. The selected recipes were nutrient dense, easy to prepare, more cost-effective and written in a lively and fun manner to engage the audience.

- VIII. A meeting was held on 18 February 2021 for the National Nutrition Communication and Advocacy Technical Working Group. Updates on going communication, advocacy and SBC activities in members' institutions were highlighted.

Key highlights of the meeting included the following

- Introduction of the Chairperson.
- Concept on the 2021 Nutrition National conference was presented to the TWG.
- Update on the roll out of the Healthy Diet Campaign and Good Food Logo
- Scope of work and an update on the development of the national SBC strategy for MCDP II Completion were shared with the TWG members
- A presentation by Plan International

- on who they were, where they operated from and scope of work
- An update on the activities NFNC had undertaken and were undertaking
- IX. An Inception report and the first draft of the SBCC and advocacy strategic plan was developed. Meetings will be held in quarter three to discuss the two components in the strategy. The advocacy component will be presented and discussed in a focussed group to identify the areas of prioritisation. Both the SBCC and advocacy components will be discussed with the Communication and Advocacy Technical Working Group and the national Nutrition Focal Point Persons, where the overview of the strategy, the proposed strategy and the recommendations will be presented.
- X. The Eat Well Campaign radio programmes continued to be aired, on Radio Phoenix at 10:00 hours and Komboni Radio at 12:00 hours every Saturday. Eight (8) programmes were aired. A Private Dietician, Ministry of Youth, Sport and Child Development, and Zambia Bureau of Standards were also invited to be part of the programmes. The different experts brought other information and added a different voice to the programmes.
- XI. The Ministry of Health staff from Lusaka Provincial and District Health Offices and Chongwe district health office were oriented on the Eat Well campaign as well as the counseling cards and the reference manual, materials which were to be used by community volunteers to sensitise the general public. A pretest of the tools (the counselling cards and the reference manual) was conducted in Chongwe and Lusaka Districts. The orientation and the pretest were conducted from 5th – 28th May 2021.
- XII. Nutrition sensitive social protection guidelines were validated at MIKA Convention Centre from the 12th -15th April 2021.
- XIII. A field visit was undertaken to Monze, Southern Province from 3rd to 5th June 2021 to conduct a market assessment on the potential to grow nutrition through the food industry in order to increase the availability and affordability of nutritious foods by supporting different stages of the value chain.
- XIV. World Milk Day, 1st June, was commemorated through radio and TV programmes that were aired on Millennium Radio, ZNBC TV 1 and Diamond TV. The benefits of milk and milk products and the importance of milk in alleviating under-nutrition and micronutrient deficiencies were discussed.
- XV. The NFNC website performed very well based on the monthly reports and performance reviews that were done for each month. The number of people using it have increased. A number of uploads on were made, these were; press releases, advertisements for jobs and consultancy, publications
- XVI. Three (3) out of five (5) sample documentaries have been produced using content ZABS had approved. The sample (draft) documentaries have submitted to ZABS for review before finalising the production.
- XVII. Footage was collected to produce a Video documentary on the Mumbwa Nutrition Convergence Centre for TV and NFNC Website.
- XVIII. Eighty-one (81) participants from different Media Houses in 13 districts (Chibombo, Kabwe, Kapiri Mposhi, Kaputa, Kasama, Kitwe, Luwingu, Mansa, Mbala, Mumbwa, Nchelenge, Ndola, and Samfya) found in the four provinces (Central, Copperbelt, Luapula and Northern) were oriented on SUN/MCDP II.
- XIX. The Copperbelt Provincial Communication and Advocacy Technical Working Group was oriented on the roles and responsibilities of the group. The group was also guided during the planning for communication and advocacy activities.
- XX. In July validation meetings of the draft SBCC strategy were held at national and district levels and feedback was integrated into the draft strategy. Out of the twelve districts that were selected, interviews were conducted with service providers, community volunteers and with caregivers (as anticipated SBCC toolkit users) in four of these i.e. Chongwe, Katete, Lundazi, and Monze. Interviews will also be conducted in the remaining eight districts in

- Quarter Four. The findings from this research will culminate in the development of the SBCC toolkit.
- XXI. Orientation package has been developed and the agenda set to form and orient the provincial nutrition communication and advocacy technical working groups. The orientation is scheduled to take place in quarter four.
- XXII. The third National Communication and Advocacy Technical Working Group meeting was held on the 15th of September 2021. Progress made on various communication and advocacy activities were shared. These included the continuation of the Health Diets Campaign, policy briefs and summary reports that had been developed based on the studies that had been conducted in 2020, and progress made on the development of the SBCC Toolkit based on the interviews that had been conducted.
- XXIII. A SUN Happy Home Campaign is being developed. Under this strategy radio spots, jingles, PA announcements & talking points will be produced and disseminated in the fourth quarter 2021.
- XXIV. A sector year book is being developed. District Nutrition Coordinating Committees have been requested to submit best practices on nutrition which will be included in the year book.
- XXV. A third episode of the animation “Let Me Tell You” has been developed. The episode is on Vitamin A. A fourth episode on Iron will be developed in the fourth quarter. The production process for all the four episodes will be completed in 2022.
- XXVI. Road shows/fun fairs whose themes are based on WASH, Nutrition and Nutrition Sensitive Agriculture have been planned and will be held in the fourth quarter of 2021 in Petauke and Katete. Nutrition messages, the developed animation videos, Nutrition Theme Songs, Nutrition Jingles, cooking demonstrations will all be part of the fun fairs.
- XXVII. Data was collected from the general public in preparation for the Food Systems Summit. Content was posted on the NFNC Social Media platforms prior to the Virtual conference held on 23rd September 2021. The purpose of this content was to keep the general public abreast on the happenings pertaining to the conference.
- XXVIII. The Eat Well counselling cards and reference manual have been finalised after incorporating the comments made during pretests. In addition the materials have been harmonised with the Food Based Dietary Guidelines and are now ready to be printed and distributed to the other districts. The roll out of the campaign will start in Mazabuka, Mumbwa and Mongu.
- XXIX. A draft nutrition report on the Integrated Food Security Phase Classification (IPC) of the 2021 Vulnerability and Needs Assessment was developed in July/August 2021. Some key information was missing in the report due to gaps in the data. There is need to continue improving on the enumerator training sessions for nutrition data collection.
- XXX. The number of people using the NFNC website have increased, since the website was upgraded. Several uploads on the website were made, these were press statements, advertisements for jobs and consultancy, publications
- XXXI. A capacity building plan in developing a sustainable social media strategy has been developed. The training will be conducted in the fourth quarter of 2021. The purpose of this training is to increase skills in social media management, thereby increasing information dissemination on nutrition to the Zambian citizens.
- XXXII. The Mapping process for SUN beneficiaries in Shangombo District, a story covered by ZANIS reporter Ms. Kasweka Sakaimbo was posted on the NFNC Facebook page which has 9,475 followers.
- XXXIII. Various IEC materials for MCDP2 were designed, reviewed, printed and re-printed. These included SBCC Materials (Menu Game, Place mat, Child Reminder Cards and Recipe

Book), Trainers and Facilitators Guide, WASH Action Cards, Volunteer Consolidated Lessons, Nutrition Action Cards etc.

the roll out to other districts commenced in Mazabuka, Mongu and Mumbwa districts. The campaign enhanced public awareness and importance healthy diets.

XXXIV. As part of the development of the SBCC strategy, creative stimulus research/tests were conducted in some selected districts (Chongwe, Monze, Katete, Lundazi, Mpika, Kaoma, Mwinilunga, Chiengi, Solwezi, Isoka, Mongu, and Choma). The findings from the research were shared, in which data showed that some districts like Katete were way ahead in the implementation of Early Childhood Development on which nutrition would be riding.

XL. NFNC's communication unit were trained in the social media strategy. The training enhanced skills in social media management.

Visibility of NFNC Enhanced

Two press releases were shared with the media during the quarter and received wide coverage on both print and broadcast media.

XXXV. Orientation package for the district communication and advocacy technical working group has been revised with focus on the district and community level structures for Social Behaviour Change Communication, and Advocacy.

I. Press release on the Joint Press Release on World Water Day 2021 Improved Access to Clean Water Key To Ending Malnutrition In Zambia Lusaka (Monday, 22nd March 2021), This World Water Day celebrated on 22nd March 2021 under the theme "Valuing Water", a broad coalition of actors in the nutrition sector is advocating for increased access to clean water in ending malnutrition in Zambia. National Food and Nutrition Commission, UNICEF Zambia, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), USAID Scaling Up Nutrition Technical Assistance, USAID Scaling Up Nutrition Learning & Evaluation, World Vision, WaterAid Zambia and CSO SUN Alliance note that water is key to fighting malnutrition in the country as it underpins other interventions aimed at addressing all forms of malnutrition

XXXVI. The fourth National Communication and Advocacy Technical Working Group meeting was held on the 20th of December 2021. Communication and advocacy activities that had been implemented throughout the year were shared. The meeting strengthened stakeholder understanding of salient issues on food and nutrition

II. Press release on the Donation to National Food and Nutrition Commission of Conferencing Facilities and Information Education Communication Materials, LUSAKA (Tuesday, 9th February 2021) – The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has donated conferencing facilities and information education communication materials worth 24, 540 Euros to the National Food and Nutrition Commission.

XXXVII. District Nutrition Coordinating Committees submitted best practices on nutrition which will be included in the NFNC Nutrition Sector year book. Authors were requested to write on different nutrition topics which will be part of the book. The submissions are expected in the first quarter 2022.

III. The donation which includes a video conferencing unit, projector and projector screen; nutrition card game and animated video on nutrition; and printer will enhance communication and behavioral change in relation to the Scaling Up Nutrition programme

XXXVIII. Road shows/fun fairs and radio shows whose themes are based on WASH, Nutrition and Nutrition Sensitive Agriculture were conducted in Petauke and Katete. Nutrition messages, animation videos, Nutrition Theme Songs, Nutrition Jingles, cooking demonstrations were part of the fun fairs. This increased community knowledge on food and nutrition in the respective districts.

XXXIX. The second phase of the Eat Well Campaign radio shows were conducted. In addition,

- which has an overall objective of reducing stunting in Zambia.
- IV. One press release was shared with the media during the quarter - Press release on the Joint Press Release on Analysis Shows Positive Outlook For Provision Of Dietary Energy, Protein, Fat and Diversified Diets in the Country (Thursday, 12th June 2021), The National Food and Nutrition Commission is glad to announce that its analysis on the food availability situation to meet dietary needs of the country up to April 2022 is positive.
- V. All the NFNC SUN II vehicles were branded.
- VI. Website monthly reports and performance reviews indicated that the website was performing well. These are undertaken each month.
- VII. A press release to mark world breast feeding week was shared with the media and received wide coverage on both print and broadcast media. In addition, the press statement was posted on the Commission's website, Facebook and Twitter.
- VIII. A documentary on the Mumbwa convergence centre project was produced. It highlighted the developments that had taken place at the centre as well as the interventions that were expected to converge in the selected households.
- IX. Two press releases were generated to mark World Toilet Day and World AIDS Day and were shared widely with the media and these were also posted on the Commission's website, Facebook and Twitter. In addition, NFNC participated in the Global Hand Washing Day (which was also posted on the NFNC Facebook page) and World Food Day.
- X. Website monthly reports and performance reviews indicated that the website was performing well. These are undertaken each month
- XI. Footage was collected on the rollout of the Heath Diets / Eat Well campaign in Mazabuka and Mumbwa and at the orientation of the Church, Civic and Traditional leaders, on MCDPII. The footage will be reviewed and packed into a 15 and 10 minute documentaries for the NFNC YouTube and website in the first quarter 2022.
- XII. NFNC participated in the Zambia Scaling Up Nutrition (SUN) 2021 conference whose theme was "sustaining stunting reduction through an enabling environment for nutritious programmes".

3.0 Nutrition Research, Monitoring and Evaluation

The objective of this programme area was “By the end of 2021, research, monitoring and evaluation of food and nutrition programmes in the strategic plan will have been strengthened”.

Key Output Achievements

Functional National M&E system for food and nutrition

Districts collected and submitted Multisectoral reports that highlighted performance. This is important in tracking progress made against set targets.

- I. NFNC provided support to American Institute for Research (AIR) to the M&E Consultant that was engaged, with support from UNICEF, to develop the SUN M&E framework and Management Information System. Once the system is functional, it will strengthen reporting of indicators on progress in districts and provinces implementing the MCDP II
- II. The National M&E TWG meeting for quarter four (4) was held on the 14th December 2022 at Cosmic lodge in Lusaka. The meeting discussed various aspects related to Research, Monitoring and Evaluation in 2021 implementation of MCDP II.

Evidence generated and disseminated for nutrition programming and policy formulation

- I. The 2021 national conference was the second in a series of annual conferences to be conducted over the life of SUN LE project. The purpose of the 2021 SUN national conference was to disseminate the findings of readiness and performance assessment (RPA), community and facility readiness survey (CFRS) to implement nutrition multisectoral programme and the study on the effect of COVID 19 on food security and findings of studies implemented by other SUN partners to SUN stakeholders at national level. The overall purpose of the 2021 national nutrition conference was to disseminate (to national level stakeholders), the findings of studies, assessments, and /or policies relevant to SUN2.0 / MCDPII, as well as provide a forum for national-level stakeholder engagement around SUN 2.0 / MCDP II. Specific studies dissemination of physically and

virtually included the following:

The 2021 Readiness and Performance Assessment (RPA) of the SUN 2.0/Most Critical Days Programme (MCDP II)

- a. The Community and Facility Readiness to Implement Multi-sectoral Maternal and Child Nutrition Interventions: An assessment of community service delivery points and health facilities (Focused Study # 2) – preliminary results
- b. Monitoring the Impact of COVID-19 on Household Food Security and Nutrition in Zambia (Focused Study #4) – preliminary results

- I. Information or data pertinent to the implementation of the SUN programme such as emerging best practices or new innovations
- II. Experiences from the districts on how they utilized the baseline and other data during planning and programme decision-making.
- III. The training of the data entry clerks in the CSPPro and CSDietary software, which are being used to enter the background data, physical activity level and dietary intake components of the food consumption survey was undertaken from 2nd to 15th June 2015. A total of 22 data entry clerks were successfully trained and a detailed report is available.

- IV. The Food Consumption and Micronutrient status survey team has been working tirelessly to ensure that the report on the FCMMS survey is finalised. One milestone achieved was the completion of the secondary data entry of the dietary intake component. This is a shift from paper questionnaires to electronic data, which makes it easy to work with as we move towards the attainment of the goal of having a final report on the various survey objectives. The members of the PHCNU successfully participated in the validation of the food based dietary guidelines, which were spearheaded by the Ministry of Agriculture. During the validation, participants reached consensus on how the food based guidelines should be named and the entire document was adjusted accordingly. The food based guidelines were developed based on scanty data from small

surveys. However, following the release of the findings of the FCMMS, there will be a need to update the guidelines should a need arise.

- V. NFNC in conjunction with SUN partners held 5-day district learning and dissemination workshops in 30 districts implementing MCDP. The dissemination workshop ensured that various studies were used in setting priorities in the development of the 2022 multisectoral MCDP II plans and other government sectoral plans at national, provincial and district level.
- VI. The MCDP-II Midline survey is scheduled to be conducted in 2022. In preparation for the survey, NFNC in partnership with SUN LE conducted a 5-day midline survey consensus workshop. The meeting adapted the baseline tools (Baseline survey questionnaire, the analysis plan and the indicator definition matrix) and additional input was provided for the midline survey.

Data entry

The actual data entry exercise commenced on 24th June 2021. However, the exercise was only undertaken for two days and stalled due to government guidelines on workshops in the context of the prevailing COVID situation in the country. The data entry exercise is planned to have two rounds of data entry, first and second, and this is a quality assurance feature for the data entry exercise to help ensure that the data entered is of extremely high quality.

- I. A feeding trial on the regional recipes has been developed, and there is a possibility that the SUN LE will fund the trial. An earlier draft was submitted to SUN LE for potential funding and the response was positive with a few comments, which has since been worked on.



NFNC Staff group photo



Nutrition Education and Communication Unit with GIZ staff-
 Seated left to Right- Jossy Phiri, Ulrike Rippke, Gerald Kaputo-
 Standing left to right- Bupe Malaya, Betty Kalaluka, Koji Soneka,
 Belinda Tembo, Given Liswaniso



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Our Core Values

Creativity

Empowerment

Teamwork

Trust

Mission Statement

To provide efficient and effective leadership for coordinated food and nutrition action in Zambia



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