Republic of Namibia

SUMMARY REPORT

LANDSCAPE ANALYSIS TO ACCELERATE ACTIONS TO **IMPROVE MATERNAL AND CHILD NUTRITION IN NAMIBIA**

NAFIN
The Namibia Alliance for Improved Nutrition

World Health Organization

MINISTRY OF HEALTH AND SOCIAL SERVICES
Directorate: Primary Health Care
Division: Family Health
Subdivision: Food and Nutrition

Private Bag 13198
Windhoek, Namibia

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FOREWORD

All children are born with the same potential, and the right to grow and develop according to their individual capabilities. In Namibia, a third of all children under five years of age are suffering from stunting or low height for age, with all the short and long-term negative consequences to the physical growth and mental development that this implies.

The Government of the Republic of Namibia has made great efforts since Independence to improve the health and nutritional status of the Namibian people. Despite these efforts, maternal and child under-nutrition still constitute a major public health problem in Namibia.

As part of the efforts to improve maternal and child nutrition, Namibia joined the Scaling Up Nutrition (SUN) movement in 2011. The SUN movement requires countries to conduct a Nutrition Landscape Analysis to assess the readiness and capacity to scale up nutrition. In collaboration with our development partners, we have been engaged to assess the existing gaps and constraints in the country, and identify opportunities to integrate and scale up new and existing evidence-based and cost effective multi-sectoral nutrition actions.

As the Chair of the Namibian Alliance for Improved Nutrition (NAFIN), I am proud to be at the helm of the movement to improve the nutritional status of our men, women and children in Namibia. I vow to continue raising the political commitment and resource allocation for nutrition in order to realize the goals and objectives of Vision 2030 and the National Development Plan NDP4.

I commend the efforts of the Ministry of Health and Social Services, which has successfully conducted this study in collaboration with the World Health Organization and other development partners in Namibia.

I call upon all government ministries, parastatal, community structures, the University of Namibia, Non-Governmental Organizations, the private sector, the United Nations agencies, and other bi-lateral agencies to read and use this report, with the vision of improving the nutrition status and food security of the Namibian population.

I thank all those who, in diverse ways, helped to make this study and report possible.

RIGHT HONOURABLE NAHAS ANGULA, MP
Prime Minister of the Republic of Namibia

PREFACE

The Ministry of Health and Social Services recognizes the contribution of good nutrition to the socio-economic development of the nation. In cognizance of this fact, the Ministry has developed several programmes to address various maternal, infant, and young child nutrition challenges in the country. A National Nutrition Strategic Plan 2011-2015 was developed to guide the Ministry and partners in delivering effective evidence-based nutrition interventions.

This Nutrition Landscape Analysis Report marks a major achievement in the history of the Ministry of Health and Social Services at a time when food and nutrition interventions require the commitment of many sectors, from community to national level, within government and among development partners, that are tasked with working together for the successful scaling up of nutrition actions in Namibia.

This report describes the methodologies used for assessing and classifying the commitment to nutrition in Namibia, and the strengths and weaknesses – as well as opportunities and threats – to Namibia's capacity to scale up nutrition interventions. The study focuses on the identification of constraints at multi-sectoral levels for scaling up nutrition-related activities and makes strategic and specific recommendations for national plans of actions to scale up nutrition in Namibia.

The Nutrition Landscape Analysis to assess the country's readiness to accelerate the actions to reduce maternal and child malnutrition in Namibia was carried out by the Directorate of Primary Health Care Services of the Ministry of Health and Social Services, in collaboration with the World Health Organization and other partners and stakeholders.

I fervently hope that the findings of this study will be beneficial to policymakers in our efforts to reduce and prevent negative nutrition-related health impacts, and will thus contribute to sustainable social and economic development in Namibia.

DR RICHARD NCHABI KAMWI, MP
Minister of Health and Social Services

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Acknowledgements

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We also appreciate the meaningful contribution of the Maternal, Child Health and Nutrition Committee, who provided their inputs individually and collectively to enrich this important document.

Our sincere gratitude and appreciation goes to the World Health Organization Headquarters in Geneva and the Namibia Country Office for the financial and technical support throughout the study.

We would also like to express our sincere appreciation to all stakeholders at national, regional and district levels who contributed to this study by providing valuable information and for expressing their views which contributed to the quality of information included in this report.

Last but not least, our special thanks go to the mothers and children of Namibia for their patience and cooperation during fieldwork, and without whom our efforts would be fruitless.

ABBREVIATIONS and ACRONYMS

AIDS	Acquired immune deficiency syndrome
ANC	Antenatal Care
BMI	Body Mass Index
CAA	Catholic AIDS Action
CACCOC	Constituency AIDS Coordinating Committees
DAPP	Development Aid from People to People
DCC	District Coordinating Committee
DSP	Directorate of Special Programming
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization
FSNAP	National Food Security and Nutrition Action Plan
FSNP	Food Security and Nutrition Project
FSNC	National Food Security and Nutrition Council
GAIN	Global Alliance for Improved Nutrition
GRN	Government of the Republic of Namibia
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
IMNCI	Integrated Management of New-born and Childhood Illness programme
I-TECH	International Technical and Educational Centre for Health
IYCF	Infant and Young Child Feeding
MAM	Moderate Acute Malnutrition
MAWF	Ministry of Agriculture, Water and Forestry
BMFI	Baby and Mother Friendly Initiative
MCH	Maternal and Child Health
MDG s	Millennium Development Goals
MIYCN	Maternal, Infant and Young Child Nutrition
MoHSS	Ministry of Health and Social Services
NACS	Nutrition Assessment Counselling and Support programme
NAFIN	Namibian Alliance for Improved Nutrition
NCD	Non-Communicable Diseases
NFNP	National Food and Nutrition Policy
NGO	Non-Governmental Organisations
NLSA	Nutrition Landscape Analysis
OVC	Orphan and Vulnerable Children
PHC	Primary Health Care
PMTCT	Prevention of Mother-to-Child Transmission of HIV
RACCOC	Regional AIDS Coordinating Committees
RCC	Regional coordinating Committee
RMT	Regional management team
SAM	Severe Acute Malnutrition
SUN	Scaling Up Nutrition movement
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

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PART 1

Part 1: Background Information

1.1 INTRODUCTION

As a country aiming to address malnutrition and carrying forward the findings of the Lancet Series on Maternal and Child Nutrition, Namibia decided to undertake the Nutrition Landscape Assessment (NLSA). This assessment was undertaken to assess Namibia's readiness to accelerate action in nutrition, involved participation of relevant stakeholders under the leadership of the World Health Organization (WHO). Since October 2007, on the global level, WHO has partnered up with other partner agencies including the Food and Agriculture Organization of the United Nations (FAO), the Global Alliance for Improved Nutrition (GAIN), Helen Keller International (HKI), the United Nations Standing Committee on Nutrition (SCN), United Nations Children's Fund (UNICEF) and the World Food Programme (WFP), in October 2007, in an interagency effort to strengthen their contribution, together with national governments, towards the achievement of Millennium Development Goals (MDGs).

This report outlines the outcomes and recommendations of the Namibia's NLSA in-depth assessment.

1.2 COUNTRY PROFILE

Namibia is a land of contrast with arid, semi-arid and savannah land, situated in south western part of Africa bordering with Angola in the north, Botswana in the east, Zambia and Zimbabwe in the northeast, South Africa in the south and the Atlantic ocean in the west. Its total surface area is 824,124 square kilometres and has a population of 2.1 million. The country is divided into 13 administrative regions.

Namibia is an upper-middle income country, ranked 120 out of 187 countries on the human development index in 2011. This classification is based on many indicators including the Gini coefficient used to assess the actual income distribution inside a country. The Gini coefficient of 0.58 in 2008/09 puts Namibia amongst countries with the highest income inequalities in the world.

After independence in 1990 provision of basic social services such as health and education, have improved through a government program of primary health care and rapid expansion of health facilities and schools. Health facilities are now more equitably distributed throughout the country. As a result, access to and quality of health services has increased.

Namibian Political Regions

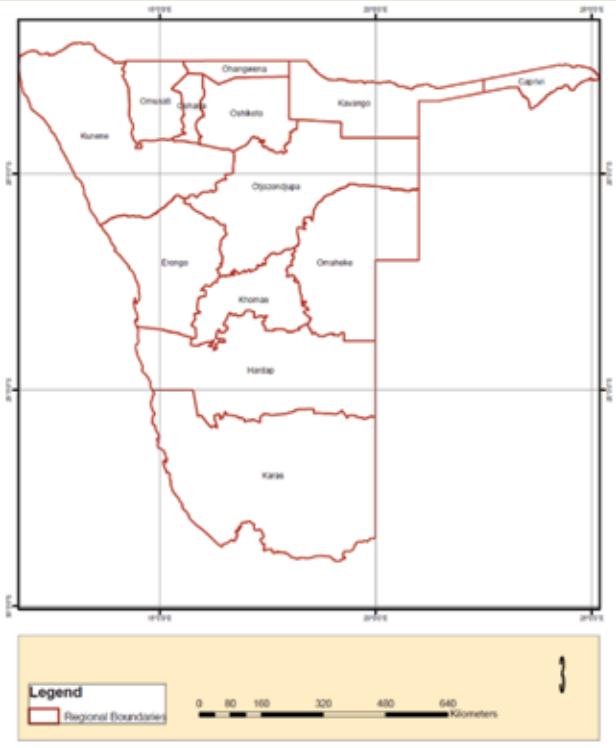


Figure 1: Map of Namibia .

Rainfall in Namibia varies greatly from place to place and from season to season. As a result, the country is prone to emergencies such as drought and floods which has a bearing on both crop and livestock farming practices and long-term economic effects on productivity. There is inadequate access to water and sanitation particularly in rural areas. According to the Namibia Demographic and Health Survey, 2006-2007, two thirds of the population have non-improved household sanitation facilities and nearly 20 per cent of the population require 30 minutes or longer to walk to obtain drinking water.

Close to 51 per cent of the active population is unemployed and 36.5 per cent are subsistence farmers[1].

[1] Central Bureau of Statistics, National Planning Commission, Republic of Namibia, (2003). 2001 Population and Housing Census. National Report. Basic Analysis with Highlights.

In Namibia, there is only one agricultural season (December to April) but the last five years have been difficult with recurring drought, insect and worm invasion and floods which greatly affected staple food production. Households depend on pension grant, child welfare, remittance and other grants or in-kind receipts as an important source of income to ensure staple foods for household members such as maize meal, mahangu (millet) meal, wheat flour, oil and sugar.

Some of these industrial products are fortified with vitamin A, thiamine, riboflavin, niacin, iron and folic acid. Actually there are no guidelines for external control and independent assessment of the quality of the final product. Added to the issue of accessibility of fortified staple foods, home gardening activities to increase the production and intake of vitamins and minerals rich foods have not yet reached a popular success due to important land property and water issues which prevent continuous activities in group or on an individual basis.

Emergencies occur when the population is exposed to risk factors. During disasters the risk is higher for certain diseases. In emergencies (epidemics/disasters), the population can be exposed to poor water supply and sanitation facilities, contaminated foodstuffs, inadequate disposal arrangements for solid and hospital waste and poor sewerage systems which can contribute to high malnutrition levels.

In recent years, the country has experienced a number of emergencies that have had a profound impact on the health and nutrition of the population. The emergence of the H1N1 pandemic in 2009 has added to the potential health risk faced by the country due to natural disasters such as recurrent floods and drought, and other disease outbreaks, notably measles and meningococcal meningitis.

Namibia has a relatively efficient surveillance and emergency preparedness and response system. However, there are challenges such as untimely and incomplete reporting of cases, non-functioning of Health Emergency Management Committees (HEMC) at various levels, as well as the lack of disease specific epidemic thresholds.

In 2011, more than 130,000 people were affected by floods in six northern and north-eastern regions of Oshana, Ohangwena, Omusati, Oshikoto, Kavango and Caprivi, which aggravates the nutrition challenges in the country.

1.3 HEALTH SERVICES

The Ministry of Health and Social Services (MoHSS) is primarily responsible for the provision of comprehensive health services that include promotive, preventive, curative and rehabilitative care. These functions are executed through the various National Directorates, Regional Health Directorates, central, intermediate and district hospitals, clinics and health centres which oversee the implementation of health care delivery in their respective catchment areas.

Primary Health Care (PHC) is the guiding principle for the delivery of health services in Namibia. The PHC guideline was developed in 1992 as an instrument for the delivery of health services in Namibia. Various program specific policies and strategies were also developed to complement the primary health care interventions in the country.

Namibia has a four-tier health delivery system:

- **First level:** Clinics and health centres;
- **Second level:** District hospitals;
- **Third level:** Intermediate referral hospitals; and
- **Fourth level:** Central (national) referral hospitals.

There are Regional Management Teams (RMTs) responsible for all PHC and Directorate of Special Programmes (DSP) functions in the regions. Two Chief Health Programme Administrators (CHPA) and two Senior Health Programme Administrators (SHPA) in every region are responsible for the implementation and management of PHC and DSP functions.

There are 34 health District Coordinating Committees (DCC) responsible for the implementation and management of all PHC and DSP functions. Although the need for effective structures to implement PHC interventions at community level was identified as early as 1992, the National Primary Health Care/Community Based Health Care Guidelines delineate no formal structures for health workers at community level. Access to health care is unevenly distributed, due to the vastness of the country where about 21 per cent of the population live more than 10 km from a health facility and have to travel long distances to access basic primary health care.

The human resources for health at lower level of the health care delivery system (clinic) are not adequately equipped with various essential skills for example, lif-saving skills to handle emergency obstetric and neonatal care services; maternal and infant nutrition; knowledge of the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) programme; and especially early initiation of breastfeeding. In addition shortage of skilled service providers, particularly doctors and anaesthetists is a bottleneck because the tertiary medical training in country only started in 2010.

Other challenges emanating from the community include harmful socio-cultural beliefs and practices, limited number of community based workers, poor male involvement; and poor socio-economic status among others.

Currently, the MoHSS is undergoing restructuring to respond to the health developments and challenges of the 21st Century. In addition the PHC Guidelines is under revision to incorporate latest developments in health and nutrition in the context of the double burden of communicable and Noncommunicable diseases and other related issues (such as social services and rehabilitation).

1.4 NUTRITION SERVICES

At national level, the nutrition programme is administered by the Food and Nutrition Subdivision (FNS) of the Family Health Division (FHD) in the PHC Directorate at the MoHSS. The mandate of FNS is to plan, implement, monitor and evaluate food and nutrition activities.

The Food and Nutrition Subdivision has the following functions and responsibilities:

- To plan, implement, monitor and evaluate food and nutrition activities;
- To coordinate national activities (supervision, monitoring and technical backstopping);
- To coordinate capacity development;
- To develop policies, guidelines and protocols;
- To set the operational research agenda, coordinate national level surveys, analyze and report on routine surveillance data;
- To coordinate social mobilization;
- To coordinate community involvement; and
- To collaborate with other stakeholders in nutrition.

The FNS is staffed by four programme officers and only one is a nutritionist with designation of CHPA as head of the sub-division, and programme activities for Nutrition Surveillance, Maternal, Infant and Child Nutrition Promotion, HIV and Nutrition, Non-Communicable Diet related diseases and Micronutrient Deficiency Control is managed by three Senior Health Programme Administrators (SHPAs). The three SHPA"s are persons with nursing qualifications, but no formal qualifications in nutrition. However, they have received shorter term training in nutrition, such as HIV and Nutrition, Growth Monitoring and Promotion, Infant and Maternal Nutrition, etc. Opportunities are provided for staff members to attend conferences and nutrition sensitive meetings internationally. In addition, there are three nutritionists supported by development partners funding to assist the sub-division, one based at FNS and two assistant nutritionists attached to the regional health training centres.

At regional and district levels, medical officers and nurses are the key health personnel providing nutrition services. Medical officers undergo a five year undergraduate training in a recognized University, leading to a Bachelor's degree in general medicine and general surgery. The training includes a component in nutrition, which includes principles of nutrition, public health nutrition and clinical nutrition. Those who undertake postgraduate training in public health, such as the Master of Public Health also receive nutrition training.

Nutrition is also covered in the nursing training curriculum, but not sufficiently, therefore more in-service training in aspects such as infant and young child feeding, general nutrition and clinical management of malnutrition is given at service delivery and community levels.

However, there are no nutritionists at regional level, where nutrition activities are currently integrated into the responsibilities of both the CHPA and the two SHPA responsible for PHC and DSP functions in every region. Regional health administrators are currently overloaded, and as a result nutrition activities are compromised. In addition, there are no nutritionists at district level to support evidence based nutrition interventions in the community.

1.5 HEALTH STATUS INDICATORS

According to the National Demographic and Health Survey (NDHS) of 2006/07, Maternal Mortality Ratio (MMR) is at 449/100,000 live births and increased from 225/100,000 Live Births in 1992. The increase in maternal mortality over the years is partially attributed to the high prevalence of HIV/AIDS in Namibia. The major direct causes of maternal mortality are eclampsia (33 per cent), haemorrhage (25 per cent) and obstructed labour (25 per cent) and HIV/AIDS is the leading indirect cause of maternal mortality accounting for a significant proportion of all deaths. Evidence shows us that anaemic women have a higher chance of dying from bleeding during pregnancy, child birth and postpartum period as compared to those who have acceptable standard of haemoglobin.

The antenatal care (ANC) coverage for at least one visit is 95 per cent, 70 per cent of women attend ANC four times during their pregnancy, 81.4 per cent of pregnant women deliver in health facilities and post natal coverage is 78 per cent. Contraceptive Prevalence Rate (CPR) is 46 per cent and unmet need for family planning is three per cent. The NDHS 2006/07 shows that teenage pregnancy rate has decreased from 18 per cent in 2000 to 15 per cent in 200607, but still remains a challenge as maternal and neonatal mortality is more common among teenage pregnant women than among those who are 20 years and above.

Research indicates that widespread gender-based violence has implications for sexual, reproductive and child health. According to the MoHSS records in 2009, 1,039 rape cases and 10,053 grievous bodily harm cases were reported to the Women and Child Protection Units. Women and girls are mostly the victims, while the majority of perpetrators are males and are known to the victims, usually as family members, spouses and partners. Women and girls who are exposed to gender based violence are more likely to have less/ no control over their sexual and reproductive health. These results in unwanted pregnancies through rape, non-use of family planning, teenage pregnancy, poor maternal health, sexually transmitted infection (STI) including HIV, and death.

The HIV sero-prevalence among pregnant women attending ANC in 2010 was 18.8 per cent. The total pregnant women in need of Prevention of Mother to Child Transmission (PMTCT) services were estimated at 12,700. Namibia has adopted the new 2010 WHO PMTCT of HIV guidelines and has chosen option B+ which will put HIV positive pregnant women on lifelong Antiretroviral (ARV) treatment once diagnosed.

Exclusive breastfeeding for the first six months of life is recommended for all infants regardless of HIV exposure or infection. Complementary feeding is recommended to start at 6 months. At one year of life, HIV exposed infants should wean from breastfeeding. HIV infected infants as well as infants born to HIV uninfected mothers should continue breastfeeding until 2 years and beyond, if no other adequate nutritious diet can be provided.

A total of 314 health facilities out of 344 are providing PMTCT services giving coverage of 92 per cent. Out of the total 61,981 pregnant women who attended ANC in 2009, 58,882 (95 per cent) received counselling and testing services. At labour and delivery, 85 per cent of HIV positive women and 91 per cent of exposed infants received ARV prophylaxis. The HIV positivity of exposed infants using Dioxyribo-Nucleic Acid Polymerase Chain Reaction (DNA-PCR) technique has reduced from 13.4 per cent in 2006/07 to 7.0 per cent in 2008/9. Continued challenges exist with the quality of care; continued follow-up of HIV exposed infants, and reaching all women who need ARV prophylaxis and treatment for themselves. There are also efforts to improve male involvement in PMTCT which has remained very low over the years.

Globally, approximately 70 per cent of childhood deaths are due to only five conditions, namely diarrhoea, measles, pneumonia, malnutrition and malaria. The situation is similar in Namibia whereby HIV/AIDS, pneumonia, diarrhoea, malaria and malnutrition are the main causes of mortality. Under 5 Mortality Rate (U5MR) is 69/1,000 live births and there was a slight upward trend in infant mortality rate (IMR) and U5MR in 2006/07, as compared to 2000/01 (Infant Mortality Rate from 38/1,000 in 2000/1 to 46/1,000 in 2006/7 and Under-Five Mortality Rate from 62/1,000 in 2000/1 to 69/1,000 in 2006/7 respectively).

In order to address the high morbidity and mortality among children, the government has adopted the Integrated Management of New-born and Childhood Illnesses (IMNCI) strategy. The first phase of IMNCI implementation took place in 1997 with support from major partners, professional groups and other stakeholders in the country. National Immunization Days (NID) was introduced in 1996 as a strategy to accelerate progress towards the attainment of polio and measles free Namibia. In 2008, the MoHSS introduced "Reach Every District (RED) approach" to reach every child in every district with immunization to improve routine immunization coverage. In 2011 Penta-valent vaccine (DPT-Hep-B-Hib-3) was introduced and the coverage for 2011 was 83 per cent.

1.6 NAMIBIA: THE FIGHT AGAINST MALNUTRITION

1.6.1 History of global commitment

During the International Conference on Nutrition (ICN) in 1992, governments including Namibia pledged to make all efforts to eliminate or substantially reduce starvation and famine; widespread chronic hunger; under nutrition, especially among children, women and the aged; micronutrient deficiencies, especially iron, iodine and vitamin A deficiencies; diet-related communicable and Noncommunicable diseases; impediments to optimal breastfeeding; and inadequate sanitation, poor hygiene and unsafe drinking water before the next millennium.

The World Health Assembly, the highest governing body of the WHO, has passed several resolutions in the areas of Nutrition that include resolutions on Infant and Young Child Feeding (IYCF), elimination of micronutrient deficiency, improving maternal nutrition and on prevention of Noncommunicable Diseases among others e.g. the 45th World Health Assembly adopted and endorsed the Innocenti Declaration on Infant and Young Child Feeding (IYCF).

Namibia adopted the Innocenti Declaration on IYCF at the WHO/UNICEF policymakers' meeting on "Breast-feeding" in 1990.The Innocenti meeting declared that as a global goal for optimal maternal and child health and nutrition, all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breast milk from birth up to 6 months of age. Thereafter, children should continue to be breast-fed, while receiving appropriate and adequate comple-mentary foods, for up to two years of age or beyond. This child-feeding ideal is to be achieved by creating an appropriate environment of awareness and support so that women can breastfeed as recommended.

On 20 September 2011, President Hifikepunye Pohamba speaking at the United Nations (UN) General Assembly High Level Meeting in New York on the Prevention and Control of NCD called for acceleration of actions to address the risk factors contributing to NCD.

In terms of demonstrating a tangible commitment for scaling up nutrition and health, the Abuja Declaration in 2001 emphasized that countries should allocate at least 15 per cent of the government budget to health. Namibia has made progress in this regard and is currently allocating around 12 per cent of its national budget to health.

The policy and institutional changes required for accel-erating nutrition improvements need to have sufficient political support to be adopted and implemented. In addition, successful operations for delivering technical assistance depend largely on the capacity of the inter-national nutrition system to work with governments to assess and build a broader ownership, as a prerequisite for policy change.

1.6.2 *History of Namibia's commitment: the National Food Security and Nutrition Project (FSNP)*

The national Food Security and Nutrition Project (FSNP) was established in 1991.

The long term goal of the FSNP was that *"All people in Namibia at all times, have physical, economic and social access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."* The FSNP was based on the following four pillars:

1. The first pillar of food availability was aimed at ensuring that a sufficient quantity of food of appropriate quality is available to all people in Namibia, through domestic production and imports;

2. The second pillar of food access aimed at ensuring access by all individuals in Namibia to adequate resources (entitlements) to acquire appropriate foods for a nutritious diet. Entitlements include legal, political, economic and social arrangements resources;

3. The third pillar of food utilization and nutritional requirements was to ensure that all individuals in Namibia reach a state of nutritional well-being for which all physiological needs are met;

4. The fourth pillar of food security was to ensure stability in equitable food provision so that all people in Namibia have access to adequate food at all times.

The FSNP was devised under the rational of the Right to Food of every person. The Right to Food is the right to have regular access to sufficient, nutritionally adequate and culturally acceptable food for an active, healthy life. It is the right to feed oneself in dignity, rather than the right to be fed. With many people still deprived of enough food, the Right to Food is not just economically, morally and politically imperative - it is also a legal obligation. In Namibia, a large proportion of the population is being faced with the impact of drought, HIV/AIDS and declining agricultural productivity. Under these conditions, ensuring food security at all levels is a difficult and complex matter, and requires collective action. A comprehensive and conducive National Programme for Food Security will contribute to providing an environment in which food security issues can be discussed and acted upon by all stakeholders.

This project plan was intended to operate through a three phased approach, namely, an assessment and planning phase (Phase 1), a pilot implementation phase (Phase 2), and an expansion phase (Phase 3).

PHASE I was undertaken between 1991 and 1995. The activities were funded by the Government of Norway and involved the preparation of the Namibia Food and Nutrition Policy (NFNP) and the Food Security and Nutrition Action Plan (FSNAP) to address food security and nutritional issues. This policy would be further elaborated during the development of plans, policies and guidelines to fight malnutrition.

PHASE 2 was undertaken between 1997 and 2000. This was the pilot implementation phase which was funded by the Government of Namibia (GRN) and focused on institutional capacity building, human resources development, decentralization of food security and nutrition initiatives to four pilot regions, provision of assistance for the development of action plans and the development of household food security and malnutrition information, and monitoring and evaluation systems.

The period 1993-2002 was declared as the first food and nutrition decade. This created an opportunity for food and nutrition security to be a government wide effort that led to the creation of the Food Security and Nutrition Secretariat to work closely with all relevant line ministries to ensure that food security and nutrition were included in every sector's agenda.

To further enforce the food and nutrition agenda, cabinet instructed that a separate multi-sectoral food security and nutrition chapter be included in the first National Development Plan (NDP1) 1995-2000 to clearly indicate government's commitment to address issues of food insecurity and malnutrition in Namibia. The chapter was prepared under the auspices of the Food Security and Nutrition Technical Committee and its contribution was to review progress made since independence to address food security and nutrition related issues as well as to estimate national goals and objectives within the context of improved food security and nutrition.

A second food and nutrition decade (2003-2012) was announced during the 2002 World Food Day celebrations by the President of Namibia. The declaration supported the long term National FSNP in Namibia.

PHASE 3 was the final phase which involved the expansion of the FSNP and formed part of the second food and nutrition decade. This phase ran for six years (2000-2006), with the aim to replicate the lessons learnt

during the pilot phase on large scale, in areas of similar climatic, environmental and ecological circumstances and strengthening of the capacity of the cross-sectoral institutional framework to coordinate and promote the multidisciplinary food security and nutrition throughout the country.

1.6.3 *The Namibia Alliance for Improved Nutrition (NAFIN)*

Namibia's commitment to nutrition at the highest political level continues with the establishment of the Namibia Alliance for Improved Nutrition (NAFIN) in 2009, followed by a formalisation of the Alliance in 2010 through Cabinet decision number 17th/23.11.10/001. NAFIN is headed by the Prime Minister of Namibia, the Right Honorable Nahas Angula. NAFIN was created as a platform that brings together key partners for a concerted response in addressing the problem of malnutrition, expanding beyond the earlier scope of the FSNC which encompassed only the public sector. This platform aimed also to provide a mechanism that ensures government stewardship responsibilities in nutrition are consistent, coordinated and collaborative. In addition, private sector engagement is called upon through public private partnerships, with additional technical and financial support from UN agencies and other development partners. This platform additionally gave space for the active participation of civil society organizations, faith based organizations and nongovernmental organizations. The ultimate aim of the platform is to provide means of harnessing broad commitments of all jurisdictions to achieve evidence-based nutrition objectives.

The general objective of NAFIN is to develop and coordinate the implementation of a multi-sectoral National Nutrition Strategy and strategically manage national nutrition promotion activities. In overseeing the development and implementation of a multi-sectoral national nutrition strategy, the Alliance will focus on four key actions, and employ five main strategies in meeting its broad objectives.

The areas of focus for NAFIN are:

- Reducing malnutrition and promoting good nutrition for all Namibians, with a focus on women and children;
- Capacity development for service delivery across key government sectors such as agriculture, health, education, gender and child welfare to ensure and prioritize essential nutrition and household food security for vulnerable and disadvantaged households and communities;
- Ensuring the economic and social benefits of nutrition security is reflected in sectoral plans and policies as well as the National Development Plans;
- Preventing and reducing overweight and obesity.

The five main strategies that NAFIN plans to employ to reach its objectives are:

1. The Alliance supports action to develop, coordinate and monitor an integrated national nutrition strategy and action plan as part of the National Development Plan and Vision 2030,
2. The Alliance has a leadership role in building a common approach to nutrition across the sectors and levels of government;
3. The Alliance provides expert advice on nutrition issues from a multi and cross-sectoral perspective to the Cabinet, parliament and individual government ministries and agencies;
4. The Alliance promotes better communication. Using its networks, it serves as a resource available to government at all levels, to health and nutrition professionals, industry and other stakeholders for sharing and disseminating information about nutrition;
5. The Alliance fosters partnerships working with public, non-government and private sectors to advance nutrition in Namibia.

The actions to be explored by the NAFIN translated out of the five proposed strategies are listed below:

1. Making fortification work better,
2. Address the needs of infants and young children;
3. Advocacy and awareness;
4. Institutional and vulnerable group feeding programmes;
5. Technical innovation and capacity development;
6. Minimum food basket.

A Cabinet decision entitled Report on Malnutrition in Namibia: The Time to Act is Now, Cabinet Decision no 3rd/01.03.11/004, was released in March 2011. This Cabinet decision passed eight core resolutions and five directives.

The eight core resolutions covered recommendations on feeding programmes for expectant mothers, food fortification, agricultural bio- fortification, targeted feeding programmes and food distribution for vulnerable sections of the population and as part of emergency responses, increased awareness programmes and advocacy actions to improve community awareness and therefore action, community based growth monitoring programmes and nationwide deworming, immunization and supplementation campaigns.

The five directives recommended that accountability be pegged to The Office of the Prime Minister (OPM) and/or the respective line ministries, the involvement of regional councils in the implementation of the recommended actions, curriculum modification to strengthen the teaching of nutrition and related subjects, linkages be made between food distribution and food production initiatives as well as the inclusion of the national youth services in food distribution. In summation, these recommendations supported a multi-sectoral and multi institutional response to existing and scaled up nutrition activities.

A third set of multi-sectoral nutrition sensitive and specific Cabinet resolutions were released under the leadership of the OPM in August 2011, under Cabinet decision number 14th/16.08.11/003, entitled Report on the National Vulnerability Assessment 2010/2011. This set of Cabinet decisions encompassed recommendations to the Disaster Risk Management Team, which is a directorate within the OPM and called for joint actions with the education, health, rural development, environment and tourism, agricultural sectors and special projects under the OPM.

An additional demonstration of political commitment was strongly communicated when all 13 Governors from the Regions in Namibia, met in Windhoek in August 2011, at the invitation of the Chair of NAFIN, the Right Honorable Prime Minister Nahas Angula. The purpose of the meeting was to create awareness about the nutrition situation in the country and all the respective regions.

The Governors were galvanized into action having learned more about the importance of nutrition to the development of the nation and in their specific regions. A key output from the meeting was the Declaration of Commitment signed by all 13 Regional Governors. In this Declaration of Commitment, the Governors pledged to support the Prime Minister in the initiatives to scale up nutrition, to act as regional representatives for NAFIN – which resonates with the initial spirit of the food security and nutrition council. Additionally, the Governors pledged to mobilize communities and community leaders as part of bi-annual national immunization days, as well as in breastfeeding campaigns, dietary diversification efforts, maternal nutrition activities, and water and sanitation activities. The Governors also pledged to support food distribution efforts among vulnerable groups and school feeding efforts and in so doing promote and support local food production.

1.6.4 Scaling Up Nutrition Movement – Namibia Membership

In November 2011, Namibia was accepted as the 25th country to join the Scaling Up Nutrition (SUN) movement. In February of 2012, the Prime Minister as the Chair of NAFIN was chosen to be part of a High Level Group known as the Lead Group comprising Heads of State, Prime Ministers, Ministers of Finance and Heads of International Organizations. In joining the SUN movement, Namibia will need to fulfil certain requirements which include identifying a government focal point, lead donor partner, undertake a situation assessment and identify a country representative to take part in the SUN Country Partner Reference group. In this respect, Namibia has shown her commitment to the process having identified a lead donor partner, undertaken the Namibia NLSA survey as well as identifying a country representative to take part in the SUN country partner reference group.

1.7 DEVELOPMENT OF PLANS, POLICIES AND GUIDELINES TO FIGHT MALNUTRITION

1.7.1 *National Food and Nutrition Policy (NFNP)*

In 1995, the National Food and Nutrition Policy (NFNP) was developed. The NFNP provides the necessary framework and guidelines for actively addressing the problems of food insecurity and malnutrition in Namibia over the medium to long term with the overall objective to:

1. Improve the quantity and quality of food consumed by the population with the aim of ensuring an adequate diet for all;
2. Empower households to use the resources available to them to improve childcare, feeding practices and their environmental sanitation; and
3. Provide an adequate level of social and supporting services.

These three areas establish the agenda for the initiatives that are necessary for the achievement of the required food security and nutrition outcomes. These objectives are supposed to be achieved through strategies and programmes designed in accordance with other basic government principles:

- To maximise popular participation in the development process,
- By emphasizing community participation in solving their own food security and nutrition problems;
- To decentralise activities and decision making to respond to the high level of regional differentiation;
- To educate and sensitize people concerning food and nutrition issues;
- To create awareness in all parts of the government and community structures on the importance of nutrition issues and their cross-sectoral nature; and
- To reduce individual and community dependence on government and other central structures to solve their food and nutrition problems.

This policy is still active, but the MoHSS is in the process of developing the Sexual Reproductive, Child Health and Nutrition Policy which will replace the previous policy. Nutrition is integrated within this policy with the goal of reducing the level of malnutrition and improve IYCF practices in line with the Global, Regional and National guidelines.

The policy includes the following nutrition policy statements:

- All health facilities shall provide growth monitoring to all children under-five years of age both in the health facilities and at outreach points,
- Facility and community based therapeutic feeding shall be provided to all severely malnourished children to alleviate the consequences of malnutrition;
- Supplementary feeding shall be provided to moderately malnourished children, pregnant and lactating women;
- Micro-nutrient deficiency shall be prevented and treated through routine health facility supplementation and campaigns;
- Exclusive breastfeeding for six-months shall be promoted to all infants irrespective of the HIV status of women as long as the proper ARV prophylaxis for the mother and the new-born is provided.

1.7.2 *National Food Security and Nutrition Action Plan, 1995*

The 1995 *National Food Security and Nutrition Action Plan* (FSNAP) was prepared in response to deteriorating conditions of food security and nutrition in many urban and rural parts of Namibia. The FSNAP is a major tool for the implementation of the NFNP. The FSNAP outlines existing government, NGO and private sector programmes and initiatives addressing food and nutrition issues and proposes a comprehensive set of mutually supportive, cross-sectoral, broad-based actions to fill the identified gaps in the existing programmes and to help achieve government's food security and nutrition-related goals and objectives. It also provides a detailed strategic framework for the implementation of government's food and nutrition policies.

The plan was intended to provide government and key partners with clearly-defined project profiles that could be used for motivating for funding support and whose implementation could endeavour to ensure that every Namibian has access to sufficient, safe and nutritious food to meet dietary needs for an active life.

The Namibia *Food and Nutrition Guidelines* were published in 2000. The aim of the guidelines was to help the public develop and practice healthy eating habits. The guidelines were developed as a collaboration between MoHSS, FAO, WHO, UNICEF, Ministry of Agriculture, Water and Rural Development, Ministry of Basic Education and Culture and the University of Namibia. The *Food and Nutrition Guidelines* promote the consumption of culturally acceptable healthy foods of a wide variety. Healthy diets help to correct bad eating habits and reinforce good eating habits which help to maintain good health.

1.7.3 *National Strategic Plan for Nutrition, 2011-2015*

The National Strategic Plan for Nutrition (NSPN, 2011–2015) was initiated by the Directorate of PHC in the MoHSS as a response to global and local calls to action, as well as renewed political commitment in Namibia and strategic direction within the MoHSS. The resulting five-year plan aims to re-emphasize the crucial role nutrition plays in the health and productivity of the nation, and improved quality of life for all. As such, it is a vital building block in the efforts to achieve Namibia's MDG. It provides a framework for interventions and activities at national, regional, district and community level, with considerable collaboration required from multilateral and bilateral development agencies, other line ministries, CSO and private institutions.

The NSPN specific objectives, initiatives, and indicators and detailed action plan have been developed for each strategic priority which are:

1. Maternal and child nutrition;
2. Micronutrient deficiencies;
3. Diet-related diseases and lifestyles;
4. Nutritional management of communicable diseases.

1.8 NUTRITION-SPECIFIC AND SENSITIVE POLICIES AND LEGISLATION

Policies and legislations are critical steps of a strategic response to maternal and child under-nutrition. In this respect, it is important to distinguish between nutrition-specific and nutrition-sensitive instruments. Nutrition-specific instruments directly influence nutrition outcomes e.g. infant and young child feeding guidelines. Nutrition-sensitive instruments indirectly influence nutrition outcomes, e.g., water and sanitation policy or agricultural policy, or school health policy. These in turn, need to be translated into action plans and guidelines that can be used on the ground.

Table 1: Legislation enacted to support nutrition activities

NUTRITION-RELEVANT LAWS	
Law	**Date**
Salt Iodization Legislation no 883	1994
Social Security Act, 1994 (Amended)	2004
Water Resources Management Act	2004
Maternity Protection Law (12 weeks) [2]	2007
Public and Environmental Health Bill (including the International Code of the Marketing of BMS: drafted measures awaiting enactment	Expected: 2012

[2] http://www.ilo.org/dyn/travail/docs/1013/2007_Labour_Act.pdf

1.9 MALNUTRITION SITUATION AT THE GLOBAL LEVEL

Malnutrition remains a single major contributing factor to child mortality. About one-third of all child deaths in 2011, are linked to malnutrition (WHO key facts on Child mortality 2011). Nearly one-third of children in the developing world are either underweight or stunted, and more than 30 percent of the developing world's population suffers from micronutrient deficiencies. Unless policies and priorities are changed, the magnitude of the problem will prevent many countries from reaching every mother and child through scaling up nutrition interventions to achieve the Millennium Development Goals.

All children have the right and the same potential to grow and develop. Although under nutrition can be rapidly eliminated if adequate maternal and child nutrition is ensured, 29 per cent of children in developing countries or 171 million children under 5 years of age are too short for their age. Current global rates of progress, while positive, are insufficient to meet MDG 1, Target 1C, and the rates of progress need to be more than doubled in order to achieve this MDG. Furthermore not achieving the under nutrition target will negatively impact on all other MDGs.

1.10 OVERVIEW OF NUTRITION SITUATION IN NAMIBIA

Malnutrition remains a public health problem in Namibia. According to the NDHS of 2006/07, 29 per cent of children under-five years of age are stunted that is low height for age, 17 per cent underweight, that is low weight for age and 8 per cent wasted, that is low weight for height. The table below indicates the magnitude of the nutritional problems among children in Namibia.

Table 2: Magnitude of nutritional problems among children in Namibia

	Estimated total number of children under-five years of age = 291,757	
	Percentage	Number of children
Stunted (low height for age)	29 per cent	84,610
Underweight (low weight for age)	17 per cent	49,599
Wasted (low weight for height)	8 per cent	23,340

National Planning Commission, 2010 and NDHS 2006/07.

The general pattern indicates that regions with high levels of poverty, low literacy rates, high HIV prevalence and with predominantly rural populations have the highest levels of stunting (for example Kavango which has highest level of poverty (50.4 per cent-, low literacy level of 79 per cent, high teenage pregnancy 34 per cent and HIV sentinel prevalence of 10.4 per cent) has the highest stunting rate of 39 per cent (NDHS, 2006/07). Children born in the poorest and second poorest wealth quintile households have a three-fold risk of being stunted compared to those born in the richest quintile (National Planning Commission, 2008).

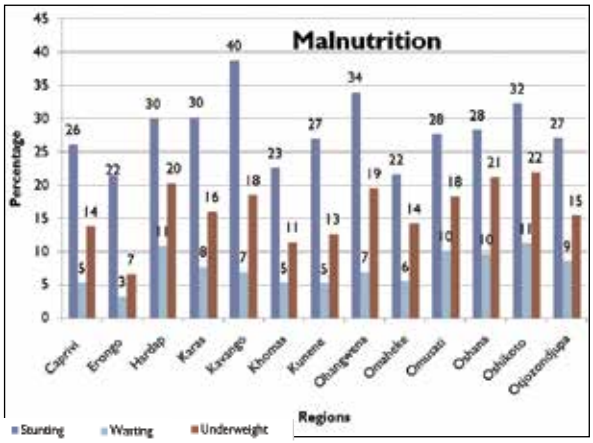


Figure 2: Regional prevalence of malnutrition among children under-five years of age

Slightly more than 4 per cent of the children were overweight or obese. This over- nutrition was more present in urban settings (7 per cent Vs 3 per cent in rural area) and in wealthier households. According to the NDHS, the higher the mothers' education level, the more prone the children are to overweight or obesity and children having an overweight or obese mother may also be more susceptible to overweight or obesity.

The NDHS showed that 14 per cent of the infants aged less than 6 months were already stunted, 11 per cent were underweight and 11 per cent were acutely malnourished while also 13 per cent of them were overweight or obese. The severe acute malnutrition affected 4.4 per cent of these infants, which is the highest proportion of children under 5 years of age affected by Severe Acute malnutrition (SAM). This serious situation could be linked with the confusing messages regarding breastfeeding in the context of HIV and the use of infant formula that the population is receiving.

Only half of all Namibian babies are exclusively breastfed within the first two months of life, and only 24 per

cent of infants are exclusively breastfed for 6 months. In addition, immediately following birth, over 14 per cent of Namibian new-born babies receive pre-lacteal feeds. Bottle feeding, non-breast milk feeds such as juices, plain water and complementary solid foods are introduced within the first 3 months of infants' lives. In Namibia, the number of bottle-fed babies exceeds the number of exclusively breastfed babies at three months.

The emergence of HIV/AIDS has created a lot of confusion on issues of exclusive breastfeeding. The frequent changes in guidelines in relation to HIV and Infant feeding for example, abrupt cessation of breastfeeding and provision of formula feeding without considering the affordability, feasibility, safety and sustainability created confusion among managers and health workers. Based on the above facts, Namibia revised the IYCF guidelines in line with the 2010 WHO recommendations and guidelines on PMTCT. This will alleviate the confusion and misunderstanding surrounding breastfeeding.

Regarding the nutrition situation in women aged 15 to 49 years, 6 per cent of them were moderately or severely thin with a body mass index (BMI) under 17; 10.2 per cent were mildly thin with a BMI between 17 and 18.4. On the other side, 16 per cent of the mothers were overweight with a BMI between 25 and 29 and 12 per cent were obese with a BMI of >30 and above. The comparison of overweight rate to the underweight rate (28 per cent vs 16 per cent, respectively) reflects the double burden of over and under-nutrition[3]. This double burden of under-nutrition and over-nutrition in Namibia highlights the current epidemiological and nutritional transition as it is seen in many other African Countries[4,5,6].

Obesity is often seen as the main risk factors associated with the increased rate of NCD[7] such as hypertension, diabetes, insulin resistance and hyperlipidaemia. This situation needs also to be addressed through healthy eating and promotion of physical activity.

1.10.1 Over-nutrition and Noncommunicable diseases

Over-nutrition is the result of an excess consumption of energy-dense and micronutrient poor foods; this is physically manifested as overweight and obesity. The diseases associated with overweight and obesity is diabetes, hyperlipidaemia, hypertension and other NCD such as cardiovascular diseases, cancer, osteoporosis, asthma and dental diseases among others.

NCDs principally cardiovascular diseases, diabetes, cancers and chronic respiratory diseases, are the leading causes of preventable morbidity and disability, and currently cause over 60 per cent of global deaths, 80 per cent of which occur in developing countries. By 2030, NCD are estimated to contribute to 75 per cent of global deaths (WHO Healthy Life Style and NCDs, 2011).

[3] Mendez, M.A., Monteiro, C.A. and Popkin, B.M. (2005) 'Overweight exceeds underweight among women in most developing countries'. Am J Clin Nutr, 2005; 81: 714-21.
[4] Standing Committee on Nutrition (2006) Diet related chronic diseases and the double burden of malnutrition in West Africa. SCN New, 2006; Number 33.
[5] Vorster, H.H., Venter, C.S., Wissing, M. and Margetts, B. (2005) 'The nutrition and health transition in the North West Province of South Africa: a review of the THUSA (Transition and Health during Urbanisation of South Africans) study'. Pub Health Nutr, 2005; 8(5): 480-90.
[6] Popkin, B.M. (2004) 'The Nutrition Transition: An overview of world patterns of change'. Nutr Rev., 2004; 62(7): S140-3.

Health facility-based data indicate hypertension and diabetes as the first and second causes of disability among adults respectively. From the MoHSS Health Information System (HIS) reports, heart failure, hypertension and stroke collectively were responsible for 5 per cent of all health facility deaths in 2005, the proportion of the NCD deaths grew to 6 per cent in 2006 and 8 per cent in 2007.

The prevalence of overweight, obesity and associated NCD are of public health concern as these are emerging as important causes of morbidity and mortality in Namibia. Namibia is using standardized surveillance methods and rapid assessment tools such as the WHO STEPwise approach to the surveillance of risk factors for Noncommunicable diseases.

1.10.2 Micronutrient Deficiency Situation

There are no actual data on micronutrient deficiency among the adult population. The recent information for children is focused on the coverage of routine vitamin A supplementation and availability of iodized salt at the household level. The specific micronutrient deficiency data (iodine, vitamin A and iron) are 20 years old.

In 1992, iodine deficiency disorders were identified as important public health problem with 55 per cent of severe prevalence of goitre in Caprivi Region and a moderate prevalence (15–25 per cent) in North-West Regions[8]. Salt iodization became mandatory in 1994 and the study conducted in the year 1998/9 found out that the prevalence of iodine deficiency as illustrated by the prevalence of goitre among children was 0.2 per cent. However, there were still nearly 13 per cent of households which do not use iodized salt which could explain why still 15 per cent of Namibian children aged 8 to 12 years (21 per cent in rural settings and 9 per cent in urban settings) had severe iodine deficiency identified by the urinary iodine concentration (<2µg/dl). The urinary iodine deficiency was more prevalent in Kavango (47 per cent) where only 55 per cent of household had access to iodized salt[9]. In 2000 NDHS, it was reported that only 55 per cent of Namibia's households were using iodized salt. Some regions had much lower access than the national average (16 per cent in Omaheke and 31 per cent in Kavango Regions).

In 1992, up to 23.5 per cent of pre-school children aged 2 to 6 years had either severe or moderate vitamin A deficiency with serum retinol level of <20µg/dl. At that time distribution of vitamin A capsules was not integrated in the MoHSS action plan[10].

Vitamin A supplementation is routinely given to all children at 9 months and every six months thereafter until the age of six years. Vitamin A supplementation is also provided during the National Immunization Days. In 2000, the NDHS reported that only 38 per cent of children received vitamin A capsules and only 33 per cent of women received vitamin A after delivery (post-partum). The coverage of vitamin A supplementation was somewhat higher in 2006 (NDHS 2006) with 52 per cent of children having received vitamin A capsule and 12 per cent received iron supplements. The coverage of deworming as a treatment among children was 9 per cent according to the NDHS 2006. Recently, deworming was adopted as a strategy to improve the nutritional status of children in Namibia.

The routine micronutrient supplementation for women during pregnancy and after delivery showed some improvement over the years. According to the results, 51 per cent of women received vitamin A post-partum (33 per cent in 2000 NDHS) and 31 per cent took iron supplements for more than 90 days. Night blindness without vision difficulty during the day was reported by 3 per cent of women. Deworming during pregnancy is uncommon (7 per cent).

The ferritin levels were found to be adequate for all children and the hypothesis that it could be associated with the use of iron pots for cooking was raised but not verified. The finding that elucidated the adequate level of ferritin among children needs to be investigated since it is believed that iron-rich foods could be available at the household level but not necessarily accessible to children. Infection with Soil Transmitted Helminthes that can potentially aggravate the iron-deficiency anaemia is also prevalent in Namibia.

Even in malaria prone areas, ferritin level was adequate despite the low use of mosquito nets by children (12 per cent) and women (8 per cent)[11]. In its National Nutrition Action Plan[12], Botswana reported that in 1994, the prevalence of anaemia was 38 per cent in children and 33

[7] Popkin, B.M. and Gordon-Larsen, P. (2004) 'The nutrition transition: worldwide obesity dynamics and their determinants'. Int J Obes, 2004; 28: S2-S9
[8] Varghese P. (1994). Salt iodization in Namibia. UNICEF.
[9] Ministry of Health and Social Services, Republic of Namibia (1998/99). Iodine deficiency disorders and data on the status of vitamin A and iron.
[10] *Ministry of Health and Social Services, Republic of Namibia (1999). Treatment and control of vitamin A deficiency. A picture of children with bright eyes. Policy Guidelines for Health Workers in Namibia.*
[11] *Ministry of Health and Social Services (MoHSS) [Namibia] and Macro International Inc. (2008). Namibia Demographic and Health Survey 2006-07. Windhoek, Namibia and Calverton, Maryland, USA: MoHSS and Macro International Inc.*
[12] *Ministry of Health, Republic of Botswana (2005). National Plan of Action for Nutrition 2005-2010.*

per cent in women which seems contrary to Namibia's findings when life and eating patterns are thought to be similar on many levels. This issue brings questions regarding the quality of the sample collection and analysis.

Beside deficiency in iodine, vitamin A or iron, it is also important to look at the zinc status. There is no nutritional data on zinc status in Namibia. However, diarrhoea rate, stunting and low intake of food rich in zinc are considered as proxy indicators of zinc deficiency.[13, 14]

Nearly one third of children are stunted and more than 10 per cent children had diarrhoea[15]. The highest sources of zinc are animal products and it is known that consumption of low zinc bioavailable diet such as consumption of plant based diet (legumes and nuts, whole grains cereals, tubers) which contains phytate limits zinc bioavailability. It is believed that animal products consumption is common in the general food patterns but there is no data regarding the real quantity eaten by children. Legumes and nuts are found traditionally in the country but consumption is low. This information might suggest that zinc status should be assessed and if required, supplementation of zinc should be pursued[16]. Folic acid and niacin deficiencies are other micronutrients that need to be investigated in Namibia.

Folic acid deficiency is associated with increased risk of low birth weight and neural tube defect. According to the NDHS (2006), 14 per cent of babies had low birth weight (less than 2.5 kg). The MoHSS HIS indicated that in 2006, out of an estimated 65,000 births reported 239 were premature and 286 babies were born with congenital malformations of the nervous system (including spinabifida). These public health problems can be associated to folic acid deficiency, HIV, alcoholism or other health conditions which need to be investigated.

Pellagra is the clinical manifestation (dermatitis, diarrhoea and dementia) of a lack of niacin or tryptophan (amino acid). This is seen in areas where maize is the main staple food with low intake of red meat. In Namibia, the porridge of thick paste made with traditional maize flour may lack niacin and hence predispose people to pellagra. Pellagra or niacin deficiency has been reported in the past and still cases are reported on a regular basis but the national HIS does not inform on the magnitude of the problem for informed programming and decision making.

1.10.3 Infant and Young Child Feeding

Breastfeeding is common in Namibia, with 94 per cent of children being breastfed at some point during their life. More than 70 per cent were breastfed in the hour following birth and 92 per cent in the first day after birth. However, 14 per cent of newborns received other liquids than breast milk in the first 3 days of life.

Bottle feeding is common in Namibia (35 per cent in 0–5 months, 49 per cent in 6–9 months, 32 per cent in 12–23 months and 15 per cent in 24–35 months). These practices contribute to the low prevalence of exclusive breastfeeding in Namibia.

The compliance to international and national IYCF recommendations is weak and highlights the importance to address the adequacy of the complementary food offered.

1.10.4 Food Intake Patterns

Detailed data on common food intake patterns in Namibia is scarce. The staple foods in Namibia are based on maize meal or mahangu (millet) which is prepared as porridge or thick paste with fish or meat sauce and few people consume legumes. Fruits and vegetables are not commonly consumed, but some green vegetables and tomatoes are added to flavour the staple food, meat or fish but not on every day basis.

[13] Gibson, Dr Rosalind S. (2007). Determining the risk of zinc deficiency: Assessment of dietary zinc intake. IZiNCG Technical Brief, No.3.
[14] Hotz, Christine and Brown, Kenneth H. (2004). 'Assessment of the risk of zinc deficiency in populations and options for its control'. Food and Nutrition Bulletin, 2004. 25(1 (suppl.2)): p. S95-S203.
[15] Ministry of Health and Social Services (MoHSS) [Namibia] and Macro International Inc. (2008). Namibia Demographic and Health Survey 2006-07. Windhoek, Namibia and Calverton, Maryland, USA: MoHSS and Macro International Inc. [16] (Hess, et al., 2009).

The challenges to adequate nutritional status in Namibia are due to limited access to diverse diets rich in micronutrients. In general, the Namibian diet is heavily subsistent on cereal based staples especially maize (in the urban areas, as well as central and south Namibia) and pearl millet (which is primarily consumed in the Northern Regions of Namibia).

According to the food consumption survey that was undertaken in 1999, 75 per cent of the population reported having breakfast, 72.8 per cent reported having lunch and 97.8 per cent had an evening meal. In terms of perceived adequacy of food consumed, 60 per cent of respondents in the survey indicated that they had not had enough to eat and 62.8 per cent reported that the household had difficulties accessing enough food to meet their needs.

The diversity of Namibia's socioeconomic patterns, agro-ecological zones and traditions is reflected in food consumption patterns. Along agro-ecological zones it was observed that populations in the south of the country were more reliant on food purchased into the home, and primarily consumed meat and maize porridge. In the northwest the diet consists of maize, meat and milk. In the north of the country, where small scale agriculture is practiced households consumed maize porridge, millet, sugar, oil, meat and milk. In the northeast, locally gathered seasonal fruits and vegetables as well as insects supplement the diet. In addition, freshwater fishing supplements the primarily maize, millet and meat diet in the northeast. However across the board, wealthier households consumed more fruits, vegetables and animal source foods and were reliant on purchases of food into the household.

The food patterns are believed to be different between urban and rural areas. Food diversity may be higher in urban areas with shops and markets selling a variety of fresh and processed food products. However, it is not known if the most vulnerable households have access to this greater diversity. In rural areas where an important number of vulnerable households are found, the small local shops sell mainly basic commodities such as maize meal and mahangu (millet) meal, rice, pasta, cookies, margarine, oil, salt, sugar and sugary products such as flavoured fruits beverages.

The NDHS data provided information on the quality of women's dietary intake. Foods made from grain were eaten by 57 per cent of women, 25 per cent of women

reported consuming roots and tubers and 18 per cent consumed legumes. Most women (71 per cent) ate meat, fish, shellfish, poultry or eggs, 15 per cent cheese and yogurt and 26 per cent drank milk. Vitamin A rich fruits and vegetables were consumed by 47 per cent of women and fruits and vegetables by only 24 per cent. 54 per cent of women consumed food items made with oil, fat or butter and 38 per cent consumed sugary foods. According to the NDHS, 83 per cent of women consumed vitamin A rich foods and 71 per cent iron rich foods.

1.11 NUTRITION IN DIFFICULT CIRCUMSTANCES

1.11.1 *Nutrition in emergencies*

Natural and man-made emergencies disrupt the socio-economic activities of the communities affected and predispose the population to malnutrition. The magnitude of the problem is worse among the vulnerable segment of the population namely, women, children, the elderly and the chronically ill and predisposes them to higher morbidity and mortality due to malnutrition.

The WHO has developed several health and nutrition assessment tools during emergencies and guidelines to implement effective interventions to avert deaths and disabilities among the affected populations. The major nutritional deficiencies during emergency are protein-energy malnutrition and micro-nutrient deficiencies that include iron, iodine, vitamin A and others.

During emergencies, a general feeding is required when the population has no access to sufficient food to meet the nutritional needs. The general ration should meet the populations' minimum energy, protein, fat, and micronutrient requirements. Besides, the general ration should be culturally acceptable, fit for human consumption and easily digestible for children and other affected vulnerable groups.

Namibia has been stricken by repeated draught and flood that affected a significant proportion of the population during recent years. The GRN, through its Disaster Risk Management Committee, has been able to address the disasters through provision of food ration, provision of supplementary and therapeutic feeding through MoHSS and other partners.

1.11.2 *HIV and nutrition*

According to the HIV sentinel surveillance data of 2010, 18.8 per cent of pregnant women are HIV positive. There is a wide variation of prevalence between different regions, reaching as high as 37 per cent in some regions. The high prevalence of HIV/AIDS contributes to the high level of malnutrition among men, women and children in Namibia. HIV/AIDS affects the most productive segment of the population which negatively affects household income as a result of increased health expenditure and low productivity which leads to food insecurity in the family and the society at large.

In 2008 an assessment of food and nutrition needs of PLHIV in Namibia was conducted by the MoHSS and Food and Nutrition Technical Assistance (FANTA) project, using BMI in 319 HIV-positive adults, 80 percent of whom were on antiretroviral therapy (ART). The assessment showed that 3 per cent of People Living with HIV (PLHIV) was severely malnourished and 20 per cent were moderately malnourished. Almost all clients rated access to healthy foods as their most serious concern after unemployment, and almost all reported food insecurity.

1.11.3 *Alcohol and nutrition*

There are no national data on alcohol consumption and its effect on health and nutrition situation of the population. The Namibia household income and expenditure survey of 2003/2004 report that Namibians spend an average of N$556 per annum on alcoholic beverages and tobacco[17]. This expenditure is much higher among males than among females (N$729 Vs N$310) and in urban settings than in rural ones (N$821 Vs N$376 respectively). However, this last reported fact cannot be related to the actual consumption since most of rural household produce local sorghum beer for their own consumption.

The Report on the Namibia School-based Student Health Survey 2004 revealed that the prevalence of alcohol use among students, i.e., drinking at least one or more days in the past 30 days is 14 per cent and male students were more likely to drink alcohol than their female counterparts.

Alcohol abuse and the use of tobacco contribute to nutritional and socio-economic problems in Namibia and increases susceptibility to diseases and infections as well household income insecurity.

[17] Central Bureau of Statistics, Republic of Namibia (2006). 2003/2004 Namibia Household Income & Expenditure Survey.

PART 2

Part 2: In-Depth Assessment

2.1 METHODOLOGY

The Namibia Nutrition Landscape Assessment (NLSA) was a descriptive study carried out between October and November 2011. A total of 192 stakeholders and service providers were interviewed in the assessment. The assessment was conducted by a team drawn from different stakeholders including line ministries, UN agencies, bi-lateral and multi-lateral organizations and NGO under the leadership of the MoHSS. Institutions included in the assessment team were members of the NAFIN platform. The stakeholders who were interviewed were identified based on past or future activities that they have in nutrition. Teams administering the questionnaires worked in pairs or threes.

2.1.1 *Preparations*

The FHD of the Directorate of PHC of the MoHSS was the key government agency which in collaboration with the WHO Namibia Country Office, led a multi-stakeholder team in undertaking the NLSA, endorsed by NAFIN. The team was approved and appointed following endorsement by the Chair of NAFIN and the entire NAFIN body at a meeting held on 26th September 2011. The Chair of the Maternal, Infant and Young Child Nutrition (MIYCN) Technical Working Group was tasked with heading the team for the NLSA, and reporting back to NAFIN. The organizing team was headed by Food and Nutrition staff from the MoHSS to provide necessary guidance in undertaking the activity.

The steps leading up to the assessment in the field component are summarised below:

1. Endorsement of the NLSA exercise by NAFIN,
2. Presentation of the study design and the study instruments to MIYCN;
3. Identification of field research team;
4. Sharing of the field study tools by WHO through MoHSS and submission of appropriate revisions by stakeholders;
5. Identification of study design;
6. Selection of study areas;
7. Tools adaptation workshops and training of field staff for data collection;
8. Preparation of field logistics required for implementation;
9. Communication with the regional Governor's office, Regional Health Management Teams and District level facilities informing them about the Namibia NLSA Survey;
10. Setting dates for field visits;
11. Implementation of the field based component;
12. Conduct of interviews;
13. Data collection, analysis and report writing.

2.2 PURPOSE OF THE NLSA

The **general objective of the NLSA** was to assess the country's readiness and capacity to scale-up effective nutrition interventions through multi-sectoral participation.

The **specific objectives** of the assessment were to:

- Assess the policy environment in relation to nutrition interventions in the country,
- Engage key policy makers and senior managers to identify key constraints and analyze the capacity gaps hindering the optimal scaling up of nutrition-related activities;
- Make strategic, relevant and specific recommendations to the national plans of actions in the scaling up of nutrition-related activities;
- Develop a country scale-up plan based on the readiness and capacity to scale up nutrition interventions;
- Develop a multi-sectoral conceptual framework to support effective coordination among stakeholders in scaling up nutrition;
- Build the capacity of stakeholders to conduct a detailed programmatic assessment by participating in this process.

2.3 STUDY INSTRUMENTS

Various study instruments were used in the assessment as follows:

Form 1	National level stakeholder. Semi structured interviews for government agencies and other stakeholders (e.g., UN agencies, donors, NGOs) at national level
Form 2	Provincial level stakeholders. Semi structured interviews for government agencies and other stakeholders at regional level
Form 3	District level management staff. Semi structured interview;
Form 4	Facility manager and staff responsible for nutrition (including facility check list).Semi structured group Interview
Form 5	Health workers. Structured questionnaire interview for all clinic staff providing services to pregnant women or children
Form 6	NGO Field Office. Structured interview with management and or nutrition programme officer of NGO providing services to women and children
Tool 7	Stakeholder Mapping tool. Excel file to map resources committed to nutrition, the location of nutrition activities and target groups of the activities and interventions

2.4 DATA ANALYSIS

Data were collected onto the appropriate form and entered by the teams into MS Excel spread sheet. The quantitative data were tallied to generate counts, totals and percentages of responses.

The qualitative data were summarised using a data analysis guidance sheet. The strengths and weaknesses of the qualitative data were outlined in addition to the findings reported. There were three phases of analysis done, the first to collate the qualitative data, the second to synthesize the quantitative data using the guidance sheet and the third one to collate the data for national and regional levels for compiling the report. Separate analysis was carried out for each region in the study. The regional analysis was scored out of 100 in percentage based on the data analysis guidance sheet, subjectively. The analysis team gave a score in percentage based on the level of response of regions.

2.5 RESULTS

Findings of the study are presented under two broad headings: Commitment to Act and Capacity to Act representing the willingness and ability, i.e., readiness, of stakeholders and service providers in the country to accelerate action in nutrition.

2.5.1 *Awareness of nutrition problems and underlying causes as perceived by stakeholders*

Awareness of the existing nutrition problems and their causes is a prerequisite for stakeholders to be committed to accelerate the reduction of maternal and child under-nutrition.

Out of the 63 regional respondents who were asked what the major nutrition problems in Namibia are, 40 (63.5 per cent) mentioned under-nutrition, 34 (54 per cent) mentioned underweight and 18 (28.6 per cent) mentioned wasting as the three most common nutrition problems. Stunting, vitamin and mineral deficiencies were also mentioned but were not perceived as major problems by majority of the respondents. Specific vitamin deficiencies such as vitamin A deficiency were not mentioned as a problem. *(Please see Figure 3).*

When asked what the major contributing factors to nutrition problems are, the majority 44 (69.8 per cent) of the total 63 respondents reported food insecurity. Poverty stood second with 35 (55.6 per cent) of the respondents mentioning poverty as underlying cause for the high malnutrition level in Namibia. *(Please see Figure 4).*

2.5.2 *Documents used for nutrition advocacy*

All the regions mention using the Vision 2030, MDGs and National Development Plan documents as the most common tools for nutrition advocacy. Other documents used for advocacy include: IYCF guidelines, women's rights, Namibia nutrition profile.

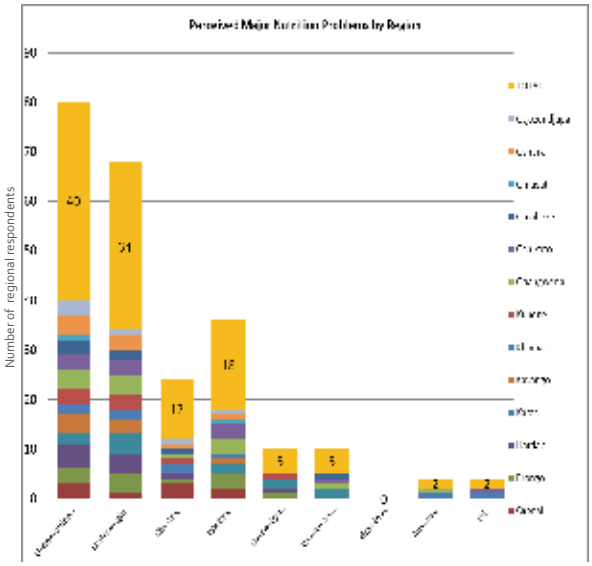


Figure 3: Perceived major nutrition problems at regional level

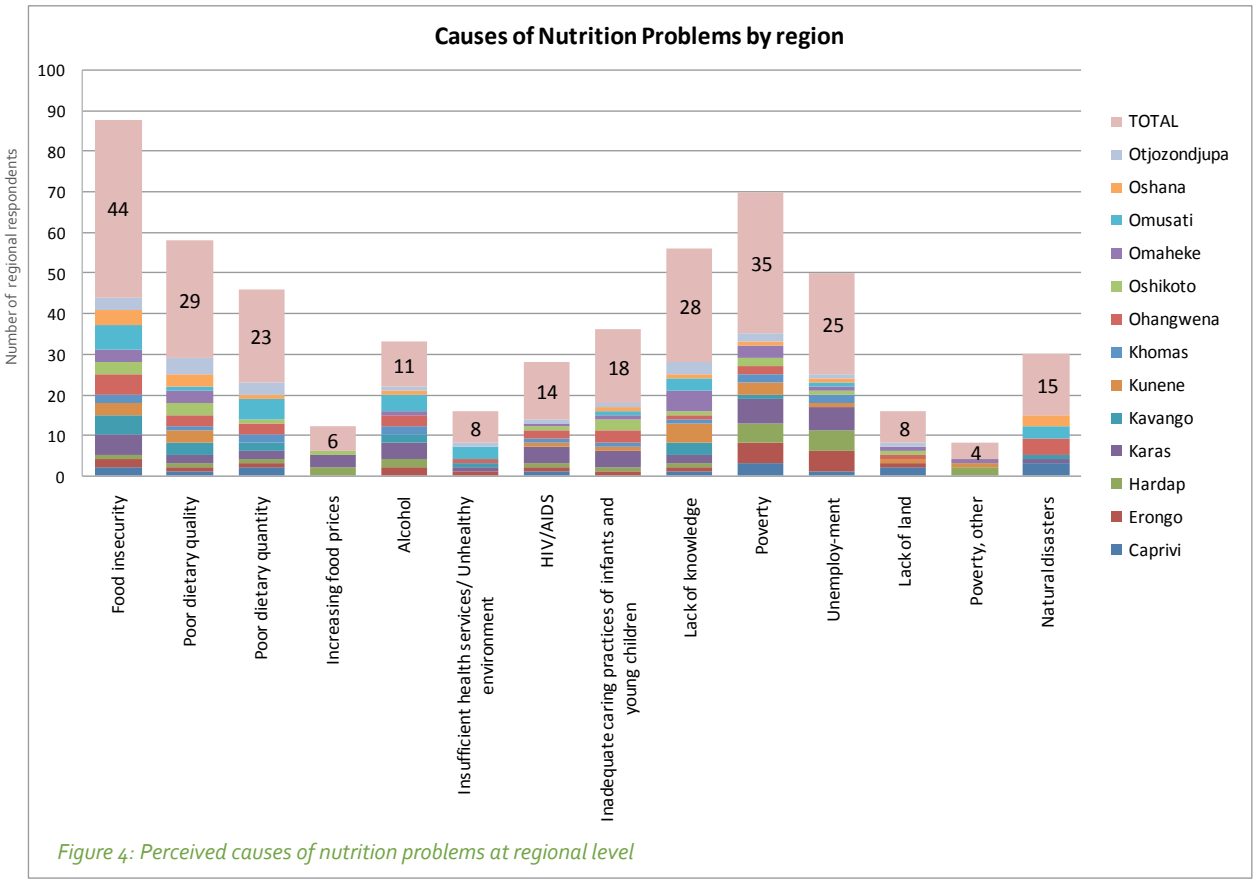


Figure 4: Perceived causes of nutrition problems at regional level

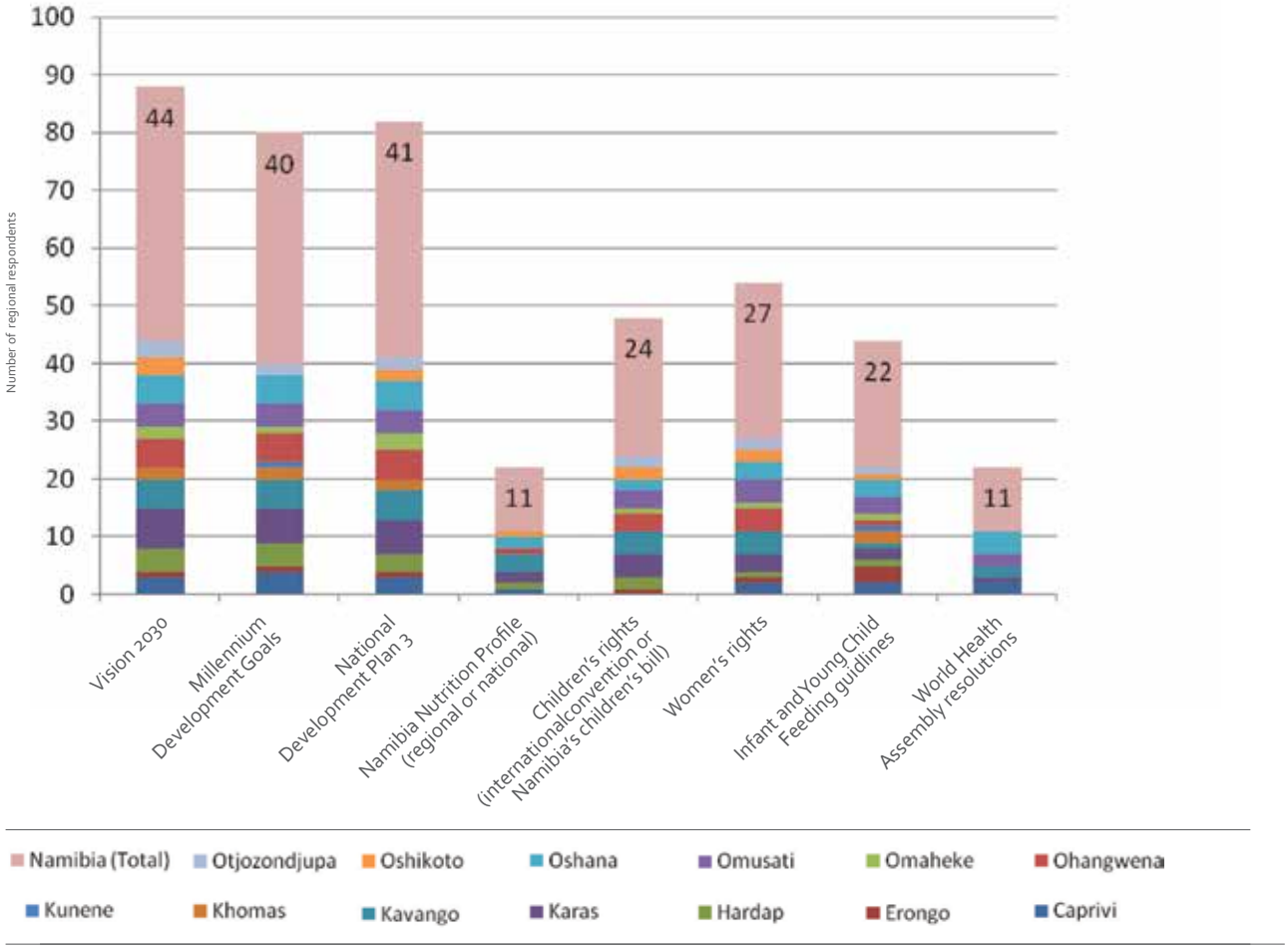


Figure 5: Documents used for nutrition advocacy

2.5.3 Commitment of stakeholders to scale up nutrition action

The various stakeholders mentioned a series of specific contributions that they could make to support the scaling up of nutrition action. The contributions identified by different stakeholders include several activities with some degree of overlap. The actions suggested by the MoHSS ranges from policy development to capacity building, conducting research and developing interventions for IMAM, improving general awareness, changing food related behaviour and better inter-sectoral coordination, and supporting evidence based nutrition interventions. Other stakeholders mentioned that they could contribute to scaling-up nutrition action through strengthening health education, conducting social mobilization, improving inter-sectoral coordination at national and regional level and monitoring and evaluation.

However, national and regional level staff also identified **a series of barriers to scaling-up nutrition action**, including inadequate financial and human resources, nutrition not being considered a priority; and inadequate training as significant barriers to scaling up nutrition actions. Accordingly, the top priority needs at both national and regional level were identified to be: human resources for scaling up nutrition action, financial resources and capacity development.

The main barriers to scaling up nutrition as perceived by different stakeholders are limited financial resources available for nutrition activities arising out of a lack of budget lines, or resources not allocated at all to nutrition. The other barrier for scaling up nutrition interventions is lack of adequate human resources, as there is no full-time nutrition staff in the regions and only one nutritionist serving at national level with additional four staff supported by donors. Among the barriers identified for scaling-up nutrition interventions, there is the lack of pre-service training for nutrition, high staff turnover, no or little incentive for well trained personnel to stay in service and lack of inter-sectoral coordination.

2.6 RESOURCE ALLOCATION FOR NUTRITION

All stakeholders at national level, both in the health and non-health sectors and those at the regional level said that the main source of funding for nutrition programmes currently is from donor organizations. Almost all stakeholders at national and the regional level said that the funds for nutrition programs are not adequate.

At all government administrative levels, the majority of stakeholders identified lack of financial and human resources as a major barrier to implementing nutrition actions. Other important factors identified were: poor inter-sectoral coordination, poor infrastructure and nutrition not being considered a priority. Poverty as a key underlying determinant was also considered as a barrier. Most regional and district level managers reported that they do not have a budget for nutrition activities.

2.7 COORDINATION FOR NUTRITION

2.7.1 *National coordination mechanisms*

MoHSS
The MoHSS has different platforms for coordination of health and nutrition interventions in the country. These are the National Maternal, Child Health and Nutrition Management Committee, Maternal and Peri-Neonatal Death Review Committee and the Maternal, Infant and Young Child Nutrition (MYCIN) technical working group which is part of the sub-groups of NAFIN. The advantages of having these coordination mechanisms as described by different stakeholders were that these coordination platforms maximize the use of the limited resources and strengthened information sharing. Challenges cited were the limited participation by tertiary institutions and broader spectrum of line ministries and government agencies.

Ministry of Gender Equality and Child Welfare
The Ministry of Gender Equality and Child Welfare coordinates the Orphan and Vulnerable Children (OVC) forum. The platform meets quarterly. The multisectoral and multi-stakeholder nature of the forum was cited as one of the strengths of this coordination platform. However, the implementation of policies and strategies are slow and is described as a weakness.

NGO
The NGOs Development Aid from People to People in Namibia (DAPP) and Catholic AIDS Action (CAA) do not have coordination mechanism for nutrition at national level. However DAPP is a member of the regional AIDS coordinating committees (RACCOC) as well as the constituency AIDS coordinating committees (CACCOC).

2.7.2 *Regional coordination mechanism*

There are also regional coordination mechanisms e.g. Regional Development Coordinating Committees (RDCC) and Regional AIDS Coordinating Committees (RACOC) chaired by the chairman of the regional council. However, it was observed that these meetings do not take place quarterly as stipulated by the office of the regional Governor. These fora can be used as an opportunity to address food and nutrition problems in the respective regions.

2.8 HUMAN RESOURCES FOR NUTRITION

2.8.1 *Capacity to act*

Ability to scale up nutrition in Namibia remains the greatest constraint as human resources remain severely limited. Up until 2010, there was only one trained nutrition professional working for the Namibian government. Since then three registered nurses with in service training on aspects of MIYCN, HIV and nutrition, micronutrients and food safety, and nutrition surveillance have joined the ranks at the MoHSS.
In 2011, one nutritionist and two assistant nutritionists were hired with resources from the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM). The nutritionist is based at Food and Nutrition Subdivision and is coordinating the Nutrition Assessment and Counselling Support (NACS) programme. The two assistant nutritionists are based at Regional Health Training Centres in Kavango and Karas regions respectively and assist with the implementation of the NACS programme. All of the above also assist with capacity building for other staff members both regionally and at district levels. The human resource constraints continue to limit not only capacity to undertake and deliver existing programs but may threaten scale up plans for nutrition.

Currently, there is no stand-alone nutrition course at the tertiary institutions in Namibia. Nutrition is integrated as a component of the nursing degree and the Masters in Public Health at the University of Namibia in the School of Nursing and Public Health. In addition, nutrition is taught as a unit within the Masters in Public Health Education course towards qualifications in teaching home economics and science based subjects. Capacity to act is also limited due to constraints in financial resources for in implementing nutrition activities at regional and district levels. This was reflected in the Governor's Declaration of Commitment given in August 2011.

2.8.2 Human resources and quality of services

Figure 6: Distribution of staff with appropriate skills at all levels

National level: Primary Health Care Directorate. Food and Nutrition Sub-Division • 1 Programme Manager • 3 Programme officers • Nutritionist (supported by GFATM)	→	**Training in nutrition** The Program Manager and the GFATM supported staff are the only qualified, trained nutritionists working within the Ministry of Health and Social Services. Programme officers are not trained in nutrition.
Regional level (13 regions) • 2 Assistant nutritionists supported by the GFATM, attached to 2 regional training centres • Medical officers and nurses • 34 Hospitals • Medical officers, nurses and dieticians working in two intermediate hospitals.	→	**Training in nutrition** No healthcare providers at regional and district levels are trained as qualified nutritionists. In-service training in some areas such as in-patient management of acute malnutrition; nutrition and HIV; IYCF counselling; GMP and NACS is conducted.
District level: District level health clinics • Medical officers and nurses	→	**Training in nutrition** No healthcare providers at district level with nutrition qualification. In-service training in some areas such as nutrition and HIV, IYCF counselling; GMP and NACS is conducted.
Community level Active community-based health care providers (CBHCP) in some districts implementing nutrition counselling, MUAC and raising nutrition awareness. Pilot phase to implement health extension workers in one district is underway.	→	**Training in nutrition** Some CBHCP in some districts have under gone orientation and training on MUAC, GMP and general nutrition counselling.

2.9 HUMAN RESOURCES WITH NUTRITION TRAINING

The figure below indicates any form of nutrition training (including degree programme) on nutrition. As can be seen, only one member of staff has advanced training in nutrition. A total of 23 members of staff were reported to be trained in nutrition at the regional level and 41 at district level. There were 87 community promoters who were trained in any form of nutrition at the community level. (Please see Figure 7).

2.9.1 *Health worker capacity, motivation and time to conduct nutrition duties*

Sixty-five percent of health workers interviewed reported that they did not have adequate time to carry out nutrition duties. The health worker cadre most likely to be responsible for nutrition duties is the nurse. The demands on the nurse are considerable, taking into account that there is no separate cadre of health worker to absorb specific nutrition duties. However, most of what is required of the nurses regarding nutrition is within the scope and practice of their job. For example, under antenatal care, the provision of maternal nutrition information and counselling is part of the standard package of ANC.

According to facility managers, nutrition education and counselling take place in different settings, ranging from hospitals and clinics. The majority of nutrition related services and tasks are integrated into other health programmes.

This summary of how nutrition is integrated into other health programmes does not accurately reflect the current situation across all health facilities and services. The inclusion of nutrition is ad hoc and inconsistent across the nation. Where NACS, is operating the quality and standardization of services is much stronger.

Nurses are the primary cadre of health worker that provides nutrition services and counselling. They are not trained specifically in nutrition however some have received training on some nutrition services such as NACS and growth monitoring and promotion. The responsibility of providing nutrition services lays with all health workers and therefore there is a risk of low accountability and follow up. The range of services and nutrition counselling offered occurs in an ad hoc manner; staff members do not use or have access to visual or written IEC materials.

2.10 MANAGEMENT SYSTEMS

The primary health care supervisor and the Principal Medical Officer are the officers responsible for nutrition implementation at district level.

Nutrition information is collected as part of the National Health Information System from the MoHSS. The system has been in use since 1992 and is managed by the Health Management Information Section of the Ministry. This section is under the Directorate of Planning within the Ministry.

The data flow involves the collection of the data elements on forms at health facility level; this information is passed onto the Health District Office for the data capture. These data are then sent electronically to the Regional Health Office for data checks prior to forwarding the data to the National Level office. The data collected is used at all levels to check patient attendance and health services rendered at primary health care, outpatient and inpatient departments of the Health System, in addition to which it is used to produce annual reports and national level reporting. In addition to this, the NDHS also collects information related to nutrition which is very useful for planning and implementation of nutrition programs. This is complemented by nutrition surveys which are done rarely. For example a micro-nutrient survey was done in 1992 to identify the major micro-nutrient deficiencies in the country. Since then, there has never been a systematic documentation of the micro-nutrient levels in the country.

Staff with nutrition training

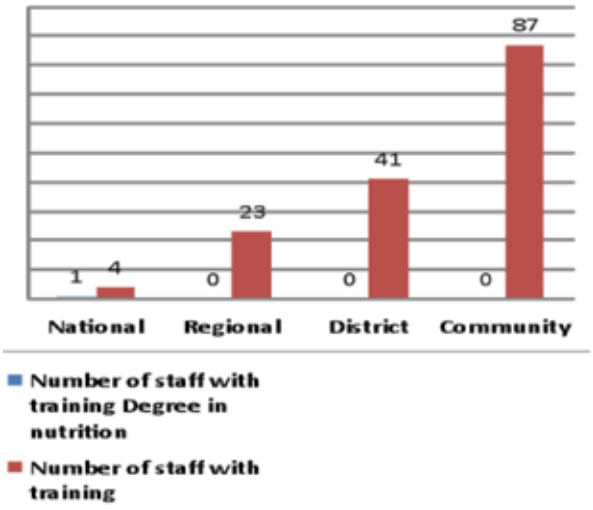


Figure 7: Staff with nutrition training

PART 3

Part 3: Conclusions and Recommendations

3.1 CONCLUSIONS

There is strong political commitment to improve the nutrition status of the population in Namibia. This was expressed by the declaration of two 'nutrition decades' (1993-2012) by the GRN; development of food security and nutrition programmes that embodied the food security and nutrition policy for Namibia; and establishment of the Food Security and Nutrition Council, Secretariat, and technical committees – with regional representation and the development and dissemination of the food security and nutrition action plans. In addition to these documents, each line ministry has also nutrition-specific and/or nutrition-sensitive policies and strategic plans and guidelines. In 2010, the Right Honourable Prime Minister of Namibia launched an Alliance for Improved Nutrition in the country, which brings together multiple stakeholders that include line ministries, UN agencies, bilateral and multilateral organisations, the private sector and NGO.

The national, regional and district level respondents have identified under-nutrition (i.e., underweight and wasting) as the major nutrition problems in the country. However, obesity and micro-nutrient deficiency and stunting were not perceived as public health problems in the country. This highlights the lack of awareness and understanding on the double burden of malnutrition which is emerging in most developing countries including Namibia. This could be attributed to lack of communication of the existing nutritional problems in user friendly language that the general public can understand.

Currently, relevant line ministries and some NGO are implementing nutrition related activities ranging from food security to implementation of community based nutrition initiatives. This should be capitalized to expand in terms of geographical coverage and extent of interventions to support the national nutrition response to reduce malnutrition in Namibia. Nutrition activities in the country are sector specific with little or no coordination or sharing of information between sectors. The human resources for nutrition are limited with very few nutritionists in the country and no nutritional focal persons in the regions and districts of Namibia. This calls for strengthening of the in-country and out of country training programs for nutrition and exploring innovative ways of building capacity of work forces and the provision of necessary protocols/guidelines and IEC materials to enable them to implement and manage nutrition related programs in the country.

The financial resources and allocation to nutrition by the government sectors and partners is non-existent or is inadequate. The scarcity of resources is worse

for community based nutrition interventions. There is a need for creating a budget line for nutrition and allocation of more resources by the GRN and development partners.

The nutrition information in the country is heavily reliant on the NDHS and other surveys. The continuous flow of key nutrition information is weak which needs strengthening to support timely informed decision-making across sectors in nutrition.

The assessment revealed that there is a need for developing and disseminating appropriate IEC materials for nutrition using a life cycle approach and adapted across all relevant sectors and partners to be used at all levels.

Although Namibia has a strong political commitment and a very rich set of policies and guidelines for nutrition, their translation to concrete actions was hampered by lack of adequate human and financial resources for nutrition and weak coordination mechanism at various levels of the system. This calls for a concerted effort to conduct advocacy at all levels for putting nutrition at the centre of development. The excellent relationship between government and development partners and other stakeholders should be capitalized to create a broader government, development partners and stakeholders coordination mechanism in the country.

3.2 POSSIBLE AREAS FOR SCALING UP SAFE AND EFFECTIVE NUTRITION INTERVENTIONS

Ministry of Health and Social Services

- Promotion and support of exclusive breastfeeding up to six months of age,
- Promotion and support of safe and adequate complementary feeding;
- Deworming of all children age 1-15 years (pre-school and school children);
- Supplementary feeding for pregnant and lactating women and children under-five;
- Management of moderate and severe malnutrition in health facilities (Hospitals and Health centres).

Ministry of Education

- School feeding program to all eligible children;
- Deworming of pre-school and school age children in collaboration with MoHSS;
- School health and gardening program.

Ministry of Agriculture, Water and Forestry

- Home and school gardening;
- Nutrition education through the agriculture extension workers;
- Promotion of diverse local foods.

Ministry of Gender Equality and Child Welfare

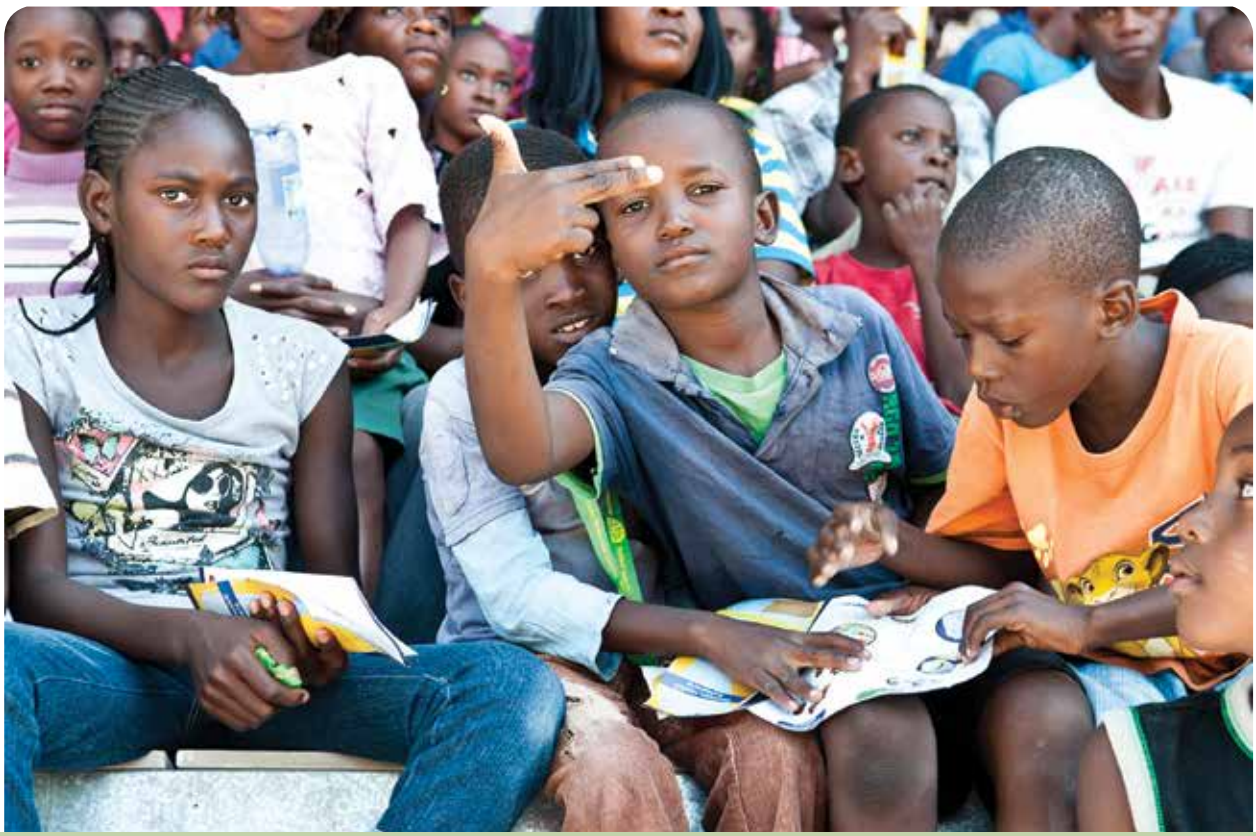
- Supplementary feeding of orphan and vulnerable (OVC) children;
- Nutrition education for OVC.

Ministry of information, Communication and Technology

- Facilitate dissemination of information for awareness creation and public education;
- Promote public debates on nutrition issues.

3.3 RECOMMENDATIONS

1. Revision of the Nutrition and Food Security Policy to guide government and partners in delivering evidence-based and cost-effective food and nutrition interventions,
2. Enactment and subsequent development of regulations to enforce the International Code of Marketing on Breast Milk substitutes to protect, promote and support exclusive breastfeeding;
3. Enforcement of salt iodization legislation and development of micro-nutrient supplementation guidelines;
4. Creation of posts for nutritionists at all levels, allocation of adequate human and financial resources for nutrition by both the government and development partners;
5. Capacity development of the workforce for nutrition through short, medium and long term training strategies to fill the gaps on nutrition experts in the country;
6. Effective communication on and operationalization of existing policies, strategies and guidelines on nutrition to bring about the desired results on the ground;
7. Embrace a multi-sectoral approach to nutrition problems, with clear descriptions of responsibilities for the relevant sectors and revitalisation/strengthening of the coordination mechanisms for nutrition at all levels;
8. Streamline the nutrition information and surveillance structures and systems of the line ministries with distinct indicators for each sectors to collect, collate, analyse and utilize the information for evidence based policy decisions and programming. In the long term, government should utilize existing mechanisms to have one Nutrition Information System for the whole nation;
9. Scale up evidence based and effective nutrition interventions by all relevant sectors. Partners should support the strategic plans of line ministries and monitoring and evaluation of the programmes;
10. Design and implement a systematic advocacy and targeted information, education and communication strategy for nutrition, to promote and support a healthy life style and environment. All stakeholders including the media should support its implementation to improve the health and nutritional status of the population;
11. Create an enabling environment for the promotion of research for innovation, documentation of best practices and to positively influence policy and programmatic decisions;
12. Creation and/or strengthening of coordination mechanisms among sectors, development partners and other stakeholders supporting food and nutrition interventions at all levels.



PART 4

BIBILIOGRAPHY

1. Central Bureau of Statistics, National Planning Commission, 2003. 2001 Population and Housing Census, Windhoek: Republic of Namibia.
2. Central Bureau of Statistics, Republic of Namibia, 2006. Namibia Household Income and Expenditure Survey 2003/2004, s.l.: s.n.
3. Gibson, R. S., 2007. Determining the risk of zinc deficiency: Assessment of dietary zinc intake. s.l.:s.n.
4. Hess, S., 2009. Systemic Review of Zinc intervention Strategies. Food and Nutrition Bulletin.
5. Hess, S. Y. et al., 2009. Recent Advances in knowledge of Zinc Nutrition and Human Health. Food and Nutrition Bulletin (supplement), 30(1), pp. S5-S11.
6. Hotz, C. & Brown, K. H., 2004. Assessment of the risk of zinc deficiency in populations and options for its control. Food and Nutrition Bulletin , 25((Suppl 2)), pp. S95-S203.
7. ILO, 2007. http://www.ilo.org/dyn/travail/docs/1013/2007. [Online] [Accessed August 2012].
8. Mendez, M. A., Monteiro, C. A. & Popkin, B. M., 2005. Overwei exceeds underweight among women in most developing countries. American Journal of Clinical Nutrition, pp. 714-21.
9. Ministry of Health and Social Services (MOHSS) [Namibia] and Macro International Inc., 2008. Namibia Demographic and Health Survey 2006-07, Windhoek, Namibia & Calverton Maryland, USA: MOHSS and Macro International Inc..
10. Ministry of Health and Social Services, Republic of Namibia, 1994. Iodine Deficiency Disorders and data on the status of Vitamin A and Iron, Windhoek: s.n.
11. Ministry of Health and Social Services, Republic of Namibia, 1999. Treatment and control of Vitamin A deficiency, Windhoek: s.n.
12. Ministry of Health Republic of Botswana, 2005. National Plan of Action for Nutrition 2005-2010, s.l.: s.n.
13. Ministry of Health, 2005. National Plan of Action for Nutrition 2005-2010, s.l.: Ministry of Health, Republic of Botswana.
14. National Planning Commission and Central Buraeu of Statistics, 2006-07. Namibia Demographic and Health Survey, s.l.: Macro International.
15. Popkin, B. M., 2004. The Nutrition Transition: An overview of world paterns of change. Nutrition Review, pp. S140-3.
16. Popkin, B. M. & Gordon-Larson, P., 2004. The Nutrition Transition: Worldwide obesity dynamics and their determinants. International Journal of Obesity, pp. 28: S2-9.
17. Standing Committee on Nutrition, 2006. Diet related chronic diseases and the double burden of malnutrition in West Africa, s.l.: SCN News, 33.
18. Varghese, P., 1994. Salt Iodization in Namibia, UNICEF, s.l.: s.n.
19. Voster, H. H., Venter, C. S., Wissing, M. & Margetts, B., 2005. The Nutrition and Health Transition in the North West Province of South Africa. Public Health Nutrition, pp. 480-90.

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