



# Namibia Zero Hunger Strategic Review Report



Republic of Namibia



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## FOREWORD

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Namibia through Vision 2030, committed itself to creating a prosperous and industrialized country, developed by her human resources, enjoying peace, harmony and political stability. Key in this vision is the eradication of poverty and hunger to ensure a healthy and food-secured nation.

The government has made tremendous progress working towards attainment of this vision. Namibia's economic growth has helped contribute to poverty reduction by 41 percent between 2001 and 2011. The effects have however been uneven across population groups as 27 percent of the population remain poor and a large proportion of Namibians still lack the food they need for an active and healthy life. In 2015, the NAMVAC estimated a total of 578,480 people in rural areas in need of food and livelihood assistance. The underlying factors contributing to food insecurity in country are high unemployment levels, inequalities and the country's exposure to recurrent climate variability which continue to upset recovery efforts and prevent people from achieving sustainable livelihoods. Hence, much work remains to be done to eradicate hunger and achieve food and nutrition security.

Through the Zero Hunger Strategic Review Report it was important to highlight factors that put stress on food security in Namibia, take stock of the progress made so far in addressing hunger, identify the gaps in the national response to food insecurity and highlight strategic actions that are needed to achieve zero hunger in Namibia.. The report provides an insight in the food and nutrition security landscape and outlines priority areas for action by all stakeholders including government, development partners, the private sector and civil society. It is a product of extensive literature review including government policy and strategy documents and stakeholder consultations at both national and regional levels.

In order to address key recommendations emerging from the strategic review, it is essential that strong and empowered coordination mechanisms that are inclusive of a wide range of sectors and stakeholders are put in place to ensure that policies and programmes of government ministries and partner institutions align with the national priorities that aim to address hunger and poverty. The findings of the strategic review therefore should inform the next national development and sectoral planning processes that aim to contribute towards resilience building, reducing poverty, inequalities and uplifting the standards of all Namibians.

I take this opportunity to urge all sectors in government, our development partners, civil society and the private sector to work together in the implementation of the recommended actions in order to achieve zero hunger in Namibia. The realization of Zero Hunger will depend on the commitment, cooperation and partnerships of all stakeholders and sectors. Our government is committed to ensure all Namibians are food and nutrition secure.

Honourable Saara Kuugongelwa-Amadhila  
*Prime Minister of the Republic of Namibia*

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## PREFACE

Hunger affects hundreds of millions of people around the world. It undermines economic growth, causes human suffering, stunts child development, and impacts on people's dignity. Hunger is one of the most pervasive development challenge Namibia has faced. While government efforts have re-duced poverty rates from 58% in 1993 to 27% in 2015 and unemployment to 28%, undernourishment remains high at 37 percent. The government of Namibia is determined to ensure that these challenges are addressed in order to sustain the development gains the country has made so far.

The vision of Zero Hunger is enshrined in the Sustainable Development Goals (SDGs) which were adopted by Namibia in September 2015. SDG2 calls on governments to: "end hunger, achieve food security and improved nutrition and promote sustainable agriculture" But to achieve this goal, progress also has to be made in other SDGs. For example progress in poverty eradication will directly contribute to greater access to food for the most vulnerable population. That's why the Government of Namibia has already embarked on the journey to domesticate the SDGs so that the focus to make Namibia a prosperous and industrialized nation is maintained.

Ending hunger means ensuring that the poorest have the means to buy or grow enough food to keep their families well-nourished and that infrastructure is adequate and markets are strong enough to get food to where it is needed. This calls for the nation to redouble efforts in ensuring that the right policies, strategies and programmes are in place to address this need. Political commitment will be key to ensuring that no Namibian goes to bed hungry and Namibia has already demonstrated this commitment through the African Union's Malabo Declaration to end hunger in Africa by 2025; the adoption of the Sustainable Development Goals (SDGs) and the launching of the Harambee Prosperity Plan by H.E. President Hage Geingob.

Hunger is a multi-faceted problem that needs integrated, multi-sectoral solutions. Inclusive growth that ensures that no Namibian is left behind will be key to achieving the vision of Zero Hunger. Re-duc-ing inequalities between men and women, urban and rural areas and socio-economic and other groups will allow the country to realise its long-term development goals. Ensuring that smallholder producers become a significant part of the solution will include empowering and equipping them with the necessary knowledge to adopt sustainable and climate-smart farming practices, giving them adequate access to new and improved farming technologies, services and inputs, and access to markets, which will enable them to become key players in food systems and frontline actors in the war on hunger. Ending hunger will also require us to provide those that are not able to produce food with social protection so that they can access food to live healthy, active and dignified lives.

A gender-sensitive focus in the country's response to hunger is vital to eliminating all forms of hunger. More than 45% of rural households nationally are women-headed, and 54% percent are small-holder farmers, representing the backbone of the agricultural sector and

food systems including guaranteeing food security for their families. Considering the fundamental roles that women play in the fight against hunger, giving them equal access to land and other productive assets and inputs will keep Namibia on the right path to development.

Strengthening national data collection and monitoring and evaluation (M&E) capabilities are further imperatives for achieving zero hunger. Availability of relevant, accurate and up-to-date data and in-formed analysis will enable the country to pursue evidenced-based planning, policies and programmes that respond to the root causes of the development challenges that are being confronted.

As the country prepares to intensify its fight against hunger, it is crucial that all Namibians and part-ners become part of the solution and champions of this Nobel cause.

Honourable Tom Alweendo  
Minister of Economic Planning and Director General of National Planning Commission

## ACKNOWLEDGEMENTS

The commitment to end hunger in Namibia gained momentum in September 2015 when the Government launched the Zero Hunger Strategic Review to establish a comprehensive understanding of the food and nutrition situation; determine the progress that national policies and programmes have made and identify gaps in the response; and propose priority actions required to accelerate progress towards zero hunger. The review process involved a desk review of existing information and reports on food security and stakeholder consultations with various government ministries and institutions at national and regional level, the private sector, national NGOs, civil society and the United Nations.

Special thanks go to the coordination team; Mr. Sylvester Mbangi: Director, Macro Economic Planning, National Planning Commission, Office of the President; Advocate Nangula Mbako: Permanent Secretary, Office of the Prime Minister; Mr. Japhet litenge: Director, Disaster Risk Management, Office of the Prime Minister and Ms. Jennifer Bitonde: WFP Representative in Namibia for providing leadership and overall coordination of the review process.

Sincere appreciation goes to the research team; Ms. Bience Gawanas: Special Advisor to the Minister of Health and Social Services (the lead consultant that provided guidance to the Zero Hunger Strategic Review process and facilitated the research team consultations with key stakeholders); Dr. Scott Drimie: Director of the Southern Africa Food Lab and Associate Professor of Health Sciences at Stellenbosch University, South Africa (for synthesizing research findings into a comprehensive review Report); Dr. Jethro Zuwarimwe: Agriculture Expert and senior lecturer at the Namibia the University of Science and Technology (researcher on sustainable agricultural production and food availability); Dr. Blessing Chiripanhura: Social Protection Expert and senior lecturer at the University of Namibia (researcher on incomes, livelihoods and social protection systems); Dr. Sithabiso Gandure: Food and Nutrition Expert and Consultant on livelihoods development (researcher on food security and nutrition systems) and Mr. Oskar Elago: Food Technology Expert and lecturer at the Namibia University of Science and Technology (researcher on food loss and waste).

Special mention goes to the Technical and Administrative Support team; Mr. John Ashipala: Deputy Director, Macroeconomic Planning, National Planning Commission, Office of the President; Mr. Isaac Tarakidzwa: VAM Expert, World Food Programme and Mr. Donovan Weimers: Communications Officer, World Food Programme for providing technical inputs, administrative, logistics and communications support to the review process.

We gratefully acknowledge all stakeholders that provided valuable inputs during the national and regional stakeholder consultations, the strategic review meetings and in the peer reviewing of the Zero Hunger Strategic Review Report. These include various government ministries and parastatals, regional councils, NGOs, Civil Society, the academia, UN agencies, the private sector, participants to the review meetings and many others. Their contributions confirmed the need for a multi-sectoral approach to eradicating hunger in Namibia.

Last but not least, we greatly acknowledge the technical and financial support that the United Nations World Food Programme provided for this initiative.

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## ABBREVIATIONS & ACRONYMS

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|        |   |
|--------|---|
| AMTA   | Agro-Marketing Trade Agency                             |
| CAADP  | Comprehensive Africa Agriculture Development Programme  |
| CSA    | Climate Smart Agriculture                               |
| DDRM   | Directorate: Disaster Risk Management                   |
| DRM    | Disaster Risk Management                                |
| EFSA   | Emergency Food Security Assessment                      |
| EU     | European Union  |
| FAO    | Food and Agriculture Organisation of the United Nations |
| FNSM   | Food and Nutrition Security Monitoring                  |
| FNSMP  | Food and Nutrition Security Monitoring Plan             |
| FNSMS  | Food and Nutrition Security Monitoring System           |
| GHI    | Global Hunger Index                                     |
| GRN    | Government of the Republic of Namibia                   |
| HEWS   | Health Extension Workers                                |
| HIV    | Human Immunodeficiency Virus                            |
| IYCF   | Infant and Young Child Feeding                          |
| MAWF   | Ministry of Agriculture, Water and Forestry             |
| MeatCo | Meat Corporation of Namibia                             |
| MTC    | Mobile Telecommunications Limited                       |
| MET    | Ministry of Environment and Tourism                     |
| MoHSS  | Ministry of Health and Social Services                  |
| MoU    | Memorandum of Understanding                             |
| NACS   | Namibia Assessment Counselling and Support              |
| NAFIN  | Namibia Alliance for Improved Nutrition                 |
| NAMVAC | Namibia Vulnerability Assessment Committee              |
| NCA    | Northern Communal Areas                                 |
| NCCSAP | National Climate Change Strategy and Action Plan        |
| NDC    | Namibia Development Corporation                         |
| NDHS   | Namibia Demographic Health Survey                       |
| NDP4   | Fourth National Development Plan                        |
| NGO    | Non-Governmental Organisation                           |
| NHIES  | Namibia Household Income and Expenditure Survey         |
| NPC    | National Planning Commission                            |
| NAB    | Namibian Agronomic Board                                |
| NSA    | Namibia Statistics Agency                               |
| NSFP   | Namibia School Feeding Programme                        |
| NTF    | Namibia Trade Forum                                     |
| OFDA   | Office of U.S. Foreign Disaster Assistance              |
| OPM    | Office of the Prime Minister                            |
| PDL    | Poverty Datum Line                                      |
| RC     | Regional Council  |
| SACU   | Southern African Customs Union                          |
| SADC   | Southern African Development Community                  |
| SDG    | Sustainable Development Goal                            |
| SME    | Small and Medium-Sized Enterprises                      |
| SSMS   | Small Stock Marketing Scheme                            |
| UN     | United Nations  |
| USAID  | United States Agency for International Development      |
| VAC    | Vulnerability Assessment Committee                      |
| VAM    | Vulnerability Analysis and Mapping                      |

## Introduction

The Zero Hunger Challenge is an international multi-level and multi-sectoral call for action made by the United Nations (UN) towards a vision of a world without hunger. It brings together different stakeholders at country level to contribute to eliminating food and nutrition insecurity. Zero Hunger lies at the heart of the 2030 sustainable development agenda, which the Namibian government has adopted. Sustainable Development Goal 2 (SDG2) calls on UN Member States to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”.

Achieving Zero Hunger is thus a priority of the government of Namibia and, as a result, considerable resources are being devoted towards its attainment. It lies at the heart of this Food Security and Nutrition Strategic Review, which seeks to identify opportunities to strengthen current and future programmes and strategies. The specific objectives of the Review are:

1. To establish a comprehensive analysis of the food security and nutrition within the pillars of the Zero Hunger Challenge and targets of the SDG2;
2. To determine the progress that policies and programmes aimed at improving food security and nutrition have made, and identify gaps in the response; and
3. To identify and prioritise actions that will be required to fill response gaps and accelerate progress towards zero hunger, and how these actions may be implemented.

The Strategic Review is explicitly intended to provide direction to the achievement of Zero Hunger and thereby SDG2 in Namibia. The Food and Nutrition Security Policy of 1995 is currently being updated and will provide the framework for implementation of the Zero Hunger Strategic Review recommendations. The Strategic Review is thus informed by key national policy and strategic frameworks which seek to increase food and nutrition status by improving the quantity and quality of food and ensuring adequate diets; empowering households to use their resources to improve their well-being; and ensuring adequate levels of social and supporting services.

## The Hunger Challenge in Namibia

Food security and nutrition is elusive for the majority of the rural population and a significant proportion of those living in urban areas. In 2013, the Emergency Food Security Assessment (EFSA) found 16% of the population to be severely food insecure while 22% of the population was moderately food insecure; the 2015 Global Hunger Index ranked Namibia 87th out of 120 countries assessed, with an index score of 31.8 indicating a ‘serious food problem’. The latest data used to compile this index show that in Namibia the proportion

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of undernourished in the population is 42.3%, the prevalence of underweight in children under five years is 13%, the prevalence in stunting in children under five years is 24% and the under-five mortality rate is 5.0%.

According to the situation analysis, some key issues pertaining to food security include:

**100% Access to Adequate Food All Year Round:** Over 80% of the Namibian population relies on market purchases for food. Combined with the heavy reliance on food imports, which makes Namibia susceptible to high food prices, this increases pressure on vulnerable households' food security. Low-income earners struggle to meet their minimum daily requirements for food intake as they can only access poor quality foods with low micronutrient content. This implies that poverty is a major factor limiting access to food. The poor are primarily women, subsistence and smallholder farmers, pensioners located largely in rural areas and people living in urban informal areas.

**Zero Stunted Children Less Than Two Years:** The high child stunting rates of 24% is an indication of inadequate nutrition over long periods of time exacerbated by poor access to health and care. Regions with the highest stunting rates generally tend to have poor socio-economic conditions. The prevalence of diarrhoea, HIV and TB undermines the immune system. A total of 46% of the population does not have access to improved sanitation and practices open defecation, factors which strongly impact nutrition status. Gender issues are clearly of critical importance for addressing stunting with insufficient care and support for mothers. With significant numbers of adolescent girls having begun childbearing, these should be acknowledged as a distinct category instead of being subsumed within broader maternal programmes.

**All Food Systems Are Sustainable:** Namibia's climate and largely semi-arid and arid conditions are expected to worsen the variability and intensify their impact on the economy and general livelihoods. The commercial and communal production systems are under increased threat from climate change although the smallholder and subsistence-farming sub-sector, located particularly in the northern regions, is far more vulnerable. Climate change poses a particular threat in reducing the amount and reliability of rainfall and increasing in evaporation due to rises in temperature. This will decrease the availability of already scarce water resources.

**100% Increase in Smallholder Productivity and Income:** Smallholder and subsistence farmers, largely in the northern communal areas, struggle with access to inputs including water. Low levels of agricultural production in the communal areas are partly due to limited available land, which consists of 34% of the total agricultural land in Namibia able to support economic crop and livestock production. Low levels of productivity in the communal crop-farming sub-sector are partly due to smallholder producers not experiencing sustained technological progress, poor soil conditions, and prolonged and frequent drought spells. Opportunities exist with new technologies, particularly those that focus on drought resistance, and expansion of irrigation. The Ministry of Agriculture, Water and Forestry continue to introduce new technologies to smallholder producers and promote crop production under irrigation. The productivity of the livestock sector in the communal areas is constrained by high frequency of drought, overgrazing, low calving rate, low off-take rate, traditional farming practices, as well as exclusion from the lucrative markets due to prevalence of foot and mouth disease in the Zambezi Region. Poor grazing is a major concern in the northern regions.

**Food Loss and Food Waste:** Although Namibia does not produce enough food for its own consumption needs, it is estimated that about 24% of all food calories grown per year are lost or wasted at the farm level. The implementation of technologies that will minimise and eliminate food losses and wastage along the supply chain provides an immense opportunity to increase the supply of food in the country.

Addressing these factors requires stakeholders to work together to deliver on a common vision. This encompasses the environment, people, institutions and processes by which agricultural products are produced, processed and brought to consumers in a sustainable manner. Different stakeholders and sectors need to act in a joined-up manner, each one dealing with different aspects of the problem, but collectively acting in a coherent manner. Recommendations around this are made below.

### **Key Recommendation: Develop a Holistic Food and Nutrition Security Policy**

The key challenge for Namibia is to develop a holistic and coherent Food and Nutrition Security Policy that strengthens and aligns interventions to effectively address food insecurity and nutrition. The success of the policy to achieve this relates directly to a suite of adequate and clear policies and related programmes that are effectively aligned. A central argument is that addressing the complex drivers of food and nutrition insecurity requires policies and programmes that mutually reinforce one another, thereby contributing to shared goals and outcomes. Essentially the best outcomes, in terms of effective implementation, will be seen when policy is well aligned within sectoral strategies with political motivations on the part of government and non-government actors including the United Nations, and that multiple stakeholders need to be coordinated around what is a complex and multidimensional policy and implementation challenge.

Secondly, it is imperative that an inclusive coordination mechanism consisting of a wide range of sectors and stakeholders, inside and outside of the state, is established. This should be empowered to ensure programmes of individual departments align with the strategic intent outlined in this strategy and improve the levels of coordination and collaboration between departments within the province and with the other spheres of government. Such a structure may fall within the Office of the Prime Minister (OPM) based on its over-arching and convening position or the National Planning Commission (NPC). It is key that the right level of political leadership is provided to support this structure. Once the coordinating structure is established, other sectors will be drawn in to develop a broad strategy encompassing strategic options that can be implemented at regional level.

All this requires enhanced institutional capacity that can contribute to realising higher degrees of coherence and coordination. Building capacity both within the coordinating mechanism and within other sectors will become a priority. The facilitation of multi-sectoral action requires strengthening not only of technical but also strategic and management capacities, bolstering individual and institutional capacity to broker agreements, resolve conflicts, build relationships, respond to recurring challenges, and undertake strategic communications within and across sectors.

The establishment of an effective food security and nutrition governance system also requires a systematic approach to the collection and assessment of data to understand the way in which the food system is changing and affecting the lives of the residents of Namibia, particularly the poor. This would essentially build on the establishment of the Namibia Food and Nutrition Security Monitoring System that is forging a harmonised system for holistic monitoring and evaluation.

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## Sector-Specific Recommendations

A number of specific sector recommendations have been identified and elaborated in the Review. It, however, remains a recommendation that the OPM convene a process to develop a comprehensive Food and Nutrition Security Policy and thereby select priority interventions through the process (roadmap) outlined. The priority interventions should then be implemented in an aligned and coordinated fashion at the local level. Sector-specific recommendations emerging from the strategic review include:

**100% Access to Adequate Food All Year Round:** Stimulating the broader economy to create employment is a clearly articulated objective of the Government of Namibia. As such a wide range of policies and programmes emphasise job creation so stress should be placed on policies targeting the most vulnerable to hunger. These programmes should cover both safety nets for the most vulnerable and enterprise development to underpin broader economic activity.

**Zero Stunted Children Less Than Two Years:** Stunting rates of children in Namibia range 19% to 40% in one region with a national average of 24%. These high rates are due to a range of factors including weak coordination mechanisms between key stakeholders despite nutrition being recognised as a crosscutting sector. Nutrition is still largely considered a Ministry of Health mandate and yet it requires other sectors to be actively involved. As such, in terms of achieving zero stunting, a number of nutrition specific interventions are recommended that should be complimented by nutrition-sensitive interventions from largely the non-health sector.

**All Food Systems Are Sustainable:** Key to a sustainable food system is recognition of the current limits of natural endowments, how to sustain these and balance of their use in a way that creates a resilient system. Future impacts should be anticipated, particularly from climate change that will have an adverse effect on food production and availability.

**100% Increase in Smallholder Productivity and Income:** A wide range of policies are in place from land resettlement, irrigation investment, dry-land crop production, fisheries and aquaculture, livestock; but much needs to be done to underpin the availability of food through smallholder production. The following elements need further enhancement: capacity development, appropriate technology and adoption, value chain development, and nutrition-sensitivity. On-going government initiatives include the Grain Production Programme, promotion of grain production, horticulture, Land Reform and Resettlement Programme, Northern Communal Area Livestock Improvement and Market Access, Small-Stock Marketing Scheme, Marine and Fisheries Development Programme, and Aquaculture Development Programme.

**Zero Food Loss and Food Waste:** Although Namibia does not produce enough food for its own consumption, it is estimated that about 24% of all food calories grown per year are lost or wasted. There is thus a clear opportunity to develop a policy in Namibia. Other opportunities exist under approaches to production, handling and storage, and the processing stages of the value chain particularly for reducing food loss, and activities under the distribution, market and the consumption stages particularly for reducing food waste. It is important to note that many technical solutions can be effective only when other parts of the food supply chain are effective. Similarly, all actors in the food value chain need to be involved if food loss and waste rates are to be significantly curtailed.

## Roadmap Ahead

Addressing food and nutrition insecurity in Namibia by 2030 is attainable if sufficient resources are allocated and appropriate policies and investments are pursued. Key to this is establishing and building appropriate institutional arrangements that will enable the effective governance of the food system, including effective alignment and coordination of programmes, and the efficient allocation of resources across sectors.

Facilitated by the NPC or the OPM, the first step is to convene a multi-sectoral and multi-stakeholder forum to establish a coordinating mechanism. Looking beyond the establishment of such an entity, appropriate strategies and policies will need to refocus on Namibia's food and nutrition challenges identified in the Strategic Review. To achieve this a high-level process should be convened to review key sectoral programmes and ensure their focus on a shared vision and to agree on the strategic options for Zero Hunger.

This process should identify and design alternative policy options or policy packages to address sector-specific or economy-wide issues and consider whether appropriate institutional arrangements for policy implementation are in place. This process should highlight opportunities for mainstreaming food security and nutrition. Decision makers, on the basis of this information will choose the policy package, which "optimise" the net expected impacts of a given sector.

A related activity is to assess the capacities required (individual, organisational and systemic) and finance available to adopt and support different policy options. This could be supported through applying a food security and nutrition lens to capacity with regard to individuals (analytical tools, skills), organisations (staff, infrastructure), and wider systems (including cross-sectoral mechanisms and platforms for engagement).

Effectively tackling the breadth of food security and nutrition challenges that exist at local and national levels requires that Namibia adopt whole food value chain approach to food security. Such an approach, from "seed to fork", includes sustainable production in the fields, linking smallholders with markets and retail centres, consumption and building the overall resilience of the food system – with emphasis on improving inclusiveness, efficiency, sustainability, nutrition, and food safety.



## 1.1 Background

**A**chieving Zero Hunger is a priority for the government of Namibia. As a result, considerable resources are being devoted towards its attainment. It lies at the heart of this Food and Nutrition Strategic Review, which seeks to identify opportunities to strengthen current and future programmes and strategies towards a common goal of eliminating hunger and malnutrition.

The Zero Hunger Challenge is an international multi-level and multi-sectoral call for action made by the United Nations towards a vision of a world without hunger. It brings together different stakeholders at country level to contribute to eliminating food and nutrition insecurity. The Zero Hunger Challenge<sup>1</sup> is structured upon the following five pillars:

- Pillar I 100% equitable access to adequate food all-year round
- Pillar II Zero stunted children less than two years old
- Pillar III All food systems are sustainable
- Pillar IV 100% increase in smallholder productivity and incomes
- Pillar V Zero loss or waste of food

Taken together, these five elements will end hunger, eliminate the worst forms of malnutrition and build inclusive and sustainable food systems. Zero Hunger lies at the heart of the 2030 sustainable development agenda, which the Namibian government has readily adopted. Sustainable Development Goal 2 (SDG2) calls on Member States of the United Nations to “End hunger, achieve food security and improve nutrition and promote sustainable agriculture”<sup>2</sup>. Four of the five targets under SDG2 are directly derived from the Zero Hunger Challenge including access to food, malnutrition, agricultural productivity and resilient food systems. The fifth is folded into its sub-objectives. By implication SDG2 has incorporated the challenges of ensuring more equitable development and environmental sustainability, especially the key goal of curbing the dangers of human-induced climate change. These targets represent the vision and blueprint for achieving zero hunger at the global level.

## 1.2. The Strategic Review

The Strategic Review is explicitly intended to provide direction to the achievement of Zero Hunger and thereby SDG2 in Namibia. The Food and Nutrition Security Policy of 1995 is currently being updated and will provide the framework for implementation of the Zero Hunger Strategic Review recommendations. The Strategic Review is thus informed by key national policy and strategic frameworks, which seek to increase food and nutrition status by improving the quantity and quality of food and ensuring adequate diets; empowering households to use their resources to improve their well-being; and ensuring adequate levels of social and supporting services.

<sup>1</sup>UN Zero Hunger Challenge. <http://www.un.org/en/zerohunger/#&panel1-1> Retrieved on 12 January 2016

<sup>2</sup><http://www.un.org/sustainabledevelopment/sustainable-development-goals> Visited 12 January 2016

This is no easy task. The food security situation in Namibia is characterised by extreme variability in levels of food production. Namibia's variable and largely semi-arid and arid conditions are expected to worsen their impacts on the economy and general livelihoods to intensify. Namibia's heavy reliance on food imports also makes it susceptible to high food prices, which increases pressure on vulnerable households' food security. Socio-economic factors including population growth, poor access to sanitation, high prevalence of HIV, and gender inequalities exacerbate Namibia's vulnerability to hunger.

As a result of these and other issues identified in the Strategic Review, food security and nutrition is elusive for the majority of the rural population and a significant proportion of those living in urban areas. In 2013, the Emergency Food Security Assessment found 47.5% of the rural population to be at risk of food insecurity<sup>3</sup>; the 2015 Global Hunger Index, ranked Namibia 87th out of 120 countries assessed, with an index score of 31.8, indicating a 'serious food problem'<sup>4</sup>. Namibia was ranked higher than its neighbours Zambia (102) and Angola (90) but lower than Zimbabwe (85), Botswana (63) and South Africa (38). The latest data used to compile this index shows that in Namibia the proportion of undernourished in the population is 42.3%, the prevalence of underweight in children under five years is 7.1%, the prevalence in stunting in children under five years is 24% and the under-five mortality rate is 5.0%. Low-income earners struggling to meet their minimum daily requirements for food intake underpin these important figures. The high child stunting rates of 23% is an indication of inadequate nutrition over long periods of time.

In response to this situation, the Food and Nutrition Strategic Review was established to achieve a number of objectives:

- To establish a comprehensive analysis of the food security and nutrition within the pillars of the Zero Hunger Challenge and targets of SDG2;
- To determine the progress that policies and programmes aimed at improving food security and nutrition have made, and identify gaps in the response; and
- To discuss and prioritise actions that will be required to fill response gaps and accelerate progress towards zero hunger, and how these actions may be implemented.

As stated, the findings and the recommendations of the Strategic Review are intended to inform Namibia's Food and Nutrition Security Policy, which is currently being updated and will provide the framework for implementation of the Zero Hunger Strategic Review recommendations. The Strategic Review will also contribute to national development planning, especially towards the formulation and implementation of strategic plans and of development partners' strategic plans.

### 1.3. Conceptual framework of Food Security and Nutrition

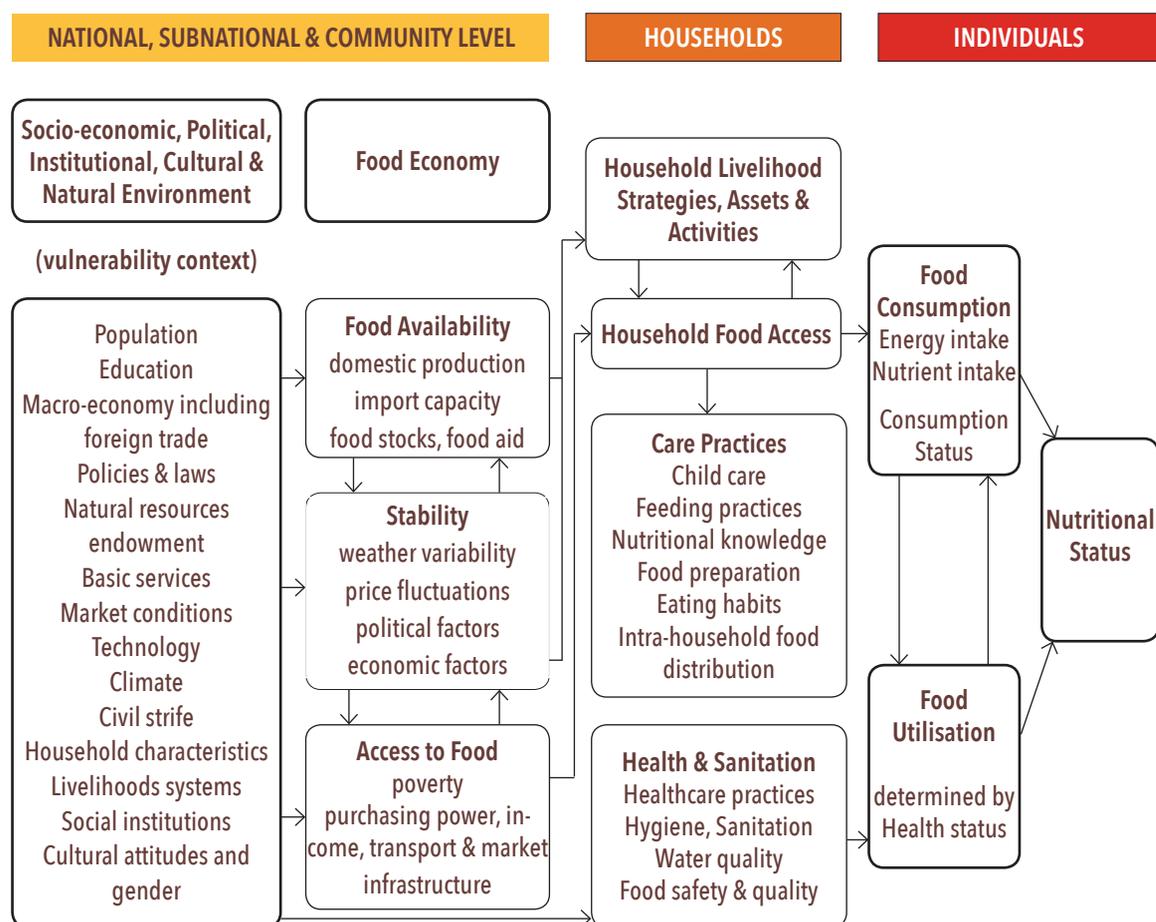
The elimination of hunger and undernutrition globally by 2030 is a formidable but realistic goal given the successes of developing countries such as Brazil, China, and Thailand in reducing hunger. This vision guided the development of the Zero Hunger Challenge, which prioritises empowering women, family farming, and the sustainability and resilience of food systems. Put succinctly, the Zero Hunger Challenge means that there are zero stunted children less than two years old; 100% access to adequate food exists all year round; all food systems are sustainable; 100% increase in smallholder productivity and income; and zero loss or waste of food.

<sup>3</sup>Namibian Vulnerability assessment Committee, *Namibia Emergency Food Security Assessment 2013*, <https://www.humanitarianresponse.info/system/files/documents/files/RVAC-NAMIBIA-2013.pdf>

<sup>4</sup>K. von Grebmer, J. Bernstein, N. Prasai, S. Yin, N. Prasai, S. Yin, Y. Yohannes. 2015. *2015 Global Hunger Index: Armed Conflict and the Challenge of Hunger*. Bonn, Washington, D.C., and Dublin: Welthungerhilfe, International Food Policy Research Institute, and Concern Worldwide. [http://www.welthungerhilfe.de/fileadmin/user\\_upload/Mediathek/Welthunger-Index/WHI\\_2015/global-hunger-index\\_2015\\_english.pdf](http://www.welthungerhilfe.de/fileadmin/user_upload/Mediathek/Welthunger-Index/WHI_2015/global-hunger-index_2015_english.pdf)

The guiding principles behind the development of a vision for Namibia's food security and nutrition security stem from the prevailing 1996 World Food Summit definition of food security: "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". The strength of this definition is found in its four core pillars: food availability, food access, food use, and the stability of these conditions. The framework presented in Figure 1.1, reading left to right, shows the linkages between the overall development context, the food economy, household-level strategies, assets and activities and individual measures of nutritional well-being.

Figure 1.1: Food Security and Nutrition Conceptual Framework



Source: FAO, 2004

Looking within the food economy, the availability of food relates to the physical presence of food. To achieve food security it is necessary that food is physically available in an area. Along with availability, it is necessary that food is accessible for all population groups, which depends on the household's ability to acquire food through various means, including own production, labour, transfers, or through the market.<sup>5</sup> If food is physically available and accessible, how households and individuals utilise this food becomes key for food security.

<sup>5</sup>Sen, Amartya (1982). *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford New York: Clarendon Press Oxford University Press. ISBN 9780198284635.

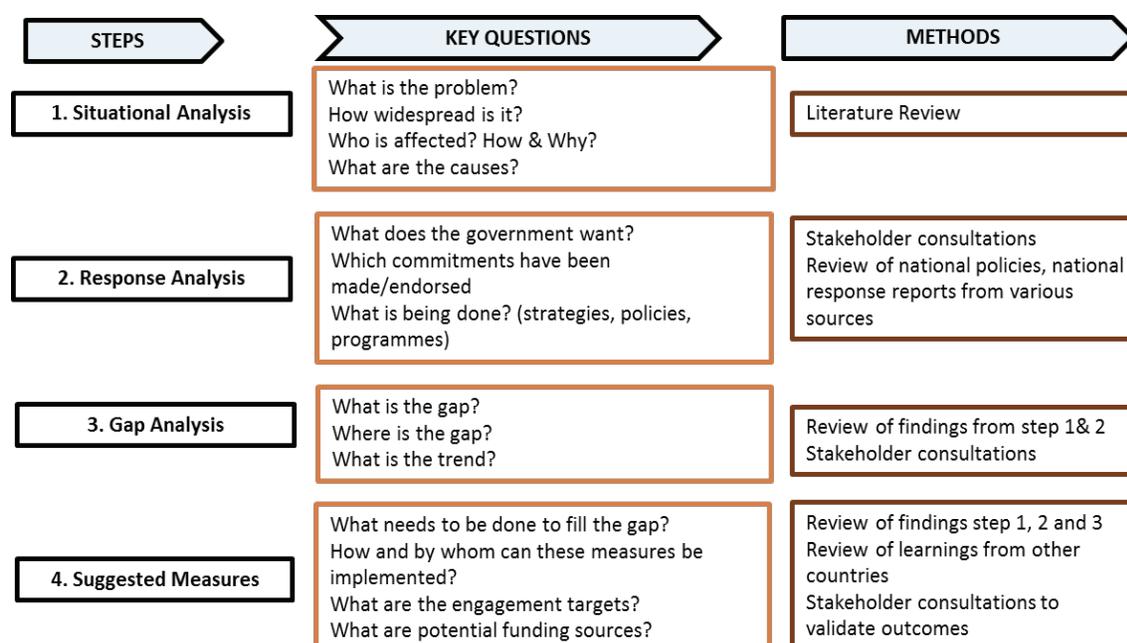
The way people utilise foods depends on factors such as economic status, cultural preferences, health status, water availability, environmental conditions, food processing and preservation, technology, maternal practices and food safety. Finally, the food security situation needs to be stable over time – even if food is available, accessible and appropriately utilised, conditions need to be consistent.

The term ‘food security and nutrition’ is now commonly used as a way to combine food security and nutrition security. In this strategic review, food security and nutrition is defined as the state “when all people at all times have physical, social and economic access to food, which is safe and consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life”.<sup>6</sup> This definition best reflects the conceptual linkages between food security and nutrition security while also expressing a single integrated development goal that helps guide policy and programmes.

To emphasise the complex linkages between the underlying causes and effects of food security and nutrition, a systems diagram was developed by the participants of the first validation workshop in November 2015. This was done in a facilitated process that involved key inputs by specialist researchers and several working groups that considered the various aspects of food security and nutrition in the country. The interconnections between these various aspects were identified to show the complex food system and to help identify opportunities for interventions. Governance arrangements were highlighted throughout as being central to working in a new way, of which the details are captured within the same diagram. (see Annexure 2)

These complex dimensions require an approach that not only crosses sectors, economies and institutions, but also spans from individual and household to regional and global levels. This is directly aligned with the Zero Hunger Challenge and SDG2. Hunger, food insecurity and malnutrition are complex problems, which cannot be resolved by a single actor or sector. A variety of actions are required to deal with the immediate, underlying and structural causes of these problems. Different actors and sectors need to act in a coordinated, each one dealing with different aspects of the problem, but collectively acting in a coherent manner.

**Figure 1.2: Strategic Review Process and Methodology**



Source: FAO, 2004

<sup>6</sup>CFS, 2012, <http://www.fao.org/docrep/meeting/026/MD776E.pdf> Retrieved 12 January 2016

## 1.4. Strategic Review Process, Methodology and Structure

The National Planning Commission (NPC) of Namibia coordinated the review process in collaboration with the Office of the Prime Minister (OPM). The World Food Programme (WFP) provided financial and technical assistance. The review process followed four consecutive and interrelated steps reflected in Figure 1.2. The review was conducted by independent consultants who carried out a detailed situational analysis along the five dimensions of the Zero Hunger Challenge. The review included an analysis of responses to this underlying situation, an identification of gaps and the suggestion of recommendations.

A mixed methods approach was adopted to ensure that a comprehensive review of literature was undertaken and complemented by wide-ranging consultations with food and nutrition security stakeholders across the country. Interviews were conducted with senior government officials, civil society representatives and members of the United Nations and a wide range of supporting documentation collected. A workshop was conducted with key stakeholders to validate the findings with a particular emphasis on the recommendations. These various components were drawn together into a synthesis document, which was distilled through various editions into the strategic review. In turn, this review was presented to a high-level workshop to validate the findings and recommendations after which a further iteration was produced. As such the review is based on detailed and validated information processed to identify key strategic options.

The Zero Hunger Strategic Review Report consists of the following chapters:

Chapter 1 introduces the Zero Hunger Challenge and provides a background to the Review, states the objectives, outlines a conceptual framework, and delineates the process and methodology.

Chapter 2 presents the country context and situational analysis of food security and nutrition, relating it to the five pillars of the Zero Hunger Challenge in Namibia. This section provides a baseline for the uptake of the Zero Hunger Challenge by the country.

Chapter 3 provides an analysis of the national responses to food security and nutrition with a particular emphasis on identifying gaps and opportunities.

Chapter 4 builds on the strategic gaps in the country responses, suggests recommendations and indicates necessary institutional arrangements to co-design a road map for the way forward.

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## CHAPTER 2: THE ZERO HUNGER CHALLENGE IN NAMIBIA

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This chapter presents a situational analysis of food security and nutrition in Namibia, as it relates to the context of the five pillars of the Zero Hunger Challenge.

### 2.1 SITUATIONAL ANALYSIS

#### 2.1.1 Introduction

Namibia is an upper-middle-income country with recurrent food deficits, frequent droughts and floods and high rates of chronic malnutrition. Food insecurity is mainly linked to structural poverty compounded by recurrent natural disasters where cyclical drought and floods severely affect people's livelihoods. Namibia is one of the countries in the southern African region that have been hit hard by the "triple threat" of HIV, tuberculosis and malnutrition. The HIV prevalence rate of 13.3% is the sixth highest in the world.

Since gaining independence in 1990, Namibia has enjoyed relative stability with the economy growing at an average rate of 4.71% between 2000 and 2015. The economy is heavily dependent on the extraction and processing of minerals for export. GDP growth was estimated at 4.9% in 2015, in line with the decade average per annum. Although agriculture accounts for 5.6% of the GDP, the sector supports 70% of the country's population largely through subsistence and smallholder production. The economic growth has, however, not translated into reduced poverty rates. In 2015, the proportion of poor individuals stood at 26.9%.

Poverty is more widespread in rural areas than in urban areas; 27% and 10% respectively.<sup>7</sup>The poor are primarily women, subsistence farmers and pensioners located largely in rural areas. Unemployment has remained high at 29.9% of the total labour force and tends to be concentrated among the youth (15-34 years), and women in particular.<sup>8</sup> The middle-income status and the steady economic growth have thus masked extreme poverty; with a Gini coefficient<sup>9</sup> of 0.594, Namibia is regarded as one of the countries with the most unequal income distribution in the world.

The Namibian economy is closely linked to South Africa with the Namibian Dollar pegged one-to-one to the South African Rand. Namibia receives 30%-40% of its revenues from the Southern African Customs Union (SACU). Volatility in the size of Namibia's annual SACU allotment complicates budget planning. Namibia's economy remains vulnerable to volatility in the price of commodities and the rising cost of mining diamonds has reduced margins. Namibian authorities recognise these issues and have emphasised the need to increase higher value raw materials, manufacturing, and services, especially in the logistics and transportation sectors.

These important factors underpin the food security situation in Namibia, which is characterised by extreme variability in levels of food production, dependency on large volumes of food imports, disparity in household income levels, high levels of child undernutrition and climate variability.

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<sup>7</sup>NSA 2012b: 156

<sup>8</sup>NSA 2015

<sup>9</sup>NHIES, 2009/2010

These multiple factors can be effectively identified and understood by aligning them to the five pillars of the Zero Hunger Challenge, as described below.

### 2.1.2 Pillar One: 100% Access to Adequate Food All Year Round

About 83% of the Namibian population rely on market purchases for food, which mainly comes from South Africa.<sup>10</sup> Rural households, constituting about 58% of the population, are largely producer-consumers, meaning they access food directly from their own farms or sale to purchase food. The majority of rural dwellers depend on access to land as a dominant factor in determining food production and subsequent access to food. In addition, they depend on weather patterns and soil quality to sustain production. Apart from direct consumption and sale, some rural producers process agricultural products to refine foods such as grains, meat, or oils, or source them from processors. Alternatively, households buy food from distributors such as independent grocery shops and large supermarkets. The financial resources required for accessing the market are multi-factorial and consist of income including from various sources, savings, and asset holdings.

In contrast, there is very little own production in urban areas<sup>11</sup>. There is greater food insecurity in the informal settlements around the country than in formal settlements due to high levels of poverty. This has resulted in over 70% of them defined as food insecure. This phenomenon is usually not discussed, and not much is known about its character and dynamics. For this reason, Pendleton et al., (2012) calls urban poverty the 'invisible crisis'.

According to a recent study in Windhoek, 66% of the households source "some of their food from the informal markets"<sup>12</sup>, including from farmers' trading points. Some food insecure urban households rely on food transfers or remittances from the rural sector. Urban dwellers also remit money to rural households<sup>13</sup>. In other instances, households and individuals share and/or borrow from their neighbours, implying that social networks play a crucial role in accessing food. Pendleton et al., (2012) observed that in urban areas there is stratification by type of housing units (informal and formal), economic activity, ethnic background, and gender, all of which have different impacts on households' ability to access food. In addition, it was observed that the poorest households spend 57% of their annual income on food, while the richest households spend only 13.2%.<sup>14</sup> These figures indicate that poverty and income inequalities are key determinants of food access.

The different ways of accessing food are dynamic throughout the year, which means the levels of food security and vulnerability change over time. For smallholder farmers, the lean period is usually a few months before harvesting. During this period, food prices in local markets rise. After harvesting, households are usually more food secure although the quality of food may remain a challenge. It should be highlighted that several millers and the Agro-Marketing and Trade Agency (AMTA) buy at pre-planting announced floor prices that are adjusted for inflation annually. This effectively addresses low market prices that might arise because of over-supply.

<sup>10</sup>Emongor, 2008

<sup>11</sup>(Pendleton et al., 2012)

<sup>12</sup>Pendleton et al, 2012

<sup>13</sup>(Ashton et al., 2009)

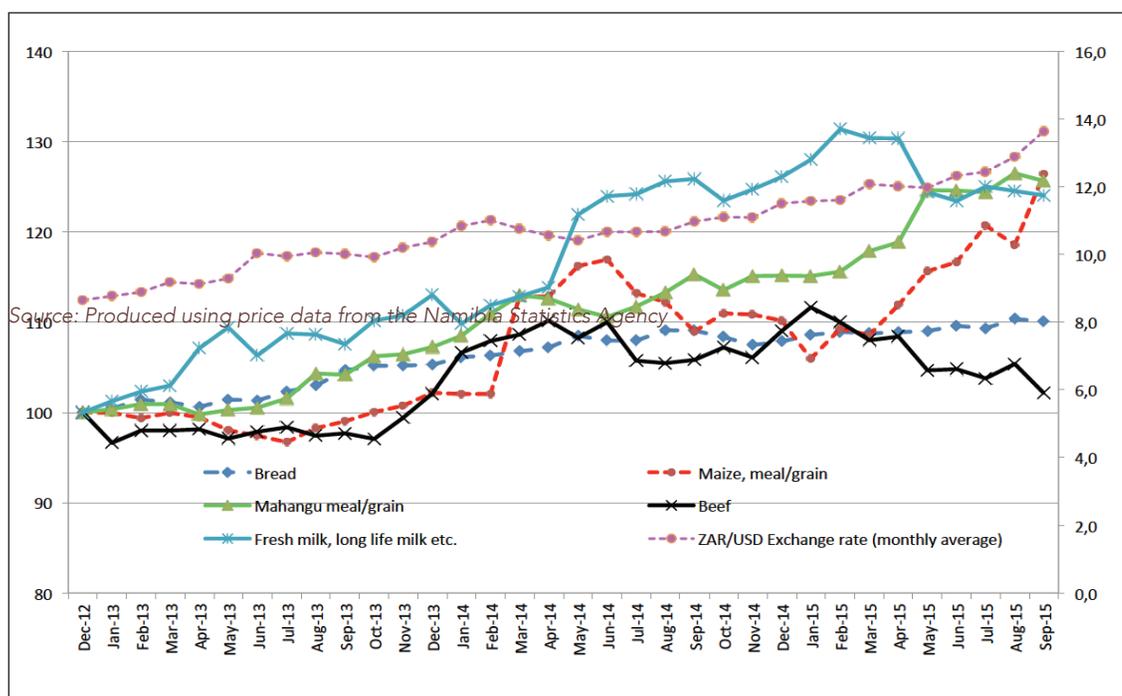
<sup>14</sup>NPC, 2008

Central to the households' access to food is the availability of the food and the households' income, and therefore purchasing power. The main sources of income include: salaries and wages (51.6%); crop and animal subsistence farming (15.8%); old age pension (11.7%) and cash remittances (10.4%). Many households have multiple sources of income, and this increases their budgetary allocation to expenditures, including expenditure on food. The 2014 Labour Force Survey places the level of unemployment at 28.1%. The unemployment rate varies across regions and between rural areas (30.2%) and urban areas (26.2%). Unemployment in the country is structural and is of a long-term nature. Of the people who are unemployed, 61.5% have been unemployed for a period longer than two years. More women than men experience long-term unemployment. Importantly the poverty datum line has been increasing in line with the general price level in the economy while household earnings have not. From 2012 and 2014, a significant segment of the population faced reduced access to food because of incomes that fell below the poverty datum line.

Figure 2.1 illustrates the upward trend in food prices illustrated by the prices of staple foods maize meal, mahangu (millet) and beef, together with bread and milk. Also shown is the United States/ South African Rand exchange rate.

The figure indicates increases in the prices of five staples over time. The overall effects of these price dynamics are reduced household purchasing power and reduced access to food. Maize, mahangu (millet) and beef are largely locally produced although some beef may be produced in South Africa or re-imported to Namibia through South African supermarkets. For locally produced staples, the increases in prices may be linked to growing demand over supply, low or declining productivity, and the high cost of production in Namibia partly due to adverse and unpredictable climatic conditions.

**Figure 2.1: Price variations: five key food products, 2012 - 2015**



As mentioned, another factor affecting prices of products imported into Namibia is the movement of the exchange rate. As a result of the exchange rate peg between the South African Rand and the Namibia Dollar, prices in Namibia mimic those in South Africa, accentuated by transaction costs including cost of transport and import taxes. However, for goods imported from outside SACU, exchange rate movements between the Rand, Namibia Dollar and the United States Dollar have significant impacts on price levels. As South Africa imports wheat, milk and maize, price increases filter through to the Namibian economy. In addition, the prices of intermediate goods used in production in Namibia, especially petroleum products and electricity, have a direct impact on the level of prices in the local economy. This shows that the impact of the exchange rate is complex with direct and indirect linkages, as a result of the Namibian economy being largely dependent on the South African economy. This complexity is revealed in Figure 2.1, which shows that the exchange rate movements are highly correlated with changes in the price levels of basic commodities in the economy (purple line in the graph, measured on the right axis: ZAR per USD, monthly average).

It is also important to recognise that producer prices have an impact on access to food, as earned income is used to buy food products not produced. In terms of livestock, for example, variations in prices can cause farmers to hold onto animals. In other instances, the Meat Corporation of Namibia (MeatCo) imposes a quarantine period for cattle, which may lead to animals losing weight during that period. Prices may also be too low when cattle are released as a result of the conditions for delivery that reduce the value of the cattle.<sup>15</sup> Emongor (2008) argues that the stringent food quality and safety standards are a major constraint on smallholder beef producers and many households miss out on the benefits of the global supply chain that offers higher prices. The impact on household incomes eventually impact consumption patterns.

High levels of poverty are usually associated with high inequality, as resources get concentrated in the hands of a few people. Income inequality in Namibia has been declining, but still remains high. As shown in table 2.1, households in richer quintiles have higher income and have greater access to food compared to those in lower quintiles. There is also growing inequality between adjacent quintile groups. The situation is worse between the bottom quintiles. At the top of the income distribution, the inequality between the richest and second richest quintiles has been decreasing over time.

NHIES 2009/10 data shows that the levels of poverty and inequality differ between male and female-headed households. There is greater inequality in male-headed households (61.9%) than in female-headed households (51%). On the other hand, headcount poverty is higher among female-headed households. Poverty is also higher among bigger households, especially those with children younger than six years. More than 49% of households with three or more children under six years fall below the poverty line. Extreme poverty was pegged at 15.8% in 2009/10, and it was highest among households whose heads were aged sixty years and above (23%). The combination of poverty and inequality results in a large part of the population not being able to access adequate amounts of food as required.

Equitable food access is dependent on the nature and structure of intra-household decision-making, as dictated by social and cultural norms. It is most likely that the head of household makes decisions, which household members abide by. In Namibia, 41% heads of household are women.<sup>16</sup> Female-headed

<sup>15</sup>Schade et al., 2000

<sup>16</sup>UNICEF, 2015

households face significant challenges in both production and access to food, as they command only 29% of total income.<sup>17</sup> They tend to face challenges in accessing land, inputs and labour, and women as mothers and carers lose time in the labour market and end up with less income than men.

### 2.1.3 Pillar Two: Zero Stunted Children Less Than Two Years

Namibia is impacted by the double burden of undernutrition and overweight or obesity with the consequences transmitted across generations via maternal-child linkages. The nutritional status of children under five has improved over the last six years. The proportion of children, who are stunted, wasted, and underweight decreased from 29% to 24%, 8 % to 6% and 17% to 13% respectively between the 2006-07 NDHS and 2013 NDHS surveys.<sup>18</sup> While such progress is commendable, the levels of stunting remain unacceptable. Stunting (height-for-age) is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a relatively long period, both in terms of macronutrients and micronutrients, and recurrent or chronic illness. The percentage of children who are stunted initially increases with age, from 1% among children aged 6-8 months to 35% among those aged 24-35 months, before declining steadily to reach 21% among children aged 48-59 months.<sup>19</sup>

There are significant variances when stunting is compared against geographical location; poverty and household wealth; the mother's birth interval, body mass index (BMI) and level of education. Children in rural areas are more likely than those in urban areas to be stunted (28% and 17%, respectively). Geographically, five regions have the highest proportion of stunted children (with rates above the national average of 24%): Ohangwena (37%), Hardap (29%), Karas and Omaheke (27% each) and Oshikoto (26%). These regions generally tend to have poor socio-economic conditions characterised by high poverty levels and high unemployment rates. Evidence generally shows that children living in households in the poorest wealth quintile have the highest prevalence of stunting (31%).<sup>20</sup>

The mother's BMI has an inverse relationship with stunting levels. NDHS (2013) found that 28% of children of mothers who have a BMI less than 18.5 are stunted, as compared with 15% of children whose mothers are overweight or obese with a BMI of 25 or above. Another important factor is the mother's level of education. Children whose mothers have more than a secondary education are least likely to be stunted (9%), whereas children whose mothers have no education are most likely to be stunted (34%). The spacing of children's births also influences stunting. If a pregnancy occurs too soon after the previous birth, the mother may have insufficient time to recover her nutritional status or it may mean premature weaning of breastfeeding and inadequate alternative feeding practices of the sibling. As such, children whose size at birth was reported as very small by their mothers are most likely to be stunted (40%).

In terms of wasting, children age 9-11 months (19%), male children (9%), those with a preceding birth interval of less than 24 months (11%), those with a very small size at birth (17%), and those living in Omaheke (10%) have the highest levels of wasting. Similarly, the prevalence of wasting decreases with increasing mother's education and the data further show that children living in the poorest households have the highest prevalence of wasting (9%).

Gender issues are clearly of critical importance for food security and nutrition and in particular for addressing stunting in Namibia. About 19% of women age 15-19 having begun childbearing (14% have had a live birth, and 5% are currently pregnant)<sup>21</sup>. Teenage pregnancies have been increasing in Namibia, with a 4% increase recorded since the 2006-07 NDHS. Teenage pregnancy is more than three times higher among young women in the lowest wealth quintile than among those in the highest wealth quintile. There are

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<sup>17</sup>NSA, 2010

<sup>18</sup>Namibia Demographic Health Survey, 2013

<sup>19</sup>ibid

<sup>20</sup>ibid

<sup>21</sup>Namibia Demographic Health Survey, 2013

various risks associated with teenage pregnancies including likelihood of maternal death during childbirth and babies more likely to die or be born with nutritional deficiencies.

A range of immediate, underlying, and basic determinants and their interactions causes stunted growth in Namibia. Among the immediate causes are poor quality foods including poor micronutrient quality and prevalence of diseases. An analysis of the consumption patterns in six regions based on nutrition security monitoring indicates poor dietary diversity in these areas over the three periods.<sup>22</sup> This increasing level of poor consumption often leads to malnutrition. Micronutrient deficiency is partly reflected in the prevalence of anaemia among children age 6-59 months and among women 15-49 years. Overall, 48% of children ages 6-59 months are anaemic.<sup>23</sup> Anaemia is a good proxy for broader micronutrient deficiency. Although micronutrient deficiency data (iodine, vitamin A and iron) is over two decades old<sup>24</sup>, previous studies identified goitre as a public health concern due to high prevalence of iodine deficiency.<sup>25</sup>

Insufficient care and support for mothers are critical underlying causes for stunting. In general, breastfeeding is common: in 2013, 95.7% children had been breastfed as reflected in Table 2.2. However, the average duration of breastfeeding has been decreasing from 2006-2013 (from 16.8 months to 14.8 months). Sub-optimal care practices, for example responsive feeding, early initiation of solid and semi-solid foods are due to time constraints available for the mother to take care of children. Another hindrance for exclusive breastfeeding is the promotion of breast milk substitutes.

In terms of diseases, the prevalence of diarrhoea, HIV and TB undermine the immune system and contribute to malnutrition and stunting in Namibia. Diarrhoea is often more prevalent among children (6-35 months) in households without an improved source of drinking water, and without an improved toilet facility. Although, overall HIV prevalence in Namibia has declined to 16.9% in 2014 from 18.2% in 2012,<sup>26</sup> it is still high and a factor impacting stunting. This is because undernutrition and poor growth are common manifestations of HIV infection.<sup>27</sup> Hence, a child's HIV status is a significant predictor of malnutrition among infants born to women living with HIV. Another disease that exacerbates malnutrition is TB because it weakens the immune

**Table 2.2: Overview of Breastfeeding in Namibia**

|                                     | 1992        | 2000        | 2006        | 2013        |
|-------------------------------------|-------------|-------------|-------------|-------------|
| Median duration of breastfeeding    | 17.3 months | 18.6 months | 16.8 months | 14.8 months |
| % EBF from birth to 6 months        | 3%          | 4.1%        | 23.9%       | 48.5%       |
| % started BF within 1 hour of birth | 52.3%       | 80.9%       | 71.3%       | 71.2%       |
| Children ever breastfed             | 94.9%       | 95.1%       | 94%         | 95.7%       |
| Children breastfed at 1 year        | 73%         | 75.2%       | 69%         | 64%         |
| Children breastfed at 2 years       | 13.4%       | 22.3%       | 28%         | 21%         |

Source: MoHSS, 2015; NDHS, 2013.

<sup>22</sup>Omaheke, Zambezi, Karas, Kunene, Omusati and Ohangwena regions – assessments are undertaken by the Directorate of Disaster Risk Management (DDRM) with technical assistance from WFP

<sup>23</sup>Namibia Demographic Health Survey, 2013

<sup>24</sup>NAFIN, 2012

<sup>25</sup>ibid

<sup>26</sup>Ministry of Health and Social Services, 2014

<sup>27</sup>Arpadi, 2000

system. Many patients with active TB experience severe weight loss and show signs of vitamin and mineral deficiencies. Namibia has one of the highest infection rates of TB in the world, the highest caseload being attributed mainly to co-infection with HIV.<sup>28</sup>

Namibia has made significant progress in improving access to water, but there is a lack of progress on sanitation, also an underlying cause for stunting. Nationally, only 34% of households in Namibia have access to improved sanitation and the situation is worse in rural areas (17% compared to 49% in urban areas). The NDHS conducted in 2013 shows that 46% of the population do not have access to improved sanitation and practice open defecation (some estimates put the figure at more than half of the population). Sanitation in schools is equally poor. One in five schools in Namibia do not have toilets and 93% of the schools without toilets are concentrated in the five flood prone northern regions.

The lack of progress in sanitation has been attributed to several factors: poor coordination in the sector; lack of accountability; spreading efforts and resources thinly; lack of knowledge and understanding of the impact of sanitation on public health; and economic development.<sup>29</sup> Such challenges are also compounded by the relative or total absence of a formalised process for implementation, monitoring and evaluation of plans.

Namibia's malnutrition challenges and in particular stunting are deeply rooted in a number of socio-economic and environmental factors. The majority of the population and in particular women and children is affected by high poverty levels, unemployment rate and suffer from the impacts of droughts and floods. Of major concern is also the institutional fragmentation and coordination challenge thereby reducing the impact of programmes and policies aimed at addressing food and nutrition insecurity.

### 2.1.4 Pillar Three: All Food Systems Are Sustainable

The High Level Panel of Experts on food security and nutrition (HLPE) define a sustainable food system as "a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised" (2014).<sup>30</sup> Efficient, well-managed and sustainable food systems are essential to end hunger and malnutrition as well as to protect the environment and its long-term food production capacity. This implies smarter approaches, policies and investments encompassing "the environment, people, institutions and processes by which agricultural products are produced, processed and brought to consumers in a sustainable manner" (UN, 2013).<sup>31</sup>

A sustainable food system in Namibia should explicitly recognise that drought and high climatic variability are endemic and that climate change will have an important impact in the future. The country has recorded several drought episodes and flood hazards between 1999 and 2015. The number of people affected by drought has steadily increased from 25,000 in 1998 to more than 700,000 in 2013.<sup>32</sup> Indeed, the drought of 2012/13 resulted in a state of emergency, with over 780,000 people in the country declared as food insecure, over 330,000 people requiring urgent support,<sup>33</sup> and over 4,000 animals dying. The 2014/15 rainfall season was characterised by lower than normal rains and prolonged dry spells resulting in poor harvests. Food insecurity was compounded by resultant increased food price and restricted access to food.<sup>34</sup>

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<sup>28</sup>Kahler B, 2015

<sup>29</sup>Ministry of Agriculture Water and Forestry, 2015

<sup>30</sup>HLPE, 2014. *Food losses and waste in the context of sustainable food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome 2014.*

<sup>31</sup>UN. 2013. *Secretary-General's message on World Food Day. New York, 16 October 2013, <http://www.un.org/sg/statements/index.asp?nid=7206>*

<sup>32</sup>Ministry of Environment and Tourism, 2011, *National Policy on Climate Change for Namibia, [http://www.met.gov.na/AAP/Downloads/National%20Policy%20on%20Climate%20Change%20for%20Namibia%202011\\_compressed.pdf](http://www.met.gov.na/AAP/Downloads/National%20Policy%20on%20Climate%20Change%20for%20Namibia%202011_compressed.pdf)*

<sup>33</sup>UN-OCHA, 2013

<sup>34</sup>FNSM, 2015

Similarly people affected by floods increased from 2,000 in 2000 to 350,000 in 2009. Floods are common in northern regions of the country and impacts significantly on crops and livestock. In 2013, many households were displaced with their houses and crops destroyed by floods in the Zambezi region.<sup>35</sup> Apart from damaging houses, crops and killing livestock, floods destroy infrastructure, with particularly severe impact on vulnerable groups that are unable to recover.<sup>36</sup> Furthermore, the outbreaks of pests and diseases, and late and erratic rainfalls make agricultural production risky as some households lose their livestock and planted crops.

Natural hazards in Namibia though not qualified as disasters, often result in population displacement, economic disruptions to transport, livestock, crops and other physical and environmental assets. In addition, vulnerability resulting from these hazards has been growing putting more people in difficult conditions. Indications are that the country will continue to be highly susceptible to increased flooding, both in terms of extent and frequency, and increased moisture stress during dry periods leading to increased drought both in terms of intensity and frequency (MET, 2011).<sup>37</sup>

Apart from these hazards, Namibia also experiences frequent veld and forest fires that destroy pasture for livestock and forests. Veld and forest fires are also linked to unfolding climate change, contributing to environmental degradation, ecosystem stress, and watershed instability and biodiversity loss. Namibia has also experienced earthquakes, with the largest recorded in history in July 2009, although these have not yet caused any major destruction but they have a potential to create tsunamis.

Reliable crop production under rain-fed conditions is possible in areas receiving an average of over 400mm rainfall annually. This occurs in two of the four agro-ecological regions, which represent 34% of agricultural land in Namibia, and determines the main agricultural production systems. Namibia's agricultural production is practiced within commercial and communal sub-systems. The communal areas directly support 95% of the nation's farming population, occupying 48% of the total agricultural land (33.5 million hectares). This is clearly predicated upon smallholder and subsistence production.

The commercial farming sub-sector is underpinned by 4,200 large-scale farmers and occupies 52% of agricultural land (36.2 million hectares). Both sub-systems are under increased threat from climate change although the communal sub-sector, located particularly in the northern regions, is far more vulnerable as it is associated with deep poverty, as shown in Figures 2.2a and 2.2b.

Since the level of output depends on productivity and other factors, households' food security is not uniform. A study on the duration of food stocks in six regions during the period November 2014 to March 2015 captured through the Food and Nutrition Security Monitoring System (NFNSMS) (2015) showed that surveyed households in five regions had stocks lasting less than one month. In addition to rearing animals, some communal households produce grains for own consumption and for the market. As the bulk of communal crop production is rain-fed, it is subject to the vagaries of the weather patterns. These findings indicate significant vulnerability faced by rural households, especially during drought periods. Livestock farmers are also adversely affected by drought, which causes a decline in the value of animals.

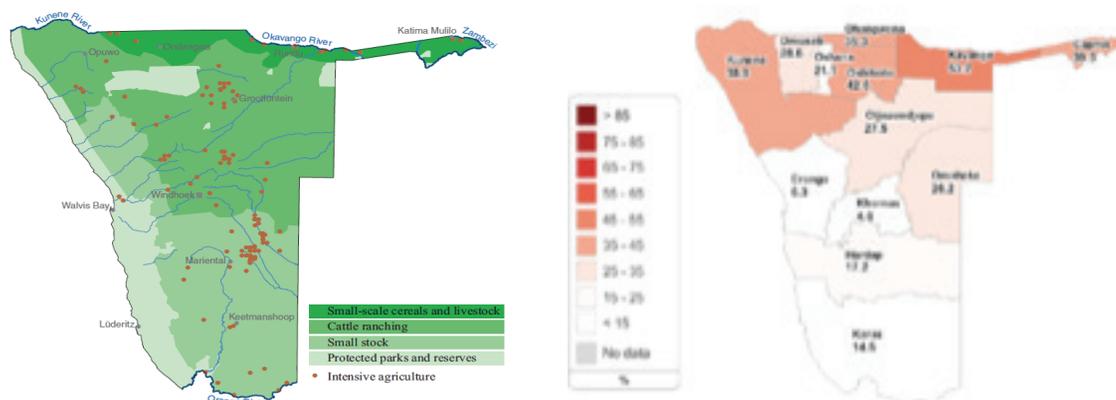
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<sup>35</sup>IFRC, 2013

<sup>36</sup>Anthony, et al., 2015

<sup>37</sup>Ministry of Environment and Tourism, 2011, *Namibia National Climate Change Programme*, Windhoek, Namibia

**Figure 2.2a: The main farming systems in Namibia & Figure 2.2b: Headcount Poverty rate, 2011, by region**



Source: Adopted from Mendelsohn 2006

Poor rains over the past three years have resulted in significant deterioration of the communal sector livestock population, thus reducing the market value of the animals.

Namibia is recognized as one of the countries that are most vulnerable to the impacts of climate change globally based on predicted increases in temperature and increased variability of rainfall. Climate change impacts are expected to affect water availability in particular through increased variability of rainfall, temperature increases, prolonged and more severe droughts, declining soil moisture and increased evapotranspiration. With respect to water resources, even in the absence of significant climate change, Namibia is predicted to suffer complete water scarcity by 2020 (INC, 2002).<sup>38</sup> With less than 5% of Namibia considered as dry sub-humid, the vast majority of the country is arid to semi-arid. Bulk water supply is provided through a network of storage dams and from the perennial rivers situated along the northern and southern borders. Thus a reduction in the amount and reliability of rainfall and the increase in evaporation due to rises in temperature will decrease the availability of already scarce water resources.

Namibia's marine fisheries, which rely on the nutrient-rich upwelling of the Benguela Current System, are threatened by changes brought by climate change. When upwelling is suppressed by northerly or easterly winds, oxygen-poor water can accumulate near the seabed and suffocate marine life.<sup>39</sup> It is possible that observed reductions in pilchard stocks since 1993 could be partially explained by warmer seas. Unpredictable algal blooms and severe weather conditions may also be exacerbated by climate change. These impacts will thus affect fish catches, which contribute 6% to GDP, and decreases in production are likely to range from 30% to 50% (MET, 2011). The contribution of Fisheries is thus slightly higher than the GDP contribution of Agriculture.

In sum, climate change will exacerbate the existing challenges that Namibia is facing as the driest country south of the Sahara, compounding the stress on climate-sensitive sectors such as agriculture, livestock management and fishing. Indeed, the high dependence on these climate sensitive natural resource-based sectors is revealed through their accounting for 24% of the total Gross Domestic Product in 2008.<sup>40</sup>

<sup>38</sup>Republic of Namibia (2002). Namibia Initial Communication to the United Nations Framework Convention on Climate Change

<sup>39</sup>Republic of Namibia (2002). Namibia Initial Communication to the United Nations Framework Convention on Climate Change

<sup>40</sup>Central Bureau of Statistic, National Planning Commission, 2009

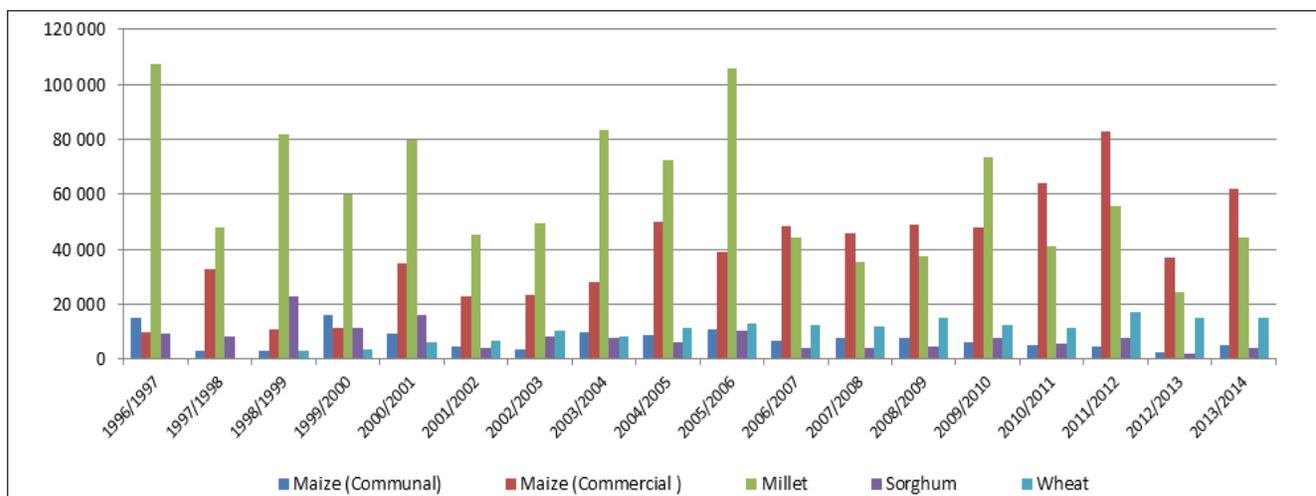
### 2.1.5 Pillar Four: 100% Increase in Smallholder Productivity and Income

The importance of smallholder producers derives from their pervasiveness and role in agricultural and economic development. The term “smallholder” refers to their limited resource endowments relative to other farmers in the sector. They produce food for home consumption, as well as for sale, which means that earning an income is a conscious objective, as distinct from “subsistence or resource-poor producers” who produce mainly or entirely for own consumption. This, in turn, is distinct from “commercial producers” who are defined as large-scale. In Namibia, smallholder producers are crop growers with less than three hectares of land producing under rain-fed conditions, predominantly found in the Zambezi, Kavango East, Kavango West, Ohangwena, Oshikoto, Oshana and Omusati regions. They grow millet, sorghum, beans, groundnuts and maize for own consumption and for income.<sup>41</sup> Smallholder producers who produce under irrigation have farm sizes that range from three to six hectares.

Namibia remains a structurally food deficit country<sup>42</sup> with low levels of production among Namibia’s smallholder farmers. Low levels of agricultural production in the communal areas are due to limited available land, which consists of 34% of the total agricultural land in Namibia able to support economic crop and livestock production. Low levels of productivity in the communal crop-farming sub-sector are partly due to smallholder producers not experiencing sustained technological progress, poor soil conditions, and prolonged and frequent drought spells.<sup>43</sup> Another constraint has been the low agriculture wages in the smallholder sector where family labour is the dominant source of labour. These wages are below what farmworkers on commercial farms receive. Indeed, while 29.5% of the national employees are within the agriculture sector, their average monthly wage of \$2,265 for female workers and \$2,076 for male workers is below the subsistence needs of an average family of five members.<sup>44</sup>

Figure 2.3 demonstrates that there has only been an increase in commercially produced maize between 1996 and 2014, with communal production remaining significantly lower over that period. The remaining crops have experienced a decline.

**Figure 2.3: Maize, millet, sorghum and wheat production 1996/97 and 2013/14 seasons**



Source: Namibia Agronomic Board (2014)

<sup>41</sup><http://www.namibiansun.com/agriculture/transforming-smallholder-farming-for-food-and-nutrition-security.54064>

<sup>42</sup>Namibia Agronomic Board, 2014 and EFSA (2013)

<sup>43</sup>International Food and Agricultural Development (2011)

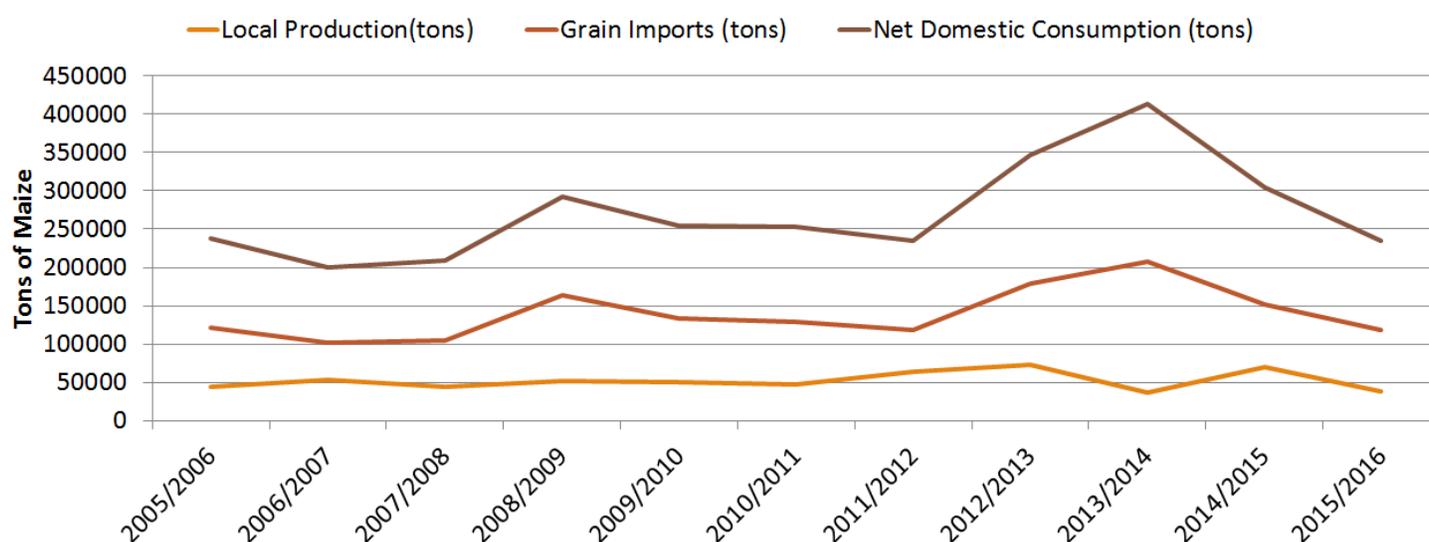
<sup>44</sup>NHIES, 2009/10.

Crop production in Namibia is practiced under both rain-fed and irrigation. Communal farmers in the northern regions mainly practice rain-fed production. There are a number of commercial irrigation schemes operating under the Green Scheme Policy as well as some private funded irrigation schemes. It is estimated that about 11,500 hectares are currently being used for commercial irrigated crop production under the Green Scheme.<sup>45</sup> The country has an irrigation potential of 43 500 hectares of which 27,000 hectares are anticipated to be put under irrigation in the long term.<sup>46</sup> The fact that only a quarter of all potential irrigable land is used is a key opportunity for smallholder farmer development.

The irrigation farms produce half of the local maize produced in the country. For irrigation production, yields ranges between 7.1 tonnes in drought years to 10.6 tonnes in good rainfall years.<sup>47</sup> The comparison with dry land farming is stark: yields vary between 0.17 tons per hectare in drought years, to 3.2 tonnes in good rainfall years. This is an important point that is linked to the fact that 50% of maize production comes from rain-fed sources, which demonstrates the structural issues of food security.

It is vital to recognise that the rain fed system has not witnessed significant increases in area between the 2005/06 and 2013/14 farming seasons (NAB, 2014). A key underlying issue is that rain-fed agriculture is highly susceptible to drought. Figure 2.9 shows trends in maize production, imports and consumption in Namibia. The country has always experienced a deficit in maize requirements and, on average, imports approximately 55% of maize requirements each year. Figure 2.4 shows that consumption is increasing, along with the imported quantities, while local production is declining during drought years.

**Figure 2.4: Local production, imports and total consumption of maize**



Source: Namibia Agronomic Board (2014)

It is instructive to look at other crops under irrigation. Wheat is a major food source for the majority of the population yet only produces around 13% of the national wheat requirements, importing the remainder. There was no expansion in irrigated wheat: in the 2013/2014 season, 2,198 hectares were used for wheat production to produce a total production of 11,312 tons.<sup>48</sup> Similarly Namibia produces an increasing quantity of its horticultural requirements and imports around 56% of these including potato, onion and

<sup>48</sup>Namibia Agronomic Board, 2014

<sup>45</sup>AgriBusDev 2014

<sup>46</sup>AgriBank, 2014

<sup>47</sup>Namibia Agronomic Board, 2014

other vegetables.<sup>49</sup> The Agronomic Board of Namibia (2014) argues that there is an enormous potential for local horticulture production, clearly strengthened by the service provided by AMTA, but that local marketing infrastructure and marketing strategies are hampering the performance of the local production.

Namibia is known as a livestock producing country as livestock forms an important asset for most households. It is a store of wealth as well as food in terms of meat and milk and can be sold or bartered in times of hunger. There is a general decline in terms of cattle numbers in the northern regions. On average, 40% of the households own cattle. For all the cattle marketed through formal channels, only 11.40% and 7.3 % came from the Northern Communal Areas (NCA) in 2013 and 2014 respectively.<sup>50</sup> This is despite the fact that 44% of the national herd is found in the NCA.<sup>51</sup> Looking at the price trends, 2014 prices were better compared to 2013 but when one factors in the inflation level and the consistent increases in the food prices farmers who sold cattle to buy food were worse off than in previous years. This may explain why there is little participation in the livestock markets. The productivity of the livestock sector in the communal areas is constrained by high frequency of drought, overgrazing, low calving rate, low off-take rate, traditional farming practices, as well as exclusion from the lucrative markets due to prevalence of foot and mouth disease in the Zambezi Region, with occasional outbreaks in some parts in the extreme east of the Kavango East Region. Poor grazing and limited quality and quantity of water are major concerns in all the northern regions. Some farmers in the NCA take pride in having a large herd of cattle rather than selling even in the face of drought.

In the southern regions most smallholder farmers are farming predominantly with small stock. Most smallholder farmers in the southern communal areas market their livestock through local abattoirs and export the live animals to South Africa. The producer prices have seen a significant growth between 2013 and 2014 marketing seasons. Sheep producer price is performing better than cattle producer prices. According to one study, small stock farmers in the southern regions earn on average N\$5 000 per month, which is close to the national average per capita monthly income of US\$5 693.13.<sup>52</sup>

The Namibian coast has an important opportunity for marine aquaculture development that can significantly contribute to economic growth and food and nutritional security. The main objective of the sector is to manage and govern utilisation of the country's fishery resources on a sustainable manner and facilitates development of responsible industries that ensure lasting contribution to the country's socio economic development (Marine Resources Policy, 2004). It is estimated that inland aquaculture is producing between 50 and 100 tons of fresh water fish annually.<sup>53</sup>

### 2.1.6 Pillar Five: Zero Loss or Waste of Food

Reducing food waste and increasing resource use efficiency in the food chain has received growing attention at the international, regional and national levels. Food waste refers to intentional discards of food fit for consumption. It typically takes place at the retail and consumption stages in the food supply chain through the behaviour of organisations and individuals. Food loss is the unintended reduction in food available for human consumption that results from inefficiencies in supply chains. It occurs mainly at the production,

<sup>49</sup>NAB, 2014

<sup>50</sup>MAWF, *Directorate of Veterinary Services, 2015*

<sup>51</sup>NNFU, *2006 and Sherbourne, 2010*

<sup>52</sup>Ngavetene, 2015

<sup>53</sup>ibid

post-harvest and processing stages, for example when food is damaged during transport and disposed of. Globally, food lost after harvest and food wasted along the distribution and consumption chain, or food wastage, has a twofold negative environmental impact: unnecessary pressure on natural resources and ecosystem services; and pollution through food rejects.

Although Namibia does not produce enough food for its own consumption needs, it is estimated that about 24% of all food calories grown per year are lost or wasted along the food value chain of smallholder producers.<sup>54</sup> Although there is evident of food losses and food waste in Namibia, there are currently no comprehensive records about these. The information in this section is undocumented evidence of Namibia and this information was collected informally from various stakeholders. The estimate does fall within the realm of plausibility; the Food and Agriculture Organisation (FAO) argues that estimated yearly global food loss and waste by quantity at roughly 30% of cereals, 40–50% of root crops, fruits and vegetables, 20% of oilseeds, meat and dairy products, and 35% of fish.<sup>55</sup>

In the production of vegetables or plant-based products, including watermelons, cabbages and pumpkins, the losses are estimated at 14% for commercial smallholder farmers while for communal farmers the losses are more than 40% for perishable products. In maize, sorghum and wheat, the losses are estimated at 20% per production season. These could be mitigated but producers in rural areas are not educated concerning food loss and waste, especially during harvesting and storing.

Presenting insights directly from smallholder farmers and respondents engaged in supporting them, it is clear that food losses occur at various stages of agricultural production in Namibia. Some grain is eaten by birds or destroyed by animals while still in the field. Other grain is left un-harvested due to lack of labour and the use of machinery. Some foods are harvested while they are not yet ready. Additional losses occur during winnowing as grains are mixed with soil. Further losses occur during transportation with unsuitable equipment.

Thus in terms of smallholder producers, challenges associated with food losses relate largely to the structural dimensions that limit productivity. For example poor road infrastructure, particularly in rural areas, inadequate transport services meaning that transport is not always available, and the high transportation costs often exclude communal farmers from markets. This means that produce may be lost post-harvest particularly if there is a long distance to markets. Exacerbating this is a lack of proper packaging materials in which to transport products. AMTA has tried to address some of these constraints particularly through purchase of millet at decentralised points.

Similarly commercial producers experience food losses during harvesting of vegetables although efforts have been made to donate unmarketable crops in the effort of minimising food loss and waste.

In supermarkets, food losses occur when supply exceeds demand. Sometimes due to shortage of customers, food may remain on the shelves, resulting in a loss of quality and sometimes have to be disposed. In 2015, losses and waste from three main supermarkets in the country was estimated to be over N\$90 million annually.<sup>56</sup> Inappropriate ordering and incorrect projections of demand for food products also result in quantities of merchandise not being sold before the expiration date or experiencing natural deterioration. Estimating demand for food products is very complex and is influenced by multiple factors such as climate, season, specific marketing campaigns, new product launches, promotions, and holidays.

Food needs to be transported from warehouses to distribution points or to retailers, and food losses occur during transit. Accidents may occur during transportation of food products and monitoring of cooling

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<sup>54</sup>Oskar Elago, 2015, *Input paper into Food and Nutrition Security Strategy: Food Loss and Food Waste*.

<sup>55</sup>FAO, 2015 <http://www.fao.org/3/a-i4068e.pdf>

<sup>56</sup>Namibia Trade Forum, stakeholder consultation

systems during transportation is often an unattainable task since it is inconvenient for the driver to keep stopping in order to monitor the temperature. Uneven roads might also damage food products and communal farms are often not fully accessible due to poor roads conditions. Unsuitable storage facilities may cause foods to deteriorate in quality. Moreover, temperature fluctuation may occur in storage due to improper management and inconsistent inspection, this can lead to shrinking and swelling of the food product. Additionally, power failures, especially at night, affect the cooling systems, which may result in an increase in temperature and therefore food may get spoiled. Inadequate implementation of good practices results in maize meal being stored and forgotten, food being damaged by heavy rain, and food rotting due to mismanagement.

The presence of unhygienic conditions during processing increases food contamination and spoilage. Food waste can also occur if food is not prepared in a way required by consumers, such as overcooking. Fish heads and livers that are also edible are thrown away at sea during processing. Meat and meat products are lost every day as a result of poor handling during processing.

Food losses and waste can occur as a result of customer preference as not all food prepared may be sold and will spoil after time. Food is often used as a symbol of wealth, and therefore may encourage a tendency to waste. An example of this is hotels and restaurants, which offer a fixed price buffet ("eat as much as you can"), oversized portions and refills of soft drinks, which promote waste.

Other causes of food losses and waste identified through stakeholder consultations include limits of the technology used to conserve products, particularly fresh products; damage to the product and food packaging during transportation and storage; inadequate professional training of sales staff, who do not perform proper stock rotation procedures; recalls of products that do not meet qualitative and safety standards; and marketing strategies ("buy one, get one free"), which are intended to promote the sale of products close to their expiration date and solve overstock problems, but which result in transfer of the risk of waste from distribution to final consumption.

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## CHAPTER 3: RESPONSE AND GAP ANALYSIS

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### 3.1 INTRODUCTION

Namibia has a wide range of policies and strategies addressing different aspects of food security and nutrition. A detailed analysis of key policies and strategies follows, which are organised around each of the Zero Hunger Pillars. The implications of these policies and strategies have been drawn out, with particular emphasis on gaps that emerge based on the preceding analysis. This provides direction and opportunities for a strategic response.

### 3.2 POLICY AND INSTITUTIONAL ENVIRONMENT

Looking specifically at the key dimensions of the situational analysis for each of the pillars, a detailed analysis of the policy and institutional environment can be made.

#### 3.2.1 100% Access to Adequate Food All Year Round

*Over 80% of the Namibian population rely on market purchases for food. Combined with the heavy reliance on food imports, which makes Namibia susceptible to high food prices, increases pressure on vulnerable households' food security. Low-income earners struggle to meet their minimum daily requirements for food intake as they can only access poor quality foods with low micronutrient content. This implies that poverty is a major factor limiting access to food. The poor are primarily women, subsistence and smallholder farmers, pensioners located largely in rural areas and people living in urban informal areas.*

Stimulating the broader economy to create employment is a clearly articulated objective of the Government of Namibia. A wide range of policies and programmes emphasise this so focus is placed in this Review on policies targeting the most vulnerable to hunger. These programmes cover both safety nets for the most vulnerable and enterprise development to underpin inclusion in broader economic development.

An important challenge in Namibia is that the majority of working people have a median wage close to the poverty datum line. With low incomes, households have limited options to address food security and nutrition. Coupled with high unemployment, especially among the youth, and high prevalence of underemployment, this challenge is one of the most pressing in Namibia, requiring concerted policy attention and alignment.

A few key government interventions focus explicitly on helping ensure that food is affordable. This largely pivots on monitoring prices in the market. This stems from recognition that the market structures in some sectors of the economy have the potential for market abuse. The Namibia Trade Forum (NTF) collects and monitors prices in industry on behalf of the Ministry of Industrialisation, Trade and SME Development. The forum is working on the formulation of a Retail Charter, which would include legislation that protects consumers. The charter seeks to facilitate 'growth at home', thus ensuring that local producers are protected against unfair competition from imported products. Through the Namibian Agronomic Board (NAB), the country is closed to grain imports during certain periods of the year to allow local production to be consumed on the market.

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MAWF has invested in AMTA to manage the National Strategic Food Reserves, which have a capacity of more than 15,000 metric tonnes. The silos store produce from Green Schemes and local farmers through marketing channels. AMTA is providing transport services between small-scale fresh produce farmers in the rural areas and the market in order to prevent some food losses associated with lack of access to storage facilities. These food reserves can be deployed as a necessary safety net when required, as part of a broader social protection approach.

Social protection is a blanket term describing a system of interventions aimed at assisting households to build routes out of poverty. Broadly, social protection consists of labour market interventions (e.g. labour skills training and active labour market policies), social insurance (e.g. social health insurance), and social safety nets or social assistance programmes. The most prominent social assistance programme in Namibia is the social pension or basic social grant. This is a universal and unconditional cash transfer to pensioners aged 60 years and above in order to improve and maintain their purchasing power. According to the NHIES, coverage was 95% in 2009 with the transfer being the main source of income for 10.2% of surveyed households. A wide range of other grants exists to provide income to households and individuals with certain social and economic circumstances. Other major government social safety nets include, child and family grants, disability grants, veteran grants. In 2008, family grants and grants and allowances targeted at the protection of orphans and vulnerable children benefited about 250,000 persons.<sup>57</sup>

Another important intervention that facilitates access to food is the school-feeding programme. This safety net provides learners with a standardised mid-morning meal with fortified inputs to improve the nutritional value of the meal. The programme supports over 320,000 learners<sup>58</sup>, and it provides 30% of the daily nutritional requirement; the other 70% is supposed to be met through household consumption. The feeding programme is the main meal for some learners<sup>59</sup>, since their households are not able to fully complement the feeding programme. Further, the Ministry of Health and Social Services (MoHSS) initiated the National Policy for School Health in 2008 to support a comprehensive school health programme that offers food and manages the nutritional needs of learners.<sup>60</sup> The stakeholder engagement is underway towards the formulation of a comprehensive school feeding policy.

The government has put in place a number of social protection measures to promote productive activities to build and maintain livelihoods, and to limit the possibility of distress sales of productive assets. The government offers tillage support, subsidised seeds and fertilisers to communal farmers. In some areas, MAWF is engaged in distributing small stock as a way of building household assets. It is involved in setting up community gardens to ensure the local availability of fresh vegetables. The ministry is also encouraging the establishment of backyard gardens so as to reduce reliance on the formal market. However, the lack of coordination between some of the ministry's department results in the projects failing to become sustainable.

The government provides support for employment creation to the informal sector and small and medium enterprises through the Namibia Development Corporation (NDC). The NDC is mandated to provide credit and business training to small enterprises.<sup>61</sup> To complement the initiative, and offset a perceived urban-bias, non-governmental organisations assist rural households by providing small loans to start small

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<sup>57</sup>*Social Safety Nets in Namibia: assessing current programmes and future options. 15th Annual Symposium, Bank of Namibia.*

<sup>58</sup>WFP, 2015

<sup>59</sup>FNSM, 2013

<sup>60</sup>WFP, 2012

<sup>61</sup>Seiche, 1995

businesses. The venture-capital nature of the NDC operations precludes poor, vulnerable and unskilled people from effectively participating. Subbarao (1998) found that the default rate was between 30-40%, which compromised the sustainability of the initiative. The Ministry of Gender Equality and Child Welfare also has an initiative to promote entrepreneurship and employment creation whereby financing is offered to individuals to engage in viable income generating activities. The granted funds should be used to purchase equipment and materials for the start-up of small businesses.

At times when government has increased expenditures to enhance job creation and infrastructure development, the tendering process gives preference to small and medium enterprises. The government, in collaboration with donors, funds the construction and maintenance of infrastructure like schools and roads with the private sector as the implementing agency. Although the employment created is generally short-term in nature, the programme has a skills development component aimed at improving the long-term employability of the participants. Despite its intentions, weaknesses in inter and intra-sectoral linkages undermine employment creation.

Apart from formal social assistance programmes, Namibia has a number of informal social safety nets. These consist of help from the extended family, taking care of orphaned children of relatives<sup>62</sup>, sharing food, draught power and other productive assets with neighbours, gifts and contributions to social functions like marriage ceremonies, weddings and funerals, and soft loans to neighbours and relatives. Food deficit households may borrow and beg for food, or obtain food from neighbours or the community. However, such *ad hoc* interventions only bridge the gap and are not sustainable.

Standing back from this analysis, a number of important gaps exist in these overall responses to supporting food access, particularly for the most vulnerable. Although effective in their focus, interventions on price monitoring and consumer protection do not provide a comprehensive response system to food prices. As an example, there are some weaknesses in the management of strategic grain reserves, as food is sometimes wasted.

One challenge affecting the accessibility of grants is lack of documentation among potential beneficiaries. This is partly caused by illiteracy and the complex procedures in place at government offices. In some cases, grandparents looking after grandchildren fail to register the children for the appropriate maintenance grants because the eligibility conditions require the presence of biological parents. The social protection system also faces important geographical and demographic challenges: there are great distances around the country and limited access to information, which leaves some communities isolated and some deserving individuals excluded. A lack of a registration programme is an important hindrance to establishing a comprehensive system.

Broadly speaking, there are weaknesses in inter and intra-sectoral linkages of programmes intended for employment creation. The lack of coordination between sectors and even within sectors, such as within MAWF, results in projects failing to become sustainable.

### 3.2.2 Pillar Two: Zero Stunted Children Less Than Two Years

*The high child stunting rates of 24% is an indication of inadequate nutrition over long periods of time exacerbated by poor access to health and care. The prevalence of diarrhoea, HIV and TB undermine the immune system. 46% of the population do not have access to improved sanitation and practice open defecation, factors which strongly impact nutrition status. Gender issues are clearly of critical importance for addressing stunting with insufficient care and support for mothers and adolescents (10-19 years) needing to*

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<sup>62</sup>Pendleton et al., 2012

be acknowledged as a distinct category instead of being subsumed within broader maternal programmes. Global evidence shows that reductions in stunting and other forms of malnutrition can be achieved through proven nutrition specific and nutrition sensitive interventions within the context of an enabling environment. These interventions draw on complementary sectors and address crucial underlying determinants of nutrition such as poverty, governance, income and equity.

Nutrition specific interventions cover mainly multiple micronutrient supplementation and Infant and Young Child Feeding (IYCF) initiatives. The government will update the Food and Nutrition Security Policy and Implementation Plan that will consolidate a nutrition-specific strategy including mandatory fortification of foods. The Food Fortification Working Group commissioned studies on the potential of fortifying *mahangu* (millet) and sugar with both studies highlighting the need for fortification legislation that will provide guidance. In addition there is a countrywide programme on vitamin A supplementation targeting children 6-59 months of age and women *postpartum*. As a result, the proportion of children who received micronutrient supplements has increased since the 2006-07 NDHS from 52% to 84% in 2015. In terms of addressing iodine deficiency, the government launched an iodine supplementation campaign and passed legislation on mandatory iodisation of household salt. Iron supplementation for 90 or more days during pregnancy is still promoted and has high adherence rates. However, zinc deficiency is a public health problem, given that maize and millet are the common staple foods eaten by most Namibians.

Due to mixed messages around HIV and infant feeding, MoHSS developed the National Policy on Infant and Young Child Feeding<sup>63</sup> in 2003 focusing on the benefits of exclusive breastfeeding, management of breast problems, introduction of complementary foods and young child nutrition needs.<sup>64</sup> These programmes have resulted in marked progress in exclusive breastfeeding. Nevertheless, there is still insufficient guidance on complementary feeding. Similarly, the Code of Marketing of Breast-Milk Substitutes has been drafted and included in 2015 Public and Environment Health Bill. Training and advocacy campaigns have been on going but more needs to be done in improving maternity leave conditions, awareness and education.

The main health sector interventions include Nutrition Assessment Counselling and Support (NACS) for PLHIV, immunization of children 0-2 years and the introduction of Health Extension Workers (HEWs), which is proving to be an effective community-based approach to accessing health services. The objective of the programme is to provide promotive, educative, basic curative and rehabilitative services at community level especially to those living in remote rural areas. HEWs provide important basic health care information and alert health facility and district staff on health related events in the community. The programme faces some challenges as the health extension workers travel long distances. Lack of transport and the semi-nomadic nature of communities also hinder follow-ups and referrals from reaching health facilities.

Since 2008, MoHSS has been working to integrate NACS into health care services in every region of the country and to improve the quality of their service delivery.<sup>65</sup> In terms of progress, NACS have been key in preventing and managing malnutrition; improving adherence and efficacy of ART and TB treatment; improving birth outcomes for women and promoting HIV-free infant and child survival. However, a major gaps remains the need for greater involvement of all relevant line ministries especially decision makers.

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<sup>63</sup>MoHSS, 2003

<sup>64</sup>MoHSS, 2011

<sup>65</sup><http://www.fantaproject.org/countries/namibia>

In 2013 the immunization coverage showed some improvement from previous years, with 89% of infants receiving the recommended three doses of Pentavalent vaccine which protects against five diseases (diphtheria, whooping cough, tetanus, hepatitis and haemophilus influenza); and 83% vaccinated against measles.<sup>66</sup> Although immunization has a better coverage, not all children are immunized and the level is dropping particularly in urban areas.

Nutrition sensitive interventions cover the agriculture, health, social protection, and water and sanitation sectors. MAWF is involved in a number of initiatives that can improve accessibility to nutritious and diverse diets through several pathways. Initiatives around crop improvement, crop diversification and horticulture production are, however, currently being implemented without deliberate nutrition goals and targets. The role of agriculture in improving nutrition needs to be clearly defined and understood at all levels. Similarly the “Integrated Initiative in Support of Urban and Peri-Urban Horticulture Development” has no specific nutrition objective.

Under social protection initiatives, the Namibian School Feeding Programme (NSFP) has the potential to play an important role in improving nutrition outcomes. The NSFP provides a standardised mid-morning meal to learners at participating schools. The meal consists of a fortified maize blend.<sup>67</sup> A current gap is the lack of a school feeding policy although stakeholder engagement is underway. Another gap is a lack of an impact evaluation including an understanding of the nutritional outcomes.

In the water and sanitation sectors, MAWF has a coordination role in implementation of sanitation strategy and community led sanitation in the regions. A communication strategy on open defecation was produced which will provide guidance and improve behavioural change and knowledge amongst the population. Clear gaps still exist in that there is no clear link to nutrition, weak coordination in implementation as the mandate falls across various ministries, key ministries do not attend meetings, the demand for sanitation is low, and there is community fatigue.

To address malnutrition, Namibia joined the Scaling Up of Nutrition movement in 2011 following the formation of the Namibia Alliance for Improved Nutrition (NAFIN). This entity is a multi-stakeholder platform to develop and coordinate a multi-sectoral national nutrition strategy. As shown in the analysis above, addressing malnutrition requires a range of nutrition-specific and nutrition-sensitive interventions that cut across sectors. This requires a strong coordinating framework and mechanism.

Although a common results framework is in place to track progress toward ending malnutrition, NAFIN has faced a range of challenges. These include weak coordination and integration between sectors at both national and regional levels. NAFIN has the challenge of convening high-level decision makers, which has hindered progress. In addition, while the SUN implementation plan has set targets, comprehensive monitoring through NAFIN has not taken place except for the regular reporting from the health and education sectors. Without high-level political commitment to addressing malnutrition and a realisation that a multi-sectoral and multi-stakeholder process is required, NAFIN will continue to face challenges.

Without these strong mechanisms, weaknesses in the overall nutrition response will remain including insufficient guidance on complementary feeding, failure to enact the Code of Marketing of Breast-Milk Substitutes, no fortification legislation, no micronutrient guidelines, limited coverage of micronutrient supplementation in general and key information gaps on key population groups including adolescents and adult nutrition.

Explicit nutrition goals in nutrition-sensitive interventions such as crop improvement and diversification are also a key gap. There are weak linkages between sectors such as water and sanitation, agriculture,

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<sup>66</sup>[http://www.who.int/immunization/monitoring\\_surveillance/data/nam.pdf](http://www.who.int/immunization/monitoring_surveillance/data/nam.pdf) - July 2015

<sup>67</sup>ibid

and health for improving nutritional outcomes. This is exemplified in the weak coordination in WASH as implementation mandates fall across various ministries.

### 3.2.3 Pillar Three: All Food Systems Are Sustainable

*Namibia's climate and largely semi-arid and arid condition is expected to worsen the variability and intensify the impacts on the economy and general livelihoods. The commercial and communal production systems are under increased threat from climate change although the smallholder and subsistence-farming sub-sector, located particularly in the northern regions, are far more vulnerable. Climate change provides a particular threat in reducing the amount and reliability of rainfall and the increase in evaporation due to rises in temperature. This will decrease the availability of already scarce water resources.*

To build resilience of drought-affected communities, and the Namibian food system more generally, MAWF has embarked on a number of initiatives, which range from the development of drought resistant crop and livestock varieties, such as the early maturing Okashana pearl millet variety and Nguni cattle breeds. In addition, mutation breeding techniques have been used to develop high yield beans varieties, which are resistant to drought and insects. Further, the Ministry is in the process of implementing the Green Scheme Programme with the aim of increasing crop production under irrigation in order to complement crop production under rain-fed conditions. This intends to eliminate the current food import gap.

The Green Scheme projects are being implemented in regions where water and land for irrigation are available, particularly along the perennial rivers and near major Dams, such as Hardap and Neckartal, which are located near Mariental and Keetmanshoop respectively. The Neckartal Dam is still under construction and is expected to add approximately 5,000 hectares to the total area under irrigation. The Ministry has also constructed Fresh Produce Hubs in production areas to serve as marketing and storage facilities for products from irrigation farms. In addition to these, the Ministry has established National Food Reserve Facilities in different regions, which are intended to guarantee national and household food security, as well as to serve as a marketing outlet for smallholder farmers. Community-Based Rangeland and Livestock Management has been promoted as a way of ensuring sustainable wealth creation in the NCA for livestock farmers.

In line with the Climate Change policy, climate adaptation information tool kits have been developed and a regional scale up initiated through the Ministry of Environment and Tourism. In addition, the government has introduced a Climate-Smart Agriculture (CSA) programme to address challenges associated with climate change. Both these initiatives represent inter-sectoral collaboration and alignment with the African Union Comprehensive Africa Agriculture Development Programme (CAADP), Namibia Vision 2030, National Development Plan (NDP4), Agricultural Sector Plan and the National Climate Change Strategy and Action Plan (NCCSAP). The Country CSA programme aims to build resilience of agricultural farming systems for enhanced food security and nutrition in Namibia through a comprehensive set of programmes. In this regard, MAWF and FAO are in the process of implementing the Namibia Comprehensive Conservation Agriculture Programme.

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The government is working with its partners such as FAO to improve the resilience of flood-affected farmers in the Zambezi River Basin. The Post Disaster Needs Assessment of 2011 indicated that an estimated 33% of households in the region were food insecure following the floods. According to experts, climate change will affect the Zambezi River Basin more severely than any other river system in the world. The partnership focuses on training in good agricultural practices, conservation agriculture, business and marketing skills, and postharvest storage and processing. The inputs provided by the project enabled farmers to diversify production, increase land under production, replenish seed stocks and improve yields. By diversifying crop production, the project helped mitigate the risk of losing an entire harvest to flooding or drought.

In addition to distributing food relief, the government has intensified its efforts to provide water for both human and animal consumption to mitigate the adverse impacts of drought. This is part of a broader process to assist the transition from disaster response to disaster risk reduction. These include the 1997 national drought policy and the 2009 National Disaster Risk Management Policy. The establishment of the Disaster Risk Management (DRM) office within OPM provides a national disaster preparedness and response unit to coordinate preparedness and relief operations in the country.

Several early warnings systems have been established to provide frequent early warning information; however these were not fully effective on the ground. For instance although the national flood forecasting system is well established and functional, mechanisms for the transformation of the flood forecasting into early warning information are still inadequate.

During the 2012-13 drought, the government coordinated a multi-sectoral Emergency Food Security Assessment, and this identified over 330,000 people, nationwide, who were requiring urgent support. An integrated and comprehensive drought response covering food security and nutrition, agriculture and water sanitation was established. A number of interventions followed, including food assistance and borehole drilling. Farmers were encouraged to reduce their livestock in order to preserve grazing land. The Namibia Red Cross Society and the Council of Churches in Namibia complemented government efforts through direct assistance to affected communities.

Despite these promising initiatives some important gaps exist. In terms of national disaster preparedness, the major weaknesses of the structure is that there is no legal instrument that specifies the chain of command to facilitate the Disaster Risk Management Authority mobilising regional authorities and stakeholders during disaster events. Most importantly, Namibia has not included disaster risk reduction in the NDP4. There is insufficient human resource capacity for coordination and operations regarding disaster risk management. As a result, preparedness, response and recovery measures against future disasters are often lacking in quality and effectiveness.

In terms of drought support, weaknesses are evident. For instance targeting remains a challenge due to inadequate capacity and beneficiary identification and verification systems at the local level. Inefficient resilience strategies makes it difficult for household to cope with shocks. Other challenges affecting food systems in Namibia include shortage of quarantine facilities for livestock farmers, particularly in the Zambezi region; declining production of staple foods, even though the government guarantees prices and purchase of output; and limited availability of irrigation facilities, especially for smallholder farmers. Conservation agriculture is still in its infancy and requires a concerted focus to develop a more resilient food system and in terms of monitoring systems, there is need for a clear strategy to establish these in some regions and to generally strengthen and upscale the initiative.

### 3.2.4 Pillar Four: 100% Increase in Smallholder Productivity and Income

*Smallholder and subsistence farmers, largely in the northern communal areas, struggle with access to inputs including water. Low levels of agricultural production in the communal areas are due to limited available land, which consists of 34% of the total agricultural land in Namibia able to support economic crop and livestock production. Low levels of productivity in the communal crop-farming sub-sector are partly due to smallholder producers not experiencing sustained technological progress, poor soil conditions, and prolonged and frequent drought spells. Opportunities exist with new technologies, particularly those that focus on drought resistance, and expansion of irrigation. The productivity of the livestock sector in the communal areas is constrained by high frequency of drought, overgrazing, low calving rate, low off-take rate, traditional farming practices, as well as exclusion from the lucrative markets due to prevalence of foot and mouth disease in the Zambezi Region, with occasional outbreaks in some parts in the extreme east of the Kavango East Region. Poor grazing is a major concern in the northern regions.*

Clearly some of these issues have been partly addressed by the MAWF policies and programmes mentioned above, including the CSA programme. However, Namibia has room to increase smallholder farmers' productivity through increased adoption of additional new technologies, mechanisation intensification and a policy environment that is characterised by coordination across and within sectors, as well as effective monitoring and evaluation of projects and programmes. This will allow smallholder farmers to benefit from economies of scale and enable them to utilise previously marginal lands. There is much, however, to build upon.

Besides producing maize, communal farmers in the north produce *mahangu* (pearl millet), which is drought resistant and forms an important part of the national diet. The impacts of unfavourable climate and erratic weather patterns, the widespread use of traditional farming practices, limited farm sizes, and *quelea* birds, are contributing to low levels of production. To combat this, the country's research stations have produced two new drought resistant crop varieties. Another strategy is the establishment of the Strategic Food Reserve Facilities whereby a number of grain silos are constructed in various regions in order to reduce losses due to poor storage of *mahangu* and other grains. A third strategy is implementation of the Dryland Crop Producers Programme which involves the provision of support to small scale crop farmers in the form of subsidised fertiliser, seeds, tillage upkeep, loans, draught power, mechanised ploughing services and subsidies for harvesting the crop. The government also has a programme to provide appropriate tillage technology in the form of walking tractors that can be used by smallholder farmers. These are all important complementary activities to the CSA programme, which with careful coordination at production level can have a sustained impact on smallholder productivity. The message is that other opportunities must be found under the CSA programme to offset climate risks particularly as more than 70% of the country is arid and semi-arid.

In terms of comprehensive smallholder support, the Green Scheme policy is another important initiative to improve grain production. AgriBusDev, the state owned enterprise running the initiative projects that at current production levels of 10 tons of maize per hectare, the country will achieve more than 100% maize production for own consumption needs as well as wheat and rice production when the projected 27 000 hectares come under irrigation. In terms of improving horticulture, the Market Share Promotion

initiative seeks to increase share of local horticultural produce to 60%. The challenge is that there is limited participation by smallholder farmers, as they cannot afford the irrigation technology needed to produce the crops.

Half of the cattle in Namibia are found in the northern communal areas<sup>68</sup> yet participation by NCA in livestock markets is minimal.<sup>69</sup> Foot and mouth disease is the main challenge for NCA farmers, as their beef cannot be taken to lucrative EU markets. To enhance productivity of this beef sector, the government has invested in abattoirs in the northern central regions as well as in Kavango and Zambezi regions. To improve the quality of the livestock the government-funded livestock research stations are undertaking research on breeding to produce more adaptive livestock. The government has also initiated a search for an alternative market for beef from the northern regions. In this regard there was an agreement between Zimbabwe and Namibia to export beef from the NCA to Zimbabwe in 2014.

The government also provides support to construct abattoirs where value addition to small stock is done. The government initiated the Small Stock Marketing Scheme (SSMS) in 2004 to impose quantitative export restrictions on exports of live sheep from Namibia to South Africa by forcing exporters to slaughter lambs in Namibia and then export carcasses, in order to benefit the Namibia livestock industry.<sup>70</sup> However, there has not been a significant improvement in the local abattoirs with respect to processing of small stock with a perception that the Namibian SSMS has led to unnecessary interference in the market. The scheme has led to a few abattoirs benefitting at the expense of the farmers, which resulted in a number of workers having to be laid off by the farmers.<sup>71</sup>

At independence, government initiated land reform to bring about fair distribution of agricultural land, to promote economic growth, social equality, lower income inequalities and reduce poverty.<sup>72</sup> Despite investments, there has been limited production from emerging farmers as very few are participating in agricultural markets.<sup>73</sup> The processes of building up livestock herds by individuals resettled on commercial farms is progressing slowly: 40% of beneficiaries resettled for more than eight years have not yet reached stocking levels sufficient to generate a sustainable livelihood.<sup>74</sup> Land reform by nature is highly complex and requires application of social, agricultural, and environmental principles by different institutions as well as planning and coordination. One issue identified by the Special Cabinet Committee on Land and Related Matters has been that different institutions have not fulfilled their mandate in supporting resettled farmers as envisaged in the National Resettlement Policy of 2001.<sup>75</sup> Monitoring and evaluation undertaken by the Ministry of Lands and Resettlement (MLR) reveals that many resettled farmers are not adhering to the conditions set in lease agreements due to this lack of support

In 2003, the government established AgriBank mandated to advance money to persons or financial intermediaries to promote agriculture. The bank's products included short-term production loans, medium term loans for infrastructure and farm improvements, long-term loans for purchasing and consolidation of farmland into more productive units, specialised loans for special agriculture projects and special schemes loans. This includes post settlement support through a post settlement support soft loan specifically established in 2009 for resettlement farmers by Agribank and MLR. In the 2014/15 financial year, the AgriBank supported 1,010 clients countrywide, creating or maintaining 3,246 jobs. Despite the progress made in advancing loans through the National Agricultural Credit Programme, which provided over 8,000 loans since 1993, the Bank realised that more can be done to provide access to communal farmers offering loans with minimum collateral requirements. In this regard, the Bank will introduce the Emerging Farmers Retail

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<sup>68</sup> Directorate of Veterinary Services (DVS) (2010)

<sup>69</sup> Mendelsohn (2006)

<sup>70</sup> Taljaard, Zerihun, Jooste and Jordaan 2009

<sup>71</sup> Ibid

<sup>72</sup> RoN, 1991:2; Werner & Odendaal, 2010:5

<sup>73</sup> PIA, 2010:21

<sup>74</sup> PIA, 2010:39

<sup>75</sup> Hoaes, 2009

Product that will be geared towards offering clients loans at minimal collateral. Moreover, a comprehensive review of products is underway to offer products through alternative forms of collateral. There is clearly an opportunity to scale up impact through connection with other institutions.

As mentioned above, despite the positive overall thrust of several interventions focused on smallholder production, some gaps exist. For example in the Green Scheme, there has been limited capital investment for irrigation infrastructure, contributing to the slow expansion of the scheme. There are high costs of production as inputs like fertilisers, related chemicals and machinery are imported. High electricity costs compound this. This has been exacerbated by water challenges that exist around riparian rules and utilising water from international rivers.

Dryland agriculture has faced challenges including poor soils in areas where mahangu is being produced. Drought has reduced production with pests destroying crops. In terms of the programmes, there are often delays in accessing services such as tractors or other inputs, a lack of coordination by various stakeholders, limited capacity at research stations and overall funding shortages. Horticulture faces similar challenges but in particular high cost and access to water, which discourage urban and peri-urban horticulture. In terms of livestock production, low levels of market participation by NCA farmers, poor livestock prices and the impact of drought destroying grazing areas resulting in poor body condition of livestock all remain policy challenges.

Similarly, in Land Reform and Resettlement, challenges exist around a lack of coordination by service providers and the relatively slow pace of land resettlement. One issue is a lack of monitoring and evaluation of the impact on the resettled farms. Another issue is loan repayment by many farmers and a lack of land use plans enforcement leading to overstocking and land degradation.

In aquaculture, cultural practices prevent the uptake of fish as an alternative source of protein among some population groups. The high cost of feed and infrastructure limits the expansion of inland aquaculture. Generally there has been minimal linkage developed between fisheries and marine resources on one hand and nutrition security on the other.

### 3.2.5 Pillar Five: Food Loss and Food Waste

According to the situational analysis some key issues pertaining to food loss and food waste include:

*Although Namibia does not produce enough food for its own consumption needs, it is estimated that about 24% of all food calories grown per year are lost or wasted at the farm level. The issue of food loss and food waste across the value chain, from producer to consumer, provides an immense opportunity to increase the supply of food in the country through the implementation of technologies that will minimise and eliminate food losses and wastage along the supply chain.*

The key issue is that Namibia does not have a food loss or food waste policy that can directly reduce the food deficit reaching vulnerable people. There is a clear opportunity to develop an overarching framework and to integrate such issues into existing policies as they come up for review. A few existing approaches are in place, particularly around proper storage facilities, that can be extended.

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AMTA has established silos in the northern regions, namely in Omusati, Kavango and Zambezi, to provide a National Strategic Food Reserve. As mentioned, these silos store produce from irrigation farms as well as from smallholder producers more generally, through marketing channels. The storage capacity of more than 15,000 metric tonnes provides an opportunity for reducing food loss by providing farmers with a proper and adequate storage facility. Similarly, AMTA manages Fresh Produce Business Hubs situated in Ongwediva, Rundu and Windhoek. The Fresh Produce Business Hubs provide cold storage facilities, grading, sorting, packaging infrastructure, transport and logistics, marketing and trading wholesale and retail. Records from AMTA show food losses particularly in the handling of food such as fruits and vegetables although on-going efforts indicate that this has been recognised.

The OPM established the Food Bank initiative in 2012 in response to the outcry about hundreds of people scavenging for food at the Kupferburg dumpsite in Windhoek, which left government and the general public extremely concerned. Although not yet scaled up, the initiative focuses on soliciting and packaging food, clothes, educational materials and other basic necessities for vulnerable people rather than allowing such material to be disposed and to provide an organised approach to distribution and collection. In essence this pivots on the state enabling the voluntarily giving away of food that otherwise would be lost or wasted to food banks, which then redistribute the food to those who need it.

Opportunities exist under approaches to production, handling and storage, and the processing stages of the value chain particularly for reducing food loss, and activities under the distribution, market and the consumption stages particularly for reducing food waste. It is important to note that many technical solutions can be effective only when other parts of the food supply chain are effective. For example, improved on-farm storage will not ultimately lead to reductions in food loss if smallholder producers have no access to a market where they can sell their harvest surplus. Similarly, all actors in the food value chain need to be involved if food loss and waste rates are to be significantly curtailed. Farmers, agribusiness firms, and consumers all have a role to play.

Apart from these identified initiatives and opportunities, many respondents in the review indicated that there was a general lack of information on food loss and waste in Namibia. This is major gap in Namibia's food security and nutrition response. Similarly in terms of a coherent response there was no universal framework or guideline, which exacerbated challenges around collaboration and coordination.

In terms of producers, there is a lack of education in rural areas concerning food loss and waste, especially during harvesting and storing. In terms of smallholder producers, challenges associated with food losses and waste relate largely to the structural dimensions that limit productivity. For example poor road infrastructure, particularly in rural areas, inadequate transport services, and high transportation costs that exclude communal farmers from markets. This means that produce may be wasted post-harvest particularly if there is a long distance to markets. Exacerbating this is a lack of proper packaging materials in which to transport products. Limits in technology used to conserve products, particularly fresh products are evident. There is sometimes food product damage during transportation and storage.

### 3.2.6 Institutional Arrangements for Effective Food System Governance

According to the situational analysis, several institutional challenges emerge:

*Addressing these factors requires different stakeholders to work together to deliver on a common vision. This vision is captured under the Zero Hunger Challenge. Having a vision underpinning a sustainable food system implies smarter approaches, policies and investments. This encompasses the environment, people, institutions and processes by food is produced, processed and brought to consumers in a sustainable*

*manner. Different actors and sectors need to act in a joined-up manner, each one dealing with different aspects of the problem, but collectively acting in a coherent manner.*

### Policy coherence

Considering the preceding situational analysis relating to food security and nutrition, captured succinctly by the 2015 Global Hunger Index, which defines Namibia as having a 'serious food problem', there are clear limits to the effectiveness of existing policies, or at least their implementation, in converging to impact. The success of national efforts to achieve food security and nutrition depends on various factors, amongst which the institutional landscape and financial resources to implement strategies and programmes are crucial.

A major issue emerging from the review and stakeholder consultations is the lack of policy coherence between different sectors developed by different government agencies. In some instances, policies have well-structured implementation frameworks, such as the National Employment Policy, but different government departments do not effectively implement their parts. This situation has been exacerbated by a lack of measures to periodically evaluate the performances of the policies in attaining set targets and objectives.

### Decentralisation challenges

Another key issue to emerge was the lack of decentralised decision-making, which hindered the ability for locally based officials to respond quickly to situations, as approvals need to be sanctioned from head offices, which takes time. While this current approach ensures accountability, it is bureaucratic and prevents timely interventions. This is exacerbated by a lack of community interest, attitudes towards development in terms of expecting quick-wins coupled with a marked dependency culture. This is complicating the delivery of many programmes. In some regions, there were calls for expedited decentralisation of government services and more power and resources for local government, along with increased coordination across ministries in the different regions.

### Coordination challenges

There are also challenges experienced in coordination mechanisms. Such mechanisms exist under NAFIN but have proven to be ineffective at both national and regional levels. There is also weak coordination within and between ministries and UN agencies as well as with the private sector. The communication and coordination between sectors currently happening is not formalised or institutionalised. There have been no deliberate efforts towards reinforcing these linkages.

### Weak monitoring and evaluation

The menu of policies, strategies and plans meant to address food and nutrition insecurity is not matched by deliberate attempts to assess progress through documentation, regular monitoring and impact evaluations. There is often no clear link between policy and activities on the ground. The major reason given for this gap is the lack of human resource capacity and high staff turn-over.

There are, however, several institutions in Namibia that collect information on different dimensions of food security and nutrition. The National Early Warning Unit in MAWF conducts Agricultural Inputs and

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Household Food Security Assessment Missions to assess the availability of inputs, farmers' preparedness for the season, changes in household food security and prices. Timely bi-annual crop assessments are also carried out to collect data on area planted, production and yield estimates. MoHSS have three information systems namely Health Information System, Demographic Health Survey (DHS), and Sentinel Surveillance Systems. These collect routine data at district, regional and national level on growth monitoring and assess nutritional status, treatment, breastfeeding and diseases. Price data at different zones in urban areas is collected by the National Statistics Agency, which is essential for determining people's access to food. Data collected through the Namibia Vulnerability Assessment Committee (NamVAC) provides information on livelihood vulnerability and food nutrition security through an annual, widely accepted exercise.

Although a wealth of information is generated by various information systems, several gaps and limitations exist. These include inadequate monitoring at household level in all regions, limited coordination of monitoring and insufficient capacity. Most strategic and guiding documents are developed using out-dated data. For example the DHS is the main source of nutrition, gender and health data but this is collected every five years, leaving the country with limited data to guide programming on a continuous basis. Efforts have been made by the Namibia Vulnerability Assessment Committee (NamVAC) in partnership with the World Food Programme to address these through the Namibia Food and Nutrition Security Monitoring System (NFNSMS).

### Capacity constraints

There are capacity constraints in terms of competence and skills as well as poor management of programmes and processes. For example there is limited capacity among nurses and community health workers who are primarily responsible for delivering nutrition programmes. Poor management is reflected in the form of accountability, weak oversight and abilities to manage programmes. This situation has been attributed to time constraints; too much work assigned to the workforce, high turnover rates as well as high attrition rates. The latter is due to high mobility especially in the health sector where at a hospital level staff is rotated on a regular basis.

### Drawing out the key challenge: coordination and coherence

A genuine, coordinated attempt to align policy to effectively address food security and nutrition demands deliberate and methodical action across different domains of policy. Such action would involve systematically addressing the immediate and underlying determinants of food security and nutrition, the health environment, care practices, diet, and health status. These factors face important challenges as overall there is a difficult environment for improving food security and nutrition with so many key areas that need to be addressed simultaneously by coherent and joined-up policy and programming.

## CHAPTER 4: RECOMMENDATIONS

*Chapter 4 suggests recommendations and delineates a road map for the way forward. The central argument emerging out of the review is the importance of aligning policy to effectively address food security and nutrition. This requires an overarching, agreed goal that will focus deliberate action across different sectors. This action would target the immediate and underlying determinants of food security and nutrition. The coherent and joined-up policy and programming required raises the real challenge for the Government of Namibia.*

### 4.1 ADDRESSING THE KEY CHALLENGE: A HOLISTIC AND COHERENT FOOD AND NUTRITION SECURITY POLICY

The key challenge for Namibia is to develop a holistic and coherent Food and Nutrition Security Policy that strengthens and aligns interventions to effectively address food insecurity and nutrition. The success of a Zero Hunger Strategy to achieve this relates directly to a suite of adequate and clear policies and related programmes that are effectively aligned. A central argument is that addressing the complex drivers of food and nutrition insecurity requires policies and programmes that mutually reinforce one another, thereby contributing to shared goals and outcomes. Essentially the best outcomes, in terms of effective implementation, will be seen when policy is well aligned within sectoral strategies with political motivations on the part of government and non-government actors including the United Nations, and that multiple stakeholders need to be coordinated around what is a complex and multidimensional policy and implementation challenge.

An inclusive coordination mechanism supported by a strong legislative framework would, in turn, underpin the institutional arrangements required to ensure that the goals of a holistic and coherent policy are taken on board by various sectors to ensure that implementation occurs. This implies that the public sector, which is comprised of a mix of institutions with varying structures, mandates, and accountabilities, has to agree and target a number of interventions that collectively will address a shared goal. This will depend on clear relationships based upon a growing recognition of the importance of food and nutrition for people's development, which in turn will bolster the political commitment required to address the issues.

An appropriate institutional mechanism will need to be established that can align and coordinate different sectoral interventions from across the state and non-state sectors, undertake necessary monitoring and evaluation, and ensure an effective data management system. The mechanism will also engage in evidence-based advocacy with key institutions for financial support in programme implementation and sensitising the public on the outcome of interventions. All this requires enhanced institutional capacity that can contribute to realising higher degrees of coherence and coordination.

## 4.2 ESTABLISHING A COORDINATION MECHANISM: GOVERNING ZERO HUNGER

In order to ensure effective implementation of the Food and Nutrition Security Policy, a new institutional arrangement should be established at the right level to manage the various elements across ministries. A relevant 'champion' that also has the right political position, in turn, should lead this body.

It is, however, important to acknowledge that the state, and particularly regions, has a limited set of levers to influence these dynamics. Improving the food security, therefore, can only be successfully pursued through the building of robust partnerships between the different spheres of the state, the UN, the private sector and civil society including communities. Relevant policy and programmes that seek to address complex problems should involve a wide range of stakeholders working together. This approach aligns well with the national policy framework and international trends towards the formation of food governance structures, to coordinate the different aspects of a response to food insecurity. Such a multi-stakeholder approach will become ever more necessary as the effects of climate change begin to transform aspects of the food system.

It is imperative that an effective coordination mechanism consisting of a wide range of sectors and stakeholders, inside and outside of the state, is established to drive the Food and Nutrition Security Policy. This should be empowered to both ensure that the programmes of individual departments align with the strategic intent outlined in this policy and to improve the levels of coordination and collaboration between departments within the regions and with the other spheres of government. The identification of collaborative opportunities and formation of partnerships also requires a systematic space to bring together the private sector and civil society.

Such a structure may fall within the NPC or the OPM or both with one handling technical coordination (NPC) and the other the political coordination (OPM). Alternatively the government should institute a national committee at a higher level appointed by the cabinet, to coordinate the implementation of the Food and Nutrition Security Policy. Regardless of which arrangement, such a position should confer greater power to the structure to enable it convene a multi-stakeholder platform, ensure adequate coordination to address food and nutrition insecurity across different scales, and mobilise resources from different sectors.

Without a strong political champion driving the Zero Hunger agenda to create the space in which to work, little will be achieved. Thus the institutional positioning of the coordinating structure requires a clear definition of the level of autonomy and authority in relation to other sectors. The NPC or the OPM would work and collaborate closely with a range of institutions in the Government including the National Statistical Agency and the various sector Ministries key to ensuring Zero Hunger.

Once the coordinating structure is established, other sectors will have to be drawn in to develop a broad strategy that encompasses different programme options that can be implemented at regional level. A key question, therefore, is what are the incentives that can be used to coordinate a multi-sectoral response to addressing Zero Hunger? A number of factors that lubricate the mechanisms of coordination can be identified from experiences elsewhere, including:

- A shared understanding of the problem at hand;
- Strong evidence generation to support this shared understanding;
- Genuine participation and ownership among participants and stakeholders in the agreed response;

- Clear roles and responsibility of all participants and stakeholders;
- Strong political leadership;
- Effective accountability mechanisms; and
- Flexibility to create appropriate responses and partnership types at different scales.

Building capacity both within the coordinating structure and within other sectors will become a priority. The facilitation of multi-sectoral action requires strengthening not only of technical but also strategic and management capacities, bolstering individual and institutional capacity to broker agreements, resolve conflicts, build relationships, respond to recurring challenges and opportunities, and undertake strategic communications within and across sectors. Key actions include:

- Assessing the human and institutional capacity: The local research institutes should be used to undertake needs assessments and disseminate information. In addition, there is need for designing a tertiary academic programme in food security and nutrition to create a pool of expertise/experts in these fields.
- Build awareness among decision makers: Another essential area of capacity building should include creation of awareness of food security and nutrition issues at the highest level.
- Build capacity for multi-sectoral programming to effectively address the causes of food and nutrition insecurity: This may mean development of tools and methodologies to create a shared understanding and establish a mass of technical expertise across a number of sectors who can effectively integrate nutrition on the ground.

Finally, the establishment of an effective food security and nutrition governance system requires a systematic approach to the collection and assessment of data to understand the way in which the food system is changing and affecting the lives of the residents of Namibia, particularly the poor. The country needs to build strategic partnerships with key stakeholders to ensure that the data that is already being collected is readily accessible to policy and decision-makers and, where gaps exist, identify them and possible partners that have a mutual interest in addressing them. This would essentially build on the establishment of the existing Namibia Food and Nutrition Security Monitoring System that is forging a harmonised system for holistic monitoring and evaluation.

### 4.3 SPECIFIC SECTOR RECOMMENDATIONS

A number of specific sector recommendations have been identified and elaborated in the review process including the validation workshop that finalised the Review. It remains, however, a recommendation that the NPC or the OPM establish a coordinating structure to convene a process to develop the full Food and Nutrition Security Policy and thereby select priority interventions through the process (roadmap) outlined below. The priority interventions should then be implemented in an aligned and coordinated fashion at the local level.

As emphasised, the achievement of the goals of Zero Hunger Challenge will require much more than a single sector implementing interventions in isolation such as agriculture, health, or social development. Instead, the approach has to be coordinated and multi-sectoral to leverage linkages across sectors. For

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example, investments in rural infrastructure to improve access to clean water, provide adequate sanitation, promote proper hygiene, and increase health clinics will be vital to promote food security, nutrition, and health. In these and other ways, technologies, policies, and institutions can help eliminate hunger and malnutrition.

In other words specific, sector specific interventions should be brought to the table and through a process of review and reflection, be adapted to become truly effective in aligning with other sectors and building on the strengths of “joined-up” government. The pillar specific recommendations that emerged during the consultation process and which require further development as recommended above are presented in annexure one.

## 4.4 ROADMAP AHEAD

Achieving Zero Hunger in Namibia by 2030 is attainable if sufficient resources are allocated and appropriate policies and investments are pursued. Key to this will be the establishment of a process to develop a holistic and coherent Food and Nutrition Security Policy based on the sector specific recommendations (see annexure one) and building appropriate institutional arrangements for the effective governance of the food system, including effective alignment and coordination of programmes, and efficient resource allocation across sectors.

Facilitated by the NPC or the OPM, the first step is to convene a multi-sectoral and multi-stakeholder forum to establish a coordinating mechanism. Looking beyond the establishment of such an entity, appropriate strategies and policies will need to refocus on Namibia’s food and nutrition challenges identified in the Strategic Review. To achieve this a high-level process should be convened to review key sectoral programmes and ensure their focus on a shared vision developed on a foundation of sound evidence and to agree on the strategic options for Zero Hunger.

This process should identify and design alternative policy options or policy packages to address sector-specific or economy-wide issues and consider whether appropriate institutional arrangements for implementation are in place. A related activity is to assess the capacities required (individual, organisational and systemic) and finance available to adopt and support different policy options. This could be supported through applying a food security and nutrition lens to capacity with regard to individuals (analytical tools, skills), organisations’ (staff, infrastructure), and wider systems (including cross-sectoral mechanisms and platforms for engagement).

Decision makers, on the basis of this information will choose the policy package, which “optimise” the net expected impacts of a given sector.

Effectively tackling the breadth of food security and nutrition challenges that exist at local and national levels requires that Namibia adopt a food system or whole food value chain approach to food security. Such an approach, from “seed to fork”, includes sustainable production in the fields, linking smallholders with markets and retail centres, consumption and building the overall resilience of the food system – with emphasis on improving inclusiveness, efficiency, sustainability, nutrition, and food safety.

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## ANNEXURE 1

The pillar specific recommendations are presented below.

### **Pillar One: 100% Access to Adequate Food All Year Round**

*Synopsis:* Stimulating the broader economy to create employment is a clearly articulated objective of the Government of Namibia. As such a wide range of policies and programmes emphasise job creation so stress should be placed on policies targeting the most vulnerable to hunger. These programmes cover both safety nets for the most vulnerable and enterprise development to underpin broader economic activity. Existing programmes include the monitoring of trade by the Namibia Trade Forum, job creation through Labour Market Interventions and Social Programmes such as Food for Work, strengthening market access for smallholder producers, small enterprise development, and social protection programmes including the wide range cash grants, food assistance, school feeding and the San Community and Asset Building and Creation programme.

In terms of strengthening accessibility of food, a number of interventions are recommended, some of which overlap with other pillars such as supporting smallholder productivity. As such, emphasis is placed on seeking at interconnections between sectors is recommended:

#### *Broad Social Protection Interventions:*

Social protection for the urban and rural poor is key for food security and nutrition in Namibia. Productive, cross-sector social safety nets can help small farmers cope with livelihood shocks and provide them with opportunities for long-term profitability. Similarly, social grants and safety nets can support vulnerable people gain access to nutritious food. A key question for social protection is how can they be adjusted or adapted to have a particular food security or nutrition impact. Social protection should also be made more shock-responsive in light of the regular weather-induced disasters affecting Namibia.

#### *Key interventions include:*

- Undertake a national identification and registration programme for pensioners and orphan and other vulnerable children, especially in marginalised and isolated communities. This is in order to broaden the numbers of eligible people receiving grants.
- Increase cash transfer payment points, and possible introduction of alternative payment methods.
- Develop a national database that records all beneficiaries of social protection, which should be shared by all government departments.
- Apply a national data management system accessible to all ministries with annual updates to reduce errors.
- Apply food and cash for work programmes so that communities remain engaged with the labour market.
- Implement the proposed Food Bank programme to help the poorest better access food.

#### *Broad Infrastructure Interventions (Resilience Building):*

- Upgrade relevant infrastructure so that it is more robust to floods and flooding.
- Construct and maintain evacuation centres with adequate facilities in flood-prone areas including schools.
- Maintain adequate strategic grain reserves to stabilise supply during drought periods. Expand storage facilities.

### *Broad Production Interventions:*

- Expand quarantine facilities in areas affected by foot and mouth disease.
- Organise national vaccination programmes and awareness campaigns to combat foot and mouth disease.
- Open new markets for beef and other meat products from north of the cordon fence into neighbouring countries.
- Establish a price stability mechanism to reduce livestock price volatility.
- Assist farmers with training and infrastructure development to reduce post-harvest losses.
- Promote non-farm income generating activities in drought-prone areas such as community tourism projects.
- Expand irrigation schemes especially in areas occupied by smallholder farmers.
- Educate farmers about treating farming as a business, including strategies around maintaining appropriate stocking rates during drought.
- Expand the import market beyond South Africa, which will reduce prices on the domestic market.
- Reduce post-harvest losses when storing grains and during distribution.

### *Broad Education Interventions:*

- Enhance educational outcomes through skills training in line with the requirements of the economy.
- Shift from a supply to a demand-driven education and training system that meet the requirements of the economy.
- Enforce equality laws, punishing gender-based discrimination.

## **Pillar Two: Zero Stunted Children Less Than Two Years**

*Synopsis:* Stunting rates of children in Namibia range between 19% up to 40% in one region. These high rates are due to a range of factors including weak coordination mechanisms between key stakeholders despite nutrition being recognised as a crosscutting sector. Nutrition is still largely considered a MoHSS mandate and yet it requires other sectors to be actively involved.

In terms of achieving zero stunting, a number of nutrition specific interventions are recommended that should be complimented by nutrition-sensitive interventions from largely the non-health sector:

### *Improve Infant and Young Child Feeding:*

Improving infant and young child feeding, particularly during the first two years of life, is crucial for preventing and reducing chronic undernutrition and micronutrient deficiencies. The following interventions are currently progressing well, but need to be increased in scale:

- Increase awareness around the benefits of optimal breastfeeding in addition to strengthening anti-natal care education. A national campaign on breastfeeding should be introduced.
- Encourage exclusive breastfeeding up to 6 months of age.
- Facilitate breastfeeding through flexible work environment and maternity leave policies, ensuring the full ten steps of breastfeeding are implemented. This requires the review and amendment of the Maternity Leave Act to increase maternity leave days and ensure that these days are adequately paid. This should be coupled with maternity protection and increased awareness to make breastfeeding accepted and promoted in the country.
- Encourage continued breastfeeding, together with appropriate and nutritious complementary food up to two years of age and beyond.
- Direct provision of extra nutrients such as vitamin A supplementation and link this with immunisation days.

- The Ministry of Health and Gender should take a lead in advocating for the fast tracking of the International Code of Marketing of Breast-milk Substitutes.

*Improve the quality of diets of all Namibians:*

The promotion of quality diets should be emphasised and integrated with traditional food production and consumption methods, especially for pregnant and lactating mothers, adolescents and infants. It has been shown that the most effective educational interventions use a carefully selected number of specific key messages about practices that can feasibly be adopted by the target population, rather than general advice on child feeding. Communities and traditional leaders should be involved in communication to advance government programmes, as they wield respect and influence.

Nutrition education requires the enhancement of communication through leveraging modern technology to increase access to vital information such as iron nutrition status, education, water and sanitation. Use of accessible communication technology such as cellular phones will strengthen monitoring, real time data capture and feedback from communities. Successful interventions should also be culturally sensitive, accessible and integrated with local resources, as well as affordable and convenient for local households. Nutrition education should be included as part of the 6-month training of health extension workers.

Research institutions need to establish the nutritional composition of traditional foods in order to inform nutrition education efforts. Namibia should look at alternative means to develop Ready to Use Therapeutic Foods (RUTF) or the equivalent using locally available foods instead of relying on imports from South Africa, which are expensive. The role of NAFIN in advancing food fortification, particularly for mahangu, should be strengthened. The study on mahangu undertaken by NAFIN requires follow-up in order for it to be fast-tracked.

It is essential that guidelines on micronutrients be developed to help reduce malnutrition, particularly stunting. Training, awareness raising and dissemination with monitoring and evaluation should follow this.

On-going efforts on food fortification should be strengthened, including the development of food fortification legislation and addressing the concerns of infrastructure and financial resources, as identified in the two studies commissioned by the Food Fortification Working Groups.

Community and backyard garden interventions should be strengthened in-order for improving dietary diversity, particularly in areas with restricted market access to nutritious foods. Such gardens are also important for coping with food price fluctuations. Many current gardens are not performing well for different reasons. It is therefore important that all gardening efforts through agriculture, regional councils, traditional leaders, NGOs and others are consolidated, integrated and coordinated under the same planning, implementation and monitoring frameworks. Of critical importance is the integration with nutrition through nutrition education.

*Strengthen support for bio-fortification:*

Bio-fortification should be prioritised through the development of nationally appropriate bio-fortified crop

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varieties with a scale up their adoption and consumption. In bio-fortification, conventional crop breeding techniques are used to identify varieties with particularly high concentration of desired nutrients such as zinc, iron or vitamin A, in addition to other productivity traits desired by farmers. The bio-fortified seeds or cuttings can then be distributed through extension programmes. Another area of support should be directed in the development of bio-fortification legislation.

#### *Strengthen the school-feeding programme:*

While progress has been made in school feeding, much work now lies in developing the concept, accelerating progress towards linking school feeding to family farming as well as development of the school feeding policy. In Brazil, under the Bolsa Familia Programme, this has led to better nutrition among school children, effective integration of food and nutritional education, greater community involvement and significant improvements in income and the welfare of smallholder producers. This will require better planning, and coordination between sectors, particularly education, agriculture, health, water and sanitation.

In addition, there is need for diversifying the school feeding meals with protein rich commodities to provide a balanced diet. Introducing fish, milk, high energy biscuits, legumes and vegetables would contribute to the nutritional needs while at the same time help children to attain their educational objectives.

Other important related interventions would be that of accelerating the establishment of early childhood development centres where mothers, including adolescent mothers, can leave their children when they go to engage in economic activities.

#### *Accelerate access to sanitation:*

In recognition of the poor sanitation coverage, the government has developed a policy framework and strategy for improving the situation. Building on this initiative, more effort needs to go into strengthening the political commitment in terms of improving coordination, commitment and implementation of various stakeholders.

#### *Strengthened capacity:*

The Ministry of Health should consider including public health nutritionists to provide additional technical support within the existing health extension system. The Ministry has trained and deployed 1,500 health workers to the field and intends to increase this number in order to carry out house-to-house visits. This should be supported by outreach service to reach more children using existing extension workers. This should include the provision of logistics support to the workers through bicycles, bags and working with other community volunteers. Involvement of communities and traditional leaders is essential to enhance the services of health extension workers. In Namibia, traditional authorities have proven to be very useful in advancing government programmes because of their influence.

### **Pillar Three: All Food Systems Are Sustainable**

*Synopsis:* It is recognised that the effective linkage between all the Zero Hunger pillars will help create a sustainable and resilient food system. Emphasis is placed here on the underlying ecological basis of the system. Key to a sustainable food system is recognition of the current limits of natural endowments, how to sustain these and balance of their use in a way that creates a resilient system. Future impacts should be anticipated, particularly from climate change that will have an adverse effect on food production and availability.

In terms of strengthening a sustainable food system, several recommendations are made:

***Climate Change Adaptation:***

The Climate Change policy lays out a number of principles that aim guide the response, while also outlining the roles and responsibilities of the relevant stakeholders to ensure effective implementation. It is crucial to align the existing Climate Change Strategy and Action Plan that emphasise adaptation to the Zero Hunger initiative to ensure all food systems are sustainable. In other words, the climate change adaptation should be made “hunger sensitive” and vice versa. In particular, it is important to prioritise the adoption of climate change strategies by smallholder producers including the introduction of new technologies. Similarly the potential for innovative risk transfer mechanisms should be explored under the Zero Hunger Strategy formulation process.

Namibia needs to adapt agricultural practices and increase the resilience of livelihoods to be able to withstand the challenges posed by climate change to sustain development. Climate-smart agriculture thus becomes a key opportunity. However, this requires a common understanding that climate change threatens agriculture and causes food insecurity to bring stakeholders together into interrogating causes, consequences and what the future holds for the country. It also requires an appreciation that a collaborative effort is needed to fight climate change problems recognising that land, water and soil are important natural resources in agricultural productivity.

***National Disaster Risk Management Policy:***

The establishment of the Disaster Risk Management office within the OPM provides a national disaster preparedness and response unit to coordinate preparedness and relief operations in the country. The major weaknesses of the structure is that there is no legal instrument that specifies the chain of command to facilitate the disaster risk management authority (DDRM) to mobilise the regional authorities and stakeholders during disaster and significant events.

There is insufficient skilled human resource capacity for coordination and operations regarding disaster risk management. As a result, preparedness, response and recovery measures against future disasters are often lacking in quality and effectiveness. A priority is to strengthen and increase capacity within DDRM. Focus on bringing in skilled human resource capacity for coordination and operations regarding disaster risk management.

Ensure that Disaster Risk Reduction and SDG2 are included within the emerging National Development Plan (NDP5) and other programmes, such as the Harambee Prosperity Programme.

***Drought Policy:***

Implement the Drought Policy of 2010, which seeks to improve management of the effects of drought to help farmers take proactive responsibility.

***Conservation Agriculture:***

A key intervention to build sustainable food production systems is the Comprehensive Conservation Agriculture Programme for Namibia to counter land degradation and to increase adaption to climate change for sustainable crop and production and improve rangeland management.

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Conservation agriculture will also contribute to mitigating the impacts of climate and erratic weather patterns, the widespread use of traditional farming practices, limited farm sizes, and the quelea birds, which destroy mahangu crops, all of which contribute to low levels of production.

#### ***Strengthening Smallholder Production:***

A range of interventions aligned to pillar four are required to strengthen the resilience of smallholder production in order to enable adaptation in the face of climate change and climate variability. For instance, low levels of productivity are partly due to Namibian smallholder producers not experiencing sustained technological progress. This is partially associated with deeply entrenched traditional beliefs and practices of farming, and yet opportunities exist with new technologies, particularly those that focus on drought resistance, and expansion of areas under irrigation.

### **Pillar Four: 100% Increase in Smallholder Productivity and Income**

**Synopsis:** A wide range of policies are in place from land resettlement, irrigation investment, dry-land crop production, fisheries and aquaculture, livestock; but much needs to be done to underpin the availability of food through smallholder production. The following elements need further enhancement: capacity development, appropriate technology and adoption, value chain development, and nutrition-sensitivity. On-going government initiatives include the Grain Production Programme, Land Reform and Resettlement Programme, Northern Communal Area Livestock Improvement and Market Access, Small-Stock Marketing Scheme, Marine and Fisheries Development Programme, and Aquaculture Development Programme.

In terms of increasing smallholder productivity and income, several recommendations are made:

#### ***Build linkages between smallholder producers and commercial producers:***

The enhancement of productivity for smallholder farmers should not be viewed in isolation of large-scale commercial farmers. Where possible, efforts should be made to link the two categories of farmers. This pillar should, therefore, focus on both large and smallholder producers, since the two categories of farmers are mutually reinforcing.

#### ***Ensure nutrition-sensitivity through the food value chain:***

An overriding objective is to better integrate nutrition into the whole food production value chain. The starting points for this include the provision of incentives to farmers through new policies and increased investment in research and development to produce more nutritious crops.

#### ***Focus on women:***

An important issue that has not received adequate attention is improvement in the role of women in agriculture, which will support higher agricultural productivity, reduce hunger and malnutrition, and underpin rural livelihoods. Strengthening land rights, improving access to inputs and financial services, and providing training and information will help achieve women's empowerment.

#### ***Improve grain production and storage:***

Improving grain production is crucial for Namibia, which requires investment by entities such as the Green Scheme as well as the private sector to enable the expansion of the area under irrigation. This should include investing in new technologies such as rainwater harvesting by smallholder producers as well as exploring ways of harnessing Namibia's underground water reserves for irrigation.

The national demand for mahangu (millet) is 5,000 to 6,000 metric tonnes annually, while the domestic supply is only 1,000 metric tonnes. The balance is imported from India with fixed US dollar prices, contributing to high domestic market prices. This is an obvious opportunity for the Green Scheme programme. However,

it should be recognized that marketing of mahangu is difficult for farmers, especially in the rural areas. The efforts by AMTA to purchase mahangu in remote areas are commendable but this does not reach all farmers. The capacity of AMTA to reach out to more farmers should be supported.

More research to produce drought and pest resistant varieties of crops should also be a priority, particularly for smallholder farmers. The idea is for farmers to harness technology so as to improve their technical efficiency and ultimately increase yield.

#### *Livestock production:*

Improving performance of smallholder livestock sector in the NCA requires a programme focused on adoption of technology and improvement of economies of scale in production. One component of the programme will focus on research to improve livestock quality, emphasising breeding and grazing improvement. The grazing can be improved through community-based rangeland management to allow communities to come together and benefit from economies of scale.

The other component will address marketing issues, by searching for alternative markets for livestock products from the NCA. Concerted efforts should be made to educate the farmers on the importance of participation in the livestock markets that can include linking them to banking systems to provide credit and savings facilities.

#### *Enhancing the Green Scheme Programme:*

The Green Scheme Programme was designed to benefit large and smallholder farmers equally, with a 50/50 benefit. Whether this is happening in practice is yet to be established. The major challenge affecting the scheme, however, is access to sustainable supply of water. The government is looking for alternative sources of water from rivers, including under-ground options and dams like the Neketal, which is still under construction. The existing marketing strategy where green scheme farmers are obliged to sale to the strategic grain reserve, at market price plus 5%, is commendable.

#### *Horticulture production:*

To improve local horticulture products' market share, a programme that will intensify local production is needed. While AMTA can continue to stimulate the marketing side, more research should be conducted to develop new production systems that use less water and space just like the hydroponic technology and the greenhouse production technology. It should, however, be recognised that there is limited funding to expand production of horticultural crops. If farmers had bankable leases, they would afford the necessary inputs to expand horticulture. This should be supported with an enhanced supply and marketing chain, and capacity enhancement for rural farmers. Investment in water harvesting is critical as is the existence of sustainable markets.

#### *Access to credit:*

Government should make the Green Scheme lease conditions conducive for private investors to borrow money. Private sector investments can be further harnessed to increase water harvesting from rivers, as is the case with the irrigation project on the Orange River, which was entirely funded by the private sector. Government could consider the development of infrastructure for expansion of schemes to be the responsibility of Agri-Business Developers.

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#### *Land access:*

With respect to land reform, there is need for critical review of progress. A key tension is the balance between economic production and social equity. The current National Resettlement Policy caters for all previously disadvantaged and landless Namibians in order to enable access to land. This should be more effectively supported to ensure that the funding options are more widely communicated to underpin production on resettled land. Similarly the mandate provided to MAWF to provide post settlement support should be prioritised by the Ministry.

#### *Fisheries development:*

For the fishing sector there is need for build on the research into inland aquaculture production systems. Existing research has revealed that the most pressing issue has been the high cost of imported fish feed and the prevailing drought situation, which undermines the local production of alternative feed. As a result, the costs of production and high prices of fish make it unaffordable for rural communities. In addition, cultural practices are preventing fast uptake of fish as an alternative source of protein in some communities. The government might have to consider subsidising the costs of production in order to make fish affordable. The programme should integrate fish production and nutrition with more awareness-raising initiatives. More investment is needed for infrastructure development as well as exploration of alternatives, particularly for the fresh water fish in the region.

### **Pillar Five: Food Loss and Food Waste**

*Synopsis:* Although Namibia does not produce enough food for its own consumption, it is estimated that about 24% of all food calories grown per year are lost or wasted. Losses are estimated at 14% for commercial smallholder farmers while for communal farmers the losses are more than 40% for perishable products and 20% for grain such as maize, sorghum and wheat. Although there is some evidence of food losses and waste in Namibia, there are no comprehensive records available.

#### *Develop a Policy on food losses:*

It is crucial to develop a policy on food wastage and food loss based on evidence and to integrate them into existing policies such as the emerging nutrition security policy.

#### *Standards for food handling:*

Develop standards for food handling and management during transportation and storage.

#### *Structured food markets:*

Expansion of structured food markets such as the national grain reserves and school feeding can help stimulate production but also incentivise farmers to adopt new technologies that reduce food losses and scale up quality to meet standards required by the grain reserves.

#### *Build better information:*

Measures to avoid food losses have to be taken at all stages of the food value chain. The implementation of measures requires all actors to be involved, including the government. There is need for in depth research to quantify the scale of food loss in Namibia.

#### *Utilise Information Communication Technology:*

Since Mobile Tele-Communication (MTC) has put up network towers to enable connections, this can be used to communicate information concerning food. This could be used to enable compliance with food safety and traceability standards. This system encourage producers and retailers to produce and market good and quality food as the produce can be easily be traced and the price of the price degraded if it does not comply with the standard.

***Increase Awareness:***

Namibia should implement consumer awareness campaigns, which reveal how much food people waste and provide simple solutions for cutting down on that waste.

***Build Political Commitment:***

The issue of food losses and waste is silent on the political agenda of Namibia. Food waste is likely to constitute a growing problem given the changes that food systems are undergoing because of rapid urbanisation, expansion of supermarket chains, and changes in diets and lifestyles.

Government needs to introduce a Save Food Initiative that should give priority to interventions that prevent food loss and waste from occurring in the first place, followed by interventions that can lead to reduced loss and waste.

***Strengthen Collaboration and Coordination:***

Collaboration and coordination of national initiatives on food loss and waste reduction need to be established in partnership with public and private sector organisations and companies that are active in the fight against food loss and waste.

***Strengthen Proper Storage Facilities:***

Training of smallholder farmers on appropriate methods of post-harvest handling, management and storage is critical, and should be a continuous process since change of mind-set takes a while to effect. The reduction of post-harvest handling loss can be partly addressed through strengthening traditional methods of post-harvest handling and management and complementing these with training in modern methods. Existing structures and systems, such as the agricultural extension, should be used to train and disseminate new technologies to farmers.

The key intervention all along the food chains is to improve storage conditions. There are a number of post-harvest technologies developed to protect stored grains from pests, for instance, insecticide protection is recommended to protect stored grains, but is often unavailable or too expensive for smallholder farmers. There is a need for intensive efforts by researchers, donor agencies, government, non-governmental organisations and other development partners to scale up affordable and adaptable storage technologies and solutions for Namibia.

***Refrigeration:***

In case of preservation of quality of harvested perishable foods, the most important issue is temperature control. There is a need for alternative, low-cost, electricity-independent options.

***Target reduction of food losses at household level:***

Focus should be placed on the reduction of food losses at household level and also address feeding habits, some of which result in food wastage.

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