

REPUBLIC OF NAMIBIA

MINISTRY OF HEALTH AND SOCIAL SERVICES

STRATEGIC PLAN FOR NUTRITION 2011–2015

STRATEGIC PLAN FOR NUTRITION 2011–2015

Directorate: Primary Health Care Services

Division: Family Health

Sub-Division: Food and Nutrition

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PREFACE

Pursuant to the plans of the Ministry of Health and Social Services (MoHSS) for contributing to the achievement of the Millennium Development Goals (MDGs), this strategic plan serves as an invaluable master plan toward achieving Namibia's Vision 2030 in health-related concerns, as had been provided for earlier in the MoHSS Strategic Plan 2009–2013. It is well recognized that at regional level, similar efforts are provided for in the African Regional Nutrition Strategy (ARNS) 2005–2015.

This document is a result of concerted and protracted efforts by dedicated staff of the MoHSS. Several prior versions led to this refined version. Essentially, the Strategic Plan for Nutrition (2011–2015) has been prepared to assist Namibian health professionals in implementing best practices in nutrition.

The plan has a wealth of appendixes that address critical issues such as policies and programmes, key family health practices, analysis and integrated management of acute malnutrition, and SWOT analysis to enable health workers to meet the overall objectives of the strategic plan and its implementation.

It is hoped that health workers will use this well-documented plan and familiarize themselves with its concerns and instructions to accelerate the country's efforts to contribute to the health and well-being of the Namibian people, as is imperative in our Vision 2030 and relevant Millennium Development Goals (MDGs), in particular, goals 4, 5 and 6.

Improved nutrition will help the country attain not only the MDGs in health but also the National Development Plan, policies, programmes and processes through which they are achievable, and in turn contribute to the overall development of the Namibian nation.

The MoHSS is grateful to all who contributed to the successful completion of this Strategic Plan. I would like to acknowledge the financial help rendered to the Ministry by I-TECH for its development and eventual realization.

MR. KAHIJORO S.M. KAHUURE PERMANENT SECRETARY

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome			
ARNS	African Regional Nutrition Strategy			
ARV	Antiretroviral			
AU	African Union			
BMFI	Baby and Mother Friendly Initiative			
BMI	Body Mass Index			
CAA	Catholic AIDS Action			
СВО	Community-Based Organisation			
СВНС	Community-Based Health Care			
CDC	U.S. Centers for Disease Control and Prevention			
CHS	Catholic Health Services			
СНРА	Chief Health Programme Administrator			
СМО	Chief Medical Officer			
CMV	Therapeutic Vitamin and Mineral Complex			
CORD	Coalition on Responsible Drinking			
CRIAA	Centre for Research Information Action in Africa			
CSO	Civil Society Organisation			
DDRM	Directorate of Disaster Risk Management			
DEM	Directorate for Emergency Management			
DFL	Directorate of Finance and Logistics			
DHS	Demographic and Health Survey			
DOTS	Directly Observed Treatment-Short Course Strategy			
DPHC	Directorate of Primary Health Care			
DPPHRD	Directorate of Policy Planning and Human Resources Development			
DSP	Directorate of Special Programmes			
DSS	Directorate Social Services			
FAO	Food and Agriculture Organization			
FANTA-2	Food and Nutrition Technical Assistance II Project			

FBF	Fortified Blended Food			
FBO	Faith-Based Organisation			
FHI	Family Health International			
FNS	Food and Nutrition Sub-Division			
GAM	Global Acute Malnutrition			
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria			
GMP	Growth Monitoring and Promotion			
GNI	Gross National Income			
HAART	Highly Active Anti-Retroviral Therapy			
HIS	Health Information System			
HIV	Human Immunodeficiency Virus			
ICN	International Conference on Nutrition			
IDA	Iron Deficiency Anaemia			
IDD	Iodine Deficiency Disorder			
IEC	Information Education Communication			
IMAM	Integrated Management of Acute Malnutrition			
IMAAI	Integrated Management of Adult and Adolescent Infections			
IMNCI	Integrated Management of Newborn and Childhood Illnesses			
I-TECH	International Training & Education Centre on HIV			
IYCF	Infant and Young Child Feeding practices			
LBW	Low Birth Weight			
M& E	Monitoring and Evaluation			
MAM	Moderate Acute Malnutrition			
MAWF	Ministry of Agriculture, Water and Forestry			
MDG	Millennium Development Goal			
MFMR	Ministry of Fisheries and Marine Resources			
MGECW	Ministry of Gender Equality and Child Welfare			
MICS	Multiple Indicators Cluster Survey			
MLR	Ministry of Lands and Resettlement			
MLSW	Ministry of Labour and Social Welfare			

MOD	Ministry of Defence
MOE	Ministry of Education
MOF	Ministry of Finance
MoHSS	Ministry of Health and Social Services
MOICT	Ministry of Information and Communication Technology
MOJ	Ministry of Justice
MRLGHRD	Ministry of Regional and Local Government, Housing and Rural Development
MSS	Ministry of Safety and Security
MUAC	Mid-upper Arm Circumference
MYSC	Ministry of Youth, Sport and Culture
NAB	Namibia Agronomic Board
NACS	Nutrition Assessment Counselling and Support
NAFIN	Namibia Alliance for Improved Nutrition
NANASO	Namibia National AIDS Support Organisation
NANGOF	Namibia Non-Governmental Organisation
NBC	Namibia Broadcasting Corporation
NCCD	Non-Communicable Chronic Diseases
NCD	Non-Communicable Diseases
NDHS	Namibia Demographic and Health Survey
NDP3	Third National Development Plan
NDRMC	National Disaster Risk Management Committee
NEMC	National Emergency Management Committee
NGOs	Non Governmental Organisations
NHEMC	National Health Emergency Management Committee
NHTC	National Health Training Centre
NIED	National Institute for Educational Development
NNAP	National Nutrition Action Plan
NPC	National Planning Commission
NRCS	Namibia Red Cross Society
NSFAF	Namibia Students Financial Assistance Fund

OPM	Office of the Prime Minister
OVC	Orphans or Vulnerable Children
PEM	Protein-Energy Malnutrition
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
РНС	Primary Health Care
PLHIV	People Living with HIV or AIDS
РМТСТ	Prevention of Mother-to-Child Transmission of HIV
RD	Regional Director
RDCC	Regional Development Coordinating Committees
RMT	Regional Management Team
RUTF	Ready-to-Use-Therapeutic Food
SAM	Severe Acute Malnutrition
SHPA	Senior Health Programme Administrator
SMART	Specific, Measurable, Agreed, Realistic, Time based
SPN	Strategic Plan for Nutrition
SWOT	Strengths, Weaknesses, Opportunities, Threats
тв	Tuberculosis
ТоТ	Training of Trainers
UNAIDS	United Nations AIDS Programme
UNAM	University of Namibia
UNCRC	United Nations Convention on the Rights of the Child
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAD	Vitamin A Deficiency
VSO	Voluntary Service Overseas
WFP	World Food Programme
WHO	World Health Organization

EXECUTIVE SUMMARY

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 scale of the problem will prevent many countries from achieving the Millennium Development Goals (MDGs), especially in sub-Saharan Africa, where malnutrition is increasing. Malnutrition remains the world's most serious health problem and the single biggest contributor to child mortality.

GLOBAL, REGIONAL AND NATIONAL NUTRITION AGENDA

Namibia's nutrition policies and programmes must therefore be understood in the context of the global agenda, which includes international recommendations on infant and young child feeding (IYCF). These recommendations include the Baby-Friendly Hospital Initiative (1991), the International Code of Marketing of Breast-milk Substitutes (1981), the Innocenti Declaration on the Promotion of Exclusive Breastfeeding for Six Months (1990), and the historical World Summit for Children (1990), with the major goal of empowering all women to breastfeed exclusively for six months and then introduce adequate complementary foods and continue with breastfeeding for two years or beyond. Other key international statements that guide nutrition planning across the world are the report of the 1992 International Conference on Nutrition (ICN), the WHO Global Strategy on Diet, Physical Activity and Health 2004, and the Millennium Development Goals, which stipulate eight broad development goals. The following Millennium Development Goals specifically address nutrition:

- Goal 1 Eradicate extreme poverty and hunger;
- Goal 4 Reduce child mortality;
- Goal 5 Improve maternal health; and
- Goal 6 Combat HIV/AIDS, malaria and other diseases.

Improved nutritional status can help to attain all of these MDGs because it, as well as the policies, programmes and processes through which it is attained, have an important role to play in overall development. The Namibian Ministry of Health and Social Services (MoHSS) has articulated its plans for contributing to the achievement of these goals in the Strategic Plan 2009–2013. At the regional level, the African Regional Nutrition Strategy (ARNS) 2005–2015 provides a strategic framework for the development of nutrition plans of action by member states.

At Independence in 1990, Namibia faced a serious problem of food insecurity which made it necessary to initiate urgent action, in particular to protect the vulnerable, especially children who were wasted as a result of inadequate food consumption or in danger of not reaching their full physical and intellectual potential because of childhood malnutrition. In 1990, the Government of Namibia ratified the United Nations Convention on the Rights of the Child (UNCRC), Article 24 of which guarantees every child's right to health care, clean drinking water, nutritious food and a clean environment.

The MoHSS adopted Primary Health Care (PHC) as the cornerstone of the country's health care system, an approach focusing on prevention and promotion of health services while maintaining the quality of curative care. Soon after Independence in 1992, Namibia committed itself to the principles and goals of the ICN and in 1995 published the National Food and Nutrition Policy for Namibia and an accompanying Action Plan. The policy identified three key areas for action through a multi-sectoral approach: improving household level resources; improving knowledge, attitudes and practices; and improving social and supporting services. It set itself the goals of reducing the incidence of underweight children to 15%, with not more than 3% severely underweight, reducing the incidence of stunting to 15% and reducing the incidence of wasting to 4.5%. According to the Namibia Demographic and Health Survey (NDHS) 2006–2007 undertaken by the MoHSS, the goals set out in this policy had still not been met, with the incidence of underweight of under-fives standing at 17 percent and severe underweight at 4 percent. The National Food Security and Nutrition Assessment Report 2008 highlighted the specific food security plans of the 13 Regions and identified gaps in information and data on food security and nutrition.

One of the objectives set out in Namibia's Vision 2030 is to "ensure a healthy, food-secured and breastfeeding nation, in which all preventable, infectious and parasitic diseases are under secure control, and in which people enjoy a high standard of living, with access to quality education, health and other vital services, in an atmosphere of sustainable population growth and development". Nutrition programmes have a vital role to play in achieving this objective and contribute significantly to overall development. The Third National Development Plan (NDP3) 2008 identifies under-nutrition among children under 5, food insecurity and malnourishment as national problems that affect both rural and urban populations living in poverty. Initiatives which have attempted to address under nutrition include the Baby and Mother Friendly Initiative of 1992, the National Policy on Infant and Young Child Feeding 2003, the Road Map for Accelerating the Reduction of Maternal and Newborn Morbidity and Mortality 2007, and an Infant and Young Child (IYC) survey which was started in 2009 and is expected to be completed by 2011.

SITUATION ANALYSIS

Namibia covers 824,116 square kilometres of land with a low population density of 2.1 people per square kilometre. The country has 13 administrative regions. The Namibian economy is mainly dependent on the export of primary commodities, largely consisting of precious metals and minerals such as diamonds, uranium and gold.

Namibia is classified as an upper-middle-income country and ranks 112 out of 209 countries. However, this classification obscures pervasive inequalities, which are rooted in the country's long colonial history and apartheid. In 2008 Namibia had the highest rate of income or expenditure inequality in the world. Unemployment is very high (estimated at 37 percent in 2004), whereas 36.5 percent of the population are subsistence farmers. Namibia has generally low and highly variable rainfall.

During the past 5 years, agricultural outputs were seriously constrained as a result of recurring drought, floods, locusts, insects and worm infestation, leading to increased dependency on staple food rations and grants from Government or donors. The prevailing political, social and economic stability, as well as sound infrastructure, provide an enabling environment in which to address the underlying causes of malnutrition, such as illiteracy, unemployment, lack of safe water, poor sanitation and food insecurity, through initiatives such as the expansion of green schemes, encouragement of home gardening projects, provision of social grants and support to the development of small and medium enterprises.

Approximately 28 percent of children are classified as orphans or vulnerable children (OVC), a situation linked with the impact of the high HIV prevalence (17.8 percent nationally). This influences the economic situation of households, as fewer economically productive adults are left to support more dependants, which in turn has an impact on households' ability to provide adequate nutrition. Advocacy and collaboration of the MoHSS with the relevant line ministries and their partners in civil society and the private sector will enhance sustainable changes in the nutrition status of the population.

The health and nutrition situation analysis that informed this Strategic Plan for Nutrition (SPN) focused on undernutrition, food intake patterns, micronutrient deficiencies, communicable diseases and nutrition, over-nutrition and non-communicable chronic diseases (NCCDs), emergencies and nutrition and alcohol and nutrition.

UNDERNUTRITION

Undernutrition plays a significant role in maternal and child mortality, both of which have risen in Namibia in recent years. The number of children living with moderate acute malnutrition (MAM) and severe acute malnutrition (SAM) in Namibia is high. The immediate causes of malnutrition include inadequate dietary intake and infections. Food shortages at household level, inadequate care, unhygienic household environment, and a lack of health services are the underlying causes of malnutrition, and all are due to low income or no income at all. The prevalence of malnutrition is often two or three times higher among the poorest income quintile than among the highest quintile. This means that improving nutrition is a pro-poor strategy, proportionately increasing the income-earning potential of the poor. In addition, the social, economic and political context is the basic cause of undernutrition. Interventions to address the basic and underlying causes of undernutrition therefore require the strong commitment of all sectors. MoHSS nutrition programmes can have a significant impact on the immediate causes of under-nutrition, as well as some of the underlying causes such as infection and inadequate care.

A child's nutritional status depends heavily on the health and nutritional status of the mother, whether or not the child has been breastfed and for how long. In order to break this cycle, the focus must be on preventing and treating undernutrition among pregnant women and children 0 to 2 years old. Early initiation of breastfeeding is encouraged because it is important for the health of both mother and child. While breastfeeding is common in Namibia, exclusive breastfeeding is not, and the use of artificial milk and other liquids and food is common. This presents a threat because of the unhygienic conditions prevailing in many households, lack of clean water and lack of knowledge about sterilising bottles and teats. The National Infant and Young Child Feeding Policy therefore recommend exclusive breastfeeding during the first 6 months of life and discourage early supplementation with replacement milks. It is important that children's nutritional needs are met through timely, adequate, safe and appropriate feeding practices.

Because of the relatively high prevalence of HIV among pregnant women, the Namibian IYCF guidelines recommend that HIV-positive mothers breastfeed exclusively for the first 6 months, during which time the infant should receive ARV prophylaxis to prevent mother-to-child transmission of HIV. At 6 months, complementary foods should be introduced, with continued breastfeeding up to 12 completed months. Babies should receive ARV prophylaxis until 4 week after all breastfeeding has stopped. The risk of transmission of HIV in exclusively breastfed babies on ARVs is lower than the risk of morbidity and mortality associated with inappropriate use of commercial milk formula and/or bottles and teats.

FOOD INTAKE PATTERNS

Detailed data on food intake patterns in Namibia is scarce, and information is mainly based on popular knowledge. Namibia has many cultures and distinct cultural groups have different languages, diets and cultural practices. It is believed that meals mostly consist of maize meal or *mahangu* (millet) usually accompanied by fish or meat. Few people regularly consume legumes, vegetables and fruit. Food patterns are believed to differ between urban and rural areas as well as different cultural groups. The consumption of diverse foods may be higher in urban areas where shops sell an extended range of fresh and industrial food products, but the majority of people residing in informal settlements live in poor hygienic conditions and lack basic amenities such as potable water and sanitation facilities. A Multiple Indicator Cluster Survey (MICS) and a food consumption and dietary survey are necessary to gather information on the knowledge, attitudes and practices of vulnerable groups such as children and women.

MICRONUTRIENT DEFICIENCIES

Micronutrient deficiencies are considered to be an aspect of undernutrition which requires intervention. In general the most common micronutrients lacking in developing countries are iron, iodine, vitamin A and zinc, deficiencies which can contribute to growth retardation, reduced resistance to infection, increased risk of morbidity and mortality, brain damage, reduced cognitive development in children and reduced productivity in adults. Deficiencies in folic acid and niacin are also of concern.

Micronutrient deficiencies can be associated with metabolic problems but are often linked with nondiversified food intake patterns that prevent adequate intake of one or many micronutrients. In Namibia, despite a number of initiatives to improve consumption of key micronutrients, such as salt iodisation and vitamin A and iron supplementation, information available on food intake patterns suggests inadequate intake of vital micronutrients. The lack of adequate monitoring of programmes and gathering of specific micronutrient data to date must be remedied through targeted research and surveillance to determine actual micronutrient deficiency levels in the country.

Processed food products on the Namibian market, such as maize and millet meal, wheat flour, oil and sugar, are fortified with various micronutrients, but the locally milled maize and millet that is most

commonly consumed is not fortified. Regulations for the independent assessment of the quality of fortified products are needed in order to ensure quality and consistency in the fortification process.

COMMUNICABLE DISEASES AND NUTRITION

Acute respiratory infections, diarrhoea and fever (including malaria) are the most common childhood illnesses in Namibia and major causes of morbidity and mortality among children. Nutrition plays a vital role in the prevalence and duration of such infections, as well as the likelihood of survival.

Birth weight is an important indicator of vulnerability to childhood illnesses. Statistics in Namibia reveal unacceptable levels of low birth weight in some regions. Despite significant treatment success rates, TB and HIV continue to be major public health problems and are integrally linked to malnutrition.

OVER-NUTRITION AND NON-COMMUNICABLE CHRONIC DISEASES

The prevalence of overweight, obesity and associated non-communicable diseases (NCD) are of public health concern as these are emerging as important causes of morbidity and mortality in Namibia. Namibia is using standardised surveillance methods and rapid assessment tools such as the WHO STEPwise approach to the surveillance of risk factors for non-communicable diseases in order to assess the current situation, trends, impact of interventions and measure changes in the distribution of risk such as patterns in diet, nutrition and physical activity.

EMERGENCIES AND NUTRITION

Namibia has recently experienced a number of emergencies related to climate change and environmental safety. These often result in food shortages, impair or jeopardise the nutritional status of communities and cause excess mortality in all age groups. Nutrition is therefore a key public health concern in emergency management. The role of the MoHSS in emergency management is to provide education, advocacy and technical expertise to ensure vulnerability reduction and preparedness for appropriate nutrition-related relief.

ALCOHOL AND NUTRITION

The prevalence of alcohol abuse and the use of tobacco are nutritional and socio-economic problems in Namibia, with adverse effects such as poor nutritional status and possible increased susceptibility of alcoholics to diseases and infections such as pellagra, diarrhoea and cirrhosis of the liver. The MoHSS has developed Guidelines on the Management of Substance Intoxication and Withdrawal in 2010 to provide uniformed management of substance abuse, intoxication and withdrawal. The primary goal of the draft National Demand Reduction Policy on Alcohol Use and Misuse is to minimise health and social harm stemming from the use of alcohol. The draft Bill was developed to provide for the establishment of the Alcohol and Drug Rehabilitation Council of Namibia, the Regional Alcohol and Drug Rehabilitation Boards, rehabilitation programmes, treatment centres, rehabilitation centres and community-based care centres and shelters. The Coalition on Responsible Drinking (CORD) is a group of stakeholders who have committed themselves to different types of interventions to prevent and control the abuse of alcohol in Namibia and to mitigate its consequences.

NUTRITION POLICIES AND PROGRAMMES

Several policies, guidelines and resource guides have been developed and disseminated since Independence, including the 1995 Food and Nutrition Policy for Namibia, 2003 National Policy on Infant and Young Child Feeding, and Guidelines on Nutrition Management for People Living with HIV/AIDS. A number of these documents are outdated and in need of revision for purposes of effective dissemination and use.

To date some important nutrition programmes have been implemented with support from various organisations, including Government, civil society organisations, and multilateral and bilateral development agencies. The Programme for Nutrition Surveillance and Maternal and Child Nutrition Promotion comprise the Infant and Young Child Feeding Programme and Baby and Mother Friendly Initiative. The Micronutrient Deficiency Control Programme is supported by UNICEF, WHO and Kiwanis International. Nutrition Management for PLHIV, the Non-communicable Diet-related Diseases Programme, Integrated Management of Acute Malnutrition (IMAM) and food standards and institutional feeding programmes are supported by the U.S. Agency for International Development (USAID), International Training and Education Center for HIV/AIDS (I-TECH) and the Food and Nutrition Technical Assistance II Project (FANTA-2). The International Code of Marketing of Breast-milk Substitutes has been drafted and included in the Public Health Bill. This Strategic Plan for Nutrition seeks to substantially build on and extend these efforts.

GAP ANALYSIS

According to the Second MDG Report for Namibia, it is possible for the country to achieve most of its 2012 targets for nutrition-related goals, provided efforts are sustained and multi-sectoral solutions are enhanced. However, there are serious gaps that must be addressed with the assistance of all key partners. There are inadequate equipment and human resources, as the staff establishment does not make provision for nutritionists at regional and district levels, a lack of a formal structure for health extension work at community level, a paucity of specific data on nutrition, insufficient capacity building at the health facility and community level, inadequate promotional activities and limited production, translation, dissemination and use of information, education and communication (IEC) materials.

DEVELOPMENT OF THE STRATEGIC PLAN FOR NUTRITION

Some nutrition activities have been implemented since the country's independence, but their low amplitude and the lack of strong and continuous follow-up have inhibited sustainable change, hence the lack of progress towards achieving the Food and Nutrition goals set in 1995. While the picture is complicated by the prevalence of HIV and AIDS in this period, it is clear that the absence of a clear strategy and embedded activities has contributed to this situation. Nutrition needs to be addressed as a dynamic new challenge in Namibia, and all aspects need increased attention and close monitoring.

The SPN was initiated by the Directorate of Primary Health Care (PHC) of 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. It was developed through a process of consultation with a cross-section of internal and external stakeholders. The resulting 5-year plan re-emphasises 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 the MDGs. The SPN 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, civil society organisations and private institutions.

Specific objectives, initiatives and indicators have been developed for each strategic priority and detailed in an action plan. Monitoring and evaluation tools will be revised or developed to collect data for all indicators. Periodic reviews and evaluations will be undertaken to ensure that activities are carried out as planned through progress review meetings, quarterly and annual plans and reports, programme reviews and research.

IMPLICATIONS FOR IMPLEMENTATION

The implementation of the SPN has implications for the structuring of nutrition programmes, resource mobilisation, research, monitoring and surveillance and capacity development.

MULTI-SECTORAL STAKEHOLDER INVOLVEMENT AND COLLABORATION

The causes and effects of malnutrition cut across almost every sector. When identifying nutrition initiatives, it is essential to first address the basic and the underlying causes in order to curb malnutrition at household level from a broader perspective. This requires a multi-sectoral approach, as it involves interventions which are not within the mandate and capacity of the MoHSS. The immediate causes of malnutrition are inadequate dietary intake and infections. Factors such as food insecurity, lack of safe and affordable water, lack of knowledge about good sanitation and lack of adequate sources of income all contribute to malnutrition and marginal dietary intake, which in turn cause diseases and infections. While this plan recognises the Government of Namibia's effort to ensure food security at the household level in order to address nutrition countrywide, urgent and concerted action must be taken to address these challenges. Key partners in this action include the Office of the Prime Minister (OPM) and Namibia Alliance for Improved Nutrition (NAFIN) Trust; line ministries; National Planning Commission (NPC); educational institutions such as the National Health Training Centre (NHTC) and University of Namibia (UNAM); civil society organisations and development agencies; private food producers, distributors and outlets; private health and fitness institutions and traditional leaders. The support of these organisations for nutrition programmes must be coordinated in order to maximise resources and avoid duplication of efforts.

VISION:

A HEALTHY AND PRODUCTIVE NAMIBIAN NATION WITH IMPROVED QUALITY OF LIFE FOR ALL

GOAL:

TO IMPROVE THE NUTRITIONAL STATUS OF THE NAMIBIAN POPULATION, WITH SPECIAL EMPHASIS ON CHILDREN,

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Key Principles

- Nutrition is not only a health issue, therefore solutions require multisectoral collaboration.
- Strategies must be evidence based in order to address the causes of malnutrition effectively in the local context.
- The life course approach is the best way to ensure good nutrition for all, so special attention must be paid to maternal nutrition and infant and young child feeding, as well as nutrition during adolescence and ageing.
- Household food security and relationships within the family and household have a critical impact on access
 to nutrition.
- Community involvement is essential to effective implementation of nutrition strategies.
- Nutrition is a key component in the healthy survival of people living with HIV and TB.
- Good nutrition and healthy lifestyles are key to reducing the risks associated with non-communicable diseases.

STRATEGIC PRIORITIES

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

1. INTRODUCTION

Malnutrition is a global issue. It remains the world's most serious health problem and the single biggest contributor to child mortality. 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 scale of the problem will prevent many countries from achieving the Millennium Development Goals (MDGs)—especially in Sub-Saharan Africa, where malnutrition is increasing.

Namibia's nutrition policies and programmes must therefore be understood in the context of international and regional nutrition agendas.

1.1. GLOBAL NUTRITION AGENDA

"Inappropriate feeding practices and their consequences are major obstacles to sustainable socioeconomic development and poverty reduction. Governments will be unsuccessful in their efforts to accelerate economic development in any significant long-term sense until optimal child growth and development, especially through appropriate feeding practices, is ensured" (WHO/UNICEF, 2003).

The key role of infant and young child feeding (IYCF) practices in the nutritional status of populations is reflected in a number of international guidelines. These include The Baby Friendly Hospital Initiative (1991), The International Code of Marketing of Breast-milk Substitutes (1981) adopted by the 34th World Health Assembly and subsequent resolutions, The Innocenti Declaration on the Promotion of Exclusive Breastfeeding for Six Months (1990) and the historical World Summit for Children (1990), which includes a major goal to "empower all women to breastfeed exclusively for six months and continue with adequate complementary foods for two years or beyond" by 2000.¹ In 2003 the WHO Global Strategy for Infant and Young Child Feeding called for a renewed commitment to these agreements, underlining the need for "an integrated comprehensive approach" and high degree of urgency for implementation. This Strategic Plan for Nutrition (SPN) follows these international recommendations for the implementation of this approach through existing health structures.

INTERNATIONAL CONFERENCE ON NUTRITION 1992

In 1992 FAO and WHO convened the International Conference on Nutrition (ICN) with the primary purpose of increasing public awareness in promoting effective strategies to target nutritional problems world-wide and encouraging the political commitment necessary for action.

The 159 participating countries (Namibia included) unanimously adopted the World Declaration and Plan of Action for Nutrition (FAO/WHO, 1992). They pledged to act in solidarity to eliminate, before the end of the 1990s, famine and famine-related deaths, starvation and nutritional deficiency diseases and iodine and vitamin A deficiencies. The countries further pledged to reduce substantially, within the same

¹ National Policy on Infant and Young Feeding, MoHSS 2003

period, undernutrition, especially among vulnerable groups; diet-related communicable and noncommunicable diseases; and inadequate sanitation, poor hygiene and lack of safe drinking water. The declaration called for the redirection of resources to those most in need to enable them to care for themselves adequately by raising their productive capacities and social opportunities. It highlighted the need for identification of specific short-term actions while working on long-term solutions.

In 1996 FAO and WHO reported significant evidence that the ICN had been successful in achieving its primary goal to integrate household food security and nutrition objectives into the mainstream of development-oriented planning and investment and explicitly incorporate nutrition at both the policy and programme formulation levels. Countries reported an increase in commitment to improve the nutritional status of their people and admitted that much more needed to be done in many countries, especially those in sub-Saharan Africa.

GLOBAL STRATEGY ON DIET, PHYSICAL ACTIVITY AND HEALTH 2004

In May 2004 the 57th World Health Assembly (WHA) endorsed the WHO Global Strategy on Diet, Physical Activity and Health. This strategy was in response to the profound shift in the balance of the major causes of death and diseases that have already occurred in the developed world and are underway in many developing countries. As the strategy document states, the burden of mortality, morbidity and disability attributable to non-communicable diseases is greatest and continuing to grow in developing countries and highlights the vulnerability of poor communicable diseases throughout the life course is also underlined. Evidence points to a surprising link between undernutrition in the womb and/or during infancy and higher risk of non-communicable diseases in adulthood. The strategy urges governments, in cooperation with other stakeholders, to create an environment that empowers and encourages behaviour change by individuals, families and communities to make positive life-enhancing decisions on healthy diets and patterns of physical activity. It also reinforces the key role that related programmes have to play in policies to achieve broader development goals (WHO, 2004).

MILLENNIUM DEVELOPMENT GOALS (MDGS)

The Millennium Development Goals (UN, 2000) stipulate eight broad development goals, of which the following specifically address nutrition:

- Goal 1 Eradicate extreme poverty and hunger;
- Goal 4 Reduce child mortality;
- Goal 5 Improve maternal health; and
- Goal 6 Combat HIV/AIDS, malaria and other diseases.

Improved nutritional status can help attain all of these MDGs because nutritional status, as well as the policies, programmes and processes through which it is attained, have an important role to play in overall development. This role is summarised below.

- Good nutritional status reduces poverty by boosting productivity throughout the life cycle and across generations (Goal 1);
- Good nutrition leads to improved educational outcomes (Goal 2);
- Dealing with nutrition empowers women (Goal 3);
- Malnutrition is associated with over 50 percent of all child mortality (Goal 4);
- Maternal malnutrition is a direct contributor to poor maternal health (Goal 5);
- Good nutritional status slows the onset of AIDS in HIV-positive individuals and increases malarial survival rates (Goal 6); and
- Good nutritional status lowers the risk of diet-related chronic disease (related to Goals 1, 4 and 6).

The plans of the MoHSS for contributing to the achievement of these goals are articulated in the MoHSS Strategic Plan 2009–2013 (MoHSS, 2008). This document sets out the overarching mission, vision, core values, strategic themes and objectives of the MoHSS for the 5-year period. Among these objectives are to reduce malnutrition, decrease morbidity rates and decrease mortality rates, all of which require substantial contributions from nutrition programmes.

1.2. REGIONAL NUTRITION AGENDA

The African Regional Nutrition Strategy (ARNS) 2005–2015 provides a strategic framework for the development of nutrition plans of action by member states (African Union, 2005). It takes stock of the general stagnation and decline of most African economies, acceleration of poverty rates, deterioration of health systems and worsening agricultural performance and food production since the early 1990s. In the years since the first ARNS 1992–2003, the disease burden increased, HIV and AIDS became pandemic, civil conflicts erupted in many parts of the continent and droughts became more frequent. The ARNS 2005–2015 reemphasised the contributing role nutrition plays in poverty alleviation and the attainment of the Millennium Development Goals.

1.3. NATIONAL NUTRITION AGENDA

At independence in 1990, Namibia faced a serious problem of food insecurity. The majority of people did not have adequate access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. This made it necessary to initiate urgent action, in particular to protect the vulnerable, especially children who were wasted as a result of inadequate food consumption, or in danger of not reaching their full physical and intellectual potential because of childhood malnutrition.²

PRIMARY HEALTH CARE

In 1990 the Government of Namibia ratified the United Nations Convention on the Rights of the Child (UNCRC), Article 24 of which guarantees every child's right to "health care, clean drinking water, nutritious food, and a clean environment" (UN, 1989). At the same time, the MoHSS adopted Primary Health Care (PHC) as the cornerstone and foundation of the health care system for the country. Health services have since been delivered to the Namibian population through the PHC approach, focusing on preventive and promotion of health services while maintaining the quality of curative care.³

NATIONAL FOOD AND NUTRITION POLICY FOR NAMIBIA 1995

Namibia committed itself to the principles and goals of the ICN in 1992 and in 1995 published the National Food and Nutrition Policy for Namibia and accompanying Action Plan (National Food Security and Nutrition Council, 1995). The policy identified three key areas for action through a multi-sectoral approach: improving household level resources; improving knowledge, attitudes and practices; and improving social and supporting services.

The Policy and accompanying Action Plan sent out a strong call to action by the public, private and nongovernmental sectors based on mutually supportive, cross-sectoral and broad-based initiatives. It set out the following principles for nutrition programming:

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

The policy aimed to achieve the following goals:

- To reduce the incidence of underweight in children to 15 percent, with no more than 3 percent severe underweight;
- To reduce the incidence of stunting to 15 percent; and
- To reduce the incidence of wasting to 4.5 percent.

² National Food Security Nutrition Assessment Report, 2005

³ Roadmap for Accelerating the Reduction of Maternal and New Morbidity and Mortality, MoHSS, 2007

According to the Namibia Demographic and Health Survey (NDHS) 2006–2007 undertaken by the MoHSS, the goals had still not been met, with the incidence of underweight standing at 17 percent and the incidence of severe underweight at 4 percent (MoHSS, 2008a).

The National Food Security and Nutrition Assessment Report of 2008 highlighted specific food security plans for the 13 regions and identified gaps in information and data on food security and nutrition. The SPN places particular emphasis on the need for comprehensive research, monitoring and evaluation, with a number of proposed surveillance priorities.

VISION 2030

The policy frameworks and 5-year plans of every ministry are guided by Namibia's Vision 2030 (Office of the President, 2004), which envisages "A prosperous and industrialised Namibia, developed by her human resources, enjoying peace, harmony and political stability". The ultimate goal of Vision 2030 is to improve the quality of life of the people of Namibia to the level of their counterparts in the developed world by 2030. One of the objectives set out in the main document is to "ensure a healthy, food-secured and breastfeeding nation, in which all preventable, infectious and parasitic diseases are under secure control and in which people enjoy a high standard of living, with access to quality education, health and other vital services in an atmosphere of sustainable population growth and development". Nutrition programmes have a vital role to play in achieving these objectives, and contribute significantly to overall development.

The following strategic elements in Vision 2030 relate to health and have implications for nutrition:

- Providing excellent, affordable health care for all;
- Mainstreaming HIV and AIDS into development policies, plans and programmes; and
- Creating access to abundant, hygienic and healthy food, based on a policy of food security.

THIRD NATIONAL DEVELOPMENT PLAN 2008

The Third National Development Plan 2008 (NDP3) translates the objectives of Vision 2030 into concrete policies and actions. It is a medium-term strategic implementing tool which provides additional guidance for government planning. NDP3 serves as the country map for sustainable social and economic development in which the MDGs have been fully and systematically integrated.

The NDP3 identifies undernutrition among children under 5, food insecurity and malnourishment as national problems that affect both rural and urban populations living in poverty. The health strategies proposed under this plan focus on the application of PHC principles and the targeting of urban poor and under-served regions, as well as vulnerable groups (Office of the President, 2008).

NATIONAL PLANS ON INFANT AND YOUNG CHILD FEEDING

The Baby and Mother Friendly Initiative of 1992, which was launched by the founding President, His Excellency Dr. Sam Nujoma, demonstrated the Government's commitment to the importance of nutrition. This initiative should be resuscitated and promoted. An Infant and Young Child (IYC) survey was started in 2009 and is expected to be completed by 2011.

The National Policy on Infant and Young Child Feeding (IYCF) 2003 was developed to create an environment that promotes, protects and supports sound infant and young child feeding practices in Namibia, with an emphasis on the promotion of breastfeeding as the best feeding practice (MoHSS, 2003).

In 2007 the Road Map for Accelerating the Reduction of Maternal and Newborn Morbidity and Mortality was developed by the MoHSS as part of a national process of strengthening current policies and programmes that address maternal and child health. The Road Map sets out interventions for the integration of newborn health care with existing health and nutrition programmes (MoHSS, 2007). The SPN incorporates those nutrition components of the road map that fall within the Ministry's responsibility.

2. SITUATION ANALYSIS

Namibia covers 824,116 square kilometres of land with a low population density of 2.1 people per square kilometre. Namibia is bordered by four countries (South Africa, Botswana, Zambia and Angola) with whom commercial exchanges, including of food products, are important. The country is divided into 13 administrative regions (Figure 1)

Figure 1. Administrative regions of Namibia



2.1. POPULATION

According to the latest National Census in 2001, the Namibian population is estimated at 1,830,293, of which 942,572 are female and 887,721 are male. Nearly 60 percent of the population is located in the Northern Regions, and more than two-thirds live in rural settlements.

Approximately 28 percent of children are classified as orphans or vulnerable children (OVC).⁴ This situation is linked with the impact of the high HIV prevalence (17.8 percent nationally⁵), which is on the decline among the adult population.⁶ It is estimated that 13 percent of orphans live in urban areas, while 30 percent grow up in rural households.⁷ This situation influences the economic situation of households, as fewer economically productive adults are left to support more dependants, which in turn has an impact on households' ability to provide adequate nutrition.

2.2. CLIMATE

The climatic condition of Namibia, which is arid with generally low and highly variable rainfall, has a bearing on both crop and livestock farming practices and long-term economic effects on productivity. The main food crops grown in Namibia are millet and maize. During the past 5 years agricultural output has been seriously constrained by recurring drought, floods, locusts, insects and worm invasions. When agricultural production is low, food prices rise and households become more dependent on staple food rations from donors or government, elderly social pension grants, child welfare remittances and other grants and in-kind receipts as important sources of income.

2.3. ECONOMY

With a Gross National Income (GNI) per capita of US\$3,450, Namibia is now classified as an upper middle income country and ranks 112 out of 209 countries.⁸ Namibia's GNI per capita exceeds by far the average GNI per capita of US\$951 for sub-Saharan Africa.⁹ However, this classification obscures pervasive inequalities, which are rooted in the country's long colonial history and apartheid.

⁴ Namibia Demographic and Health Survey 2006–2007, MoHSS 2008

⁵ Results of the 2008 HIV Sentinel Survey, Directorate of Special Programmes, Response Monitoring and Evaluation Subdivision, MoHSS, 2008

⁶ While the sentinel surveys only provide sero-prevalence data for pregnant women visiting Sentinel ANC facilities, it is used as a proxy indicator of the HIV/AIDS prevalence among the general population because it indicates unprotected sex.

⁷ 2003/2004 Namibia Household Income and Expenditure Survey, Central Bureau of Statistics, Republic of Namibia, November 2006

⁸ The World Bank classifies countries according to income level (GNI). The groups are low income, US\$935 or less; lower middle income, US\$936–US\$3,705; upper middle income, US\$3,706–US\$11,455 and high income, US\$11,456 or more (Gross National Income calculated by the Atlas Method 2007).

⁹The World Bank (Gross National Income calculated by the Atlas Method 2007)

The Gini coefficient reported for Namibia in 2008 was 74.3, making it the country with the highest rate of income or expenditure inequality in the world (UNDP, 2008)¹⁰. Unemployment is also very high in Namibia (estimated at 37% in 2004) and 36.5% of the population are subsistence farmers (MLSW, 2006). The Namibian economy is mainly dependent on the export of primary commodities, largely consisting of precious metals and minerals such as diamond, uranium and gold. In an attempt to improve affordability of basic foods, fresh milk and sugar (brown and white) were added to the list of zero-rated foodstuffs in May 2010.

2.4. HEALTH AND NUTRITION

This section describes maternal and child mortality in Namibia, maternal and child nutrition and the effect of the HIV epidemic on maternal and child health.

MATERNAL AND CHILD MORTALITY

A major issue of concern in Namibia is the sudden increase of both the maternal and under-5 mortality rates. As shown in Figure 2, the under-5 mortality rate decreased from 83 per 1,000 live births in 1992 to 62 per 1,000 live births in 2000, but increased to 69 per 1,000 live births in 2006–2007. Similarly, the infant mortality rate (IMR) decreased considerably from 57 per 1,000 live births in 1992 to 38 per 1,000 live births in the year 2000, but rose to 46 per 1,000 live births in 2006–2007. The maternal mortality ratio almost doubled from 225 per 100,000 live births in 1992 to 449 in 2006–2007 (MoHSS, 2008a). These increases coincide with an increase in the number of women delivering at health facilities and an increase in antenatal care in rural areas. Micronutrient deficiencies are associated with pregnancy complications and maternal mortality and maternal undernutrition is related to low birthweight and intrauterine growth retardation. With about 20 percent of deaths in under-5s attributable to malnutrition (MoHSS, 2009), it is clear that nutrition programmes have an important role to play in reducing mortality rates.

¹⁰ The Gini Coefficient measures the extent to which the distribution of income among individuals or households deviates from a perfectly equal distribution. A Gini Coefficient of zero means perfect equality, while a coefficient of 100 implies perfect inequality. Countries with a Gini Coefficient of 50 and above are considered to have high levels of income inequality.





ACUTE MALNUTRITION

The number of children living with moderate acute malnutrition (MAM) and severe acute malnutrition (SAM) in Namibia is high. The most serious form of malnutrition is protein-energy malnutrition (PEM). PEM is a result of inadequate food intake, which is common in children under 5 living in poor communities. PEM manifests itself as stunting (low height for age or chronic malnutrition), wasting (low weight for height or acute malnutrition), and underweight (low weight for age or a combination of both chronic and acute malnutrition). The NDHS 2006–2007 reported that 29 percent of children were stunted, 17 percent were underweight and 7.5 percent were acutely malnourished (MoHSS, 2008a).

Child undernutrition rates were higher in rural areas and in the poorest households or where the mothers were less educated. The nutritional status of infants less than 6 months old requires specific attention. The NDHS showed that stunting was already apparent in 14 percent of infants under 6 months old, underweight in 11 percent and acute malnutrition in 11 percent, while 13 percent were overweight or obese. Severe acute malnutrition affected 4.4 percent of these infants, which is twice as high as the national average at 1.9 percent over all in children under 5 years.

As shown in Figure 3, there are regional variations in the data for malnutrition. For example, the percentage of underweight children in Oshikoto (22 percent), Oshana (21 percent), Hardap and Ohangwena (20 percent each), Kavango (19 percent) and Omusati (18 percent) are above the national average of 17 percent (MoHSS, 2008a).





CAUSES OF UNDERNUTRITION

Figure 4 illustrates UNICEF's Modified Maternal and Child Undernutrition Framework (Black RE, 2008). It presents the vicious cycle of inadequate dietary intake and disease as immediate causes of undernutrition. Food shortages at household level, inadequate care, unhygienic household environments and a lack of health services are the underlying causes of malnutrition, which result from low income or no income at all. The prevalence of malnutrition is often two or three times - sometimes many times - higher among the poorest income quintile than among the highest quintile. This means that improving nutrition is a pro-poor strategy, proportionately increasing the income-earning potential of the poor. In addition, the social, economic and political context is the basic cause of undernutrition. Interventions to address the basic and underlying causes of undernutrition therefore require strong commitment from all sectors. MoHSS nutrition programmes can have a significant impact on the immediate causes of undernutrition, as well as some of the underlying causes such as inadequate care.



Figure 4. UNICEF's Modified Maternal and Child Under-nutrition Framework

MATERNAL NUTRITION

A child's nutritional status depends heavily on the health and nutritional status of the mother. There is clear evidence that the major damage caused by undernutrition takes place in the womb and during the first 2 years of life and that this damage is irreversible; that it causes lower intelligence and reduced physical capacity, which in turn reduces productivity, slows economic growth and perpetuates poverty.

Undernutrition passes from generation to generation because stunted mothers are more likely to have underweight children. In order to break this cycle, the focus must be on preventing teenage pregnancies and preventing and treating undernutrition among pregnant women and children 0 to 2 years old.

The NDHS 2006–2007 found that 6 percent of women 15 to 49 years old were moderately or severely malnourished, with a body mass index (BMI) of under 17, and 10.2 percent were mildly malnourished, with a BMI between 17 and 18.4. These figures indicate that chronic malnutrition among women of reproductive age must be targeted as a matter of priority.

INFANT AND YOUNG CHILD FEEDING PRACTICES

Breastmilk is the ideal food for the healthy growth and development of infants and is also an integral part of the reproductive process in women. Therefore, early initiation of breastfeeding is encouraged because it is important for the health of both mother and child.

Breastfeeding is common in Namibia, with 94 percent of children being breastfed early in life. The Namibia Demographic and Health Survey 2006–2007 found that more than 70 percent of children were breastfed in the hour following birth and 92 percent in the first day after birth. However, 14 percent of new-borns received artificial milks, other liquids and foods in the first 3 days of life. The use of artificial milk feeding is high in Namibia (35 percent between 0 and 5 months, 49 percent between 6 and 9 months, 32 between 12 and 23 months and 15 percent between 24 and 35 months). This presents a threat because of the unhygienic conditions prevailing in many households, such as lack of clean water and lack of knowledge about sterilising bottles and teats. National guidelines therefore recommend exclusive breastfeeding during the first 6 months of life. Early supplementation is discouraged because it exposes infants to pathogens and increases risk to infections; it also decreases infants' intake of breastmilk, therefore suckling, which reduces breastmilk production and in challenged socioeconomic situations (poor households), replacement milks are often nutritionally inferior.

Clear national guidelines for the promotion of exclusive breastfeeding from birth to 6 months and continued breastfeeding to 2 years or beyond are crucial for improved maternal and child health and nutrition. WHO recommends the following feeding practices for children over 6 months:

- Breastfed children over 6 months should receive food from three or more food groups at least twice a day for infants 6–8 months old and at least three times a day for breastfed children 9–23 months old; and
- Non-breastfed children over 6 months old should receive milk or milk products in addition to food from four or more food groups four times a day or more.

Compliance with these recommended practices is very low, as shown in the following table:

Children 6–23 months old	Adequate number of food groups	Adequate number of meals per day	Intake of milk or milk products	Compliance with IYCF recommendations
Breastfed	62%	49%	N/A	34%
Non-breastfed	60%	25%	63%	11%

Table 1. Compliance of IYCF practices in Namibia with recommendations

This low compliance increases the importance of the quality and density of the food provided. Among breastfed children (0–35 months old), 14 percent consumed fortified baby foods and 70 percent consumed food made from grains, while in non-breastfed children, 20 percent received fortified baby food and 94 percent received food made from grains. In addition to improving the quality of complementary feeding, it is important that children's nutritional needs are met through timely, adequate, safe and proper feeding practices.

Figure 5 illustrates the changes in breastfeeding practices in Namibia between 2000 and 2006, as assessed in the NDHS 2000 and 2006–2007 surveys. These data show that not all children under 6 months old are exclusively breastfed. Contrary to national recommendations, only about half of the children under 2 months old age are exclusively breastfed, 10 percent receive breastmilk and plain water, 11 percent receive breastmilk and other non-milk liquids and 9 percent receive breastmilk and other milk. Three percent of children under 2 months old are given foods or liquids other than breastmilk or replacement milk. The proportion of children who are exclusively breastfed drops to 6 percent by the age of 4–5 months and continues to decline thereafter. Twenty-four percent of children are exclusively breastfed, and thirty percent receive complementary foods before 6 months (MoHSS, 2008a). As Figure 5 shows, the proportion of non-breastfed infants, as well as of infants receiving complementary food, increased between survey periods. In the 6–9-month age group, the use of other milk decreased and more complementary food was offered to children.





PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV (PMTCT)

Because of the relatively high prevalence of HIV among pregnant women (MoHSS, 2008c), the Namibian IYCF guidelines recommend that HIV-positive mothers breastfeed exclusively for the first 6 months, during which time their infants should receive ARV prophylaxis to prevent mother-to-child transmission of HIV. At the age of 6 months complementary foods should be introduced, with continued breastfeeding up to 12 completed months. The infants should receive ARV prophylaxis during this time until 4 weeks after all breastfeeding has stopped. The risk of transmission of HIV in infants following these guidelines is lower than the risk of morbidity and mortality associated with inappropriate use of commercial milk formulas and/or bottles and teats (MoHSS, 2008a).

FOOD INTAKE PATTERNS

Detailed data on common food intake patterns in Namibia is scarce, and information is mainly based on popular knowledge. It is believed that meals mostly consist of maize meal or *mahangu* (millet), which is prepared as porridge or thick paste. This is usually accompanied by fish or meat, and few people consume legumes. Vegetables such as green leaves, squash or tomatoes are sometimes added to the meat or fish but not every day.
Fruits are apparently rarely consumed. Organ meats have high micronutrient content and may be consumed in communities which do not take in many fruits and vegetables. Food patterns are believed to differ between urban and rural areas, as well as for different cultural groups. For example, some traditional diets are limited to meat and dairy products, an expression of deeply-rooted cultural values.

The consumption of diverse foods may be higher in urban areas where shops sell an extended range of fresh and industrial food products. The small local shops in rural areas mainly sell basic commodities and little or no fresh produce. The majority of people residing in informal settlements live in poor hygienic conditions and lack basic amenities such as potable water and sanitation facilities. In addition, local foods which are usually grown or naturally available in rural areas are not available to households in towns and cities because of lack of space and water.

Programmes must therefore emphasise the nutritional value of locally grown foods, with strategies for developing home gardens in both urban and rural areas.

The NDHS is the national source of information of food intake patterns in Namibia. The survey that was conducted in 2006 shed some light on this issue, though more specific and reliable data are needed for accurate targeting of nutritional needs.

The NDHS 2006–2007 data suggested reasonable intake of vitamin A-rich foods among young children, but the food categories included some that are not rich in vitamin A.

A Multiple Indicators Cluster Survey (MICS) appears necessary to gather information on the knowledge, attitudes and practices of vulnerable groups, that is, children and women of reproductive age. Without an understanding of the reasons why people adopt different health lifestyles and food habits, it is difficult to plan appropriate and complete activities to reduce mortality and morbidity (including malnutrition) among vulnerable groups.

MICRONUTRIENT DEFICIENCIES

Micronutrients are vitamins and minerals, essential trace elements which can be consumed through specific foods or taken as supplements. In general the most common micronutrients lacking in developing countries are iron, iodine, vitamin A and zinc. Deficiencies in these micronutrients can lead to iron deficiency anaemia (IDA/anaemia), iodine deficiency disorders (IDD/goitre), Vitamin A deficiency (VAD/xerophthalmia) and hypozincemia.

These deficiencies generally contribute to growth retardation, interfere with the immune system, reducing resistance, increase the risk of morbidity and mortality and cause brain damage and reduced cognitive development in children. In adults, micronutrient deficiencies reduce productivity¹¹ (Ministry of Health Eritrea, 2005). Micronutrient deficiencies are also associated with pregnancy complications and maternal mortality.

¹¹ National Strategic Plan of Action for Nutrition, Ministry of Health Eritrea 2006–2010

Micronutrient deficiencies are considered to be a critical component of undernutrition which requires immediate intervention. The framework for the causes of undernutrition can also apply to this nutritional problem.

Micronutrient deficiencies can be associated with metabolic problems but are often linked with nondiversified food intake patterns preventing adequate intake of one or many micronutrients. Information available on food intake patterns suggests inadequate intake of vital micronutrients in Namibia.

2.4.8.1 MICRONUTRIENT SURVEILLANCE

The micronutrient status of the general population cannot be accurately analysed, as there is no actual micronutrient deficiency data on the adult population. The most recent information for children is focused on the coverage of routine vitamin A supplementation (NDHS 2006–2007) and availability of iodised salt at household level (NDHS 2000). The specific micronutrient deficiency data (iodine, vitamin A and iron) are more than 10 years old. This calls for research and surveillance to determine actual micronutrient deficiency levels in Namibia as well as progress of micronutrient supplementation programmes.

2.4.8.2 IODINE

In 1992 iodine deficiency disorders were identified as an important public health problem in Namibia, and salt iodisation became mandatory. Despite these measures, the NDHS 2000 reported that only 55 percent of all Namibian households used iodised salt (16 percent in Omaheke and 31 percent in Kavango regions). Unfortunately, household use of iodised salt was not included in the NDHS 2006–2007 survey.

2.4.8.3 VITAMIN A AND IRON

In 2001 vitamin A deficiency was reported to be a public health problem (MoHSS, 2001) and vitamin A and iron supplementation was routinely implemented in regular growth monitoring activities. In 2007, 52 percent of children were reported to have received vitamin A supplementation and 12 percent to have received iron supplements (MoHSS, 2008a). Night blindness (a symptom of vitamin A deficiency, or VAD) was not assessed in children.

Since 1996 vitamin A supplementation has been integrated into the National Immunization Days, on average sustaining annual population coverage of above 80 percent. This is supplemental to routine vitamin A supplementation, which need to be strengthened to achieve the same high coverage levels.

According to the NDHS 2006–2007 results, 51 percent of women received vitamin A post-partum (compared with 33 percent in 2000) and 31 percent took iron supplements for more than 90 days. Night blindness without vision difficulty during the day was reported by 3 percent of women.

2.4.8.4 FERRITIN

Ferritin levels were found 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 (MoHSS, 2001). This adequate level of ferritin is surprising since it is believed that iron-rich foods could be available at the household level but not

necessarily accessible to children. Even in malaria-prone areas, ferritin levels were adequate, despite the low use of mosquito nets (MoHSS, 2008a).

The National Nutrition Action Plan of Botswana (MoHSS Botswana, 2005) reported much higher rates of anaemia than in Namibia, while life and eating patterns are thought to be similar at many levels. This raises questions regarding the quality of the sample collection and analysis of the Namibian data and further underscores the need for additional surveillance.

2.4.8.5 ZINC, FOLIC ACID AND NIACIN

Other micronutrients which need to be assessed are zinc, folic acid and niacin. There are no nutritional data on zinc status in Namibia. However, the diarrhoea rate, stunting and low intake of food rich in zinc are considered proxy indicators of zinc deficiency (Gibson, 2007; Brown, 2004). Nearly one-third of children are stunted, and more that 10 percent had diarrhoea in the two weeks preceding the NHDS (MoHSS, 2008a). The richest sources of zinc are animal products, but it is known that vegetable food sources containing phytate (legumes and nuts, whole grains cereals, tubers, fruits and vegetables) will decrease zinc bioavailability.

Folic acid deficiencies are equally important to consider in Namibia, as deficiency in folic acid can lead to low birth weight and neural tube defects. According to NDHS 2006–2007 data, 14 percent of infants had a low birth weight (less than 2.5 kg). The data are not refined enough to indicate how many had a very low birth weight (less than 1.5 kg) or were pre-term births. The National Health Information System informs that in 2006, health facilities reported 239 premature births and 286 congenital malformations of the nervous system (including spina bifida). A total of 51 and 22 of these infants, respectively, died from these conditions. Among many other possible causes, these health cases could be associated with HIV, alcoholism or deficiency in folic acid.

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 and there is a low intake of meat, so some population groups in Namibia may be at risk. Pellagra or niacin deficiency has been reported in the past, and some cases are still seen on a regular basis, but the Namibian HIS does not inform on the number of cases seen every year.

2.4.8.6 FOOD FORTIFICATION

In Namibia the industrially processed food products on the market, such as maize and millet meal, wheat flour, oil and sugar, are fortified with various micronutrients such as vitamin A, thiamine, riboflavin, niacin, iron and folic acid. However, the locally milled maize and millet that is most commonly consumed is not fortified. As yet there is no legislation for the independent assessment of the quality of fortified products. This is needed in order to ensure quality and consistency in the fortification process, as emphasised in the objectives of NAFIN.

COMMUNICABLE DISEASES AND NUTRITION

Acute respiratory infections, diarrhoea and fever (including malaria) are the most common childhood illnesses in Namibia and major causes of morbidity and mortality among children (MoHSS, 2008a).

Nutrition plays a vital role in the prevention of such infections, as well as the likelihood of survival. Infections cause loss of appetite and malabsorption of nutrients, increasing the body requirements for nutrients. At the same time, reduced nutrition increases susceptibility to infection. Thus disease causes malnutrition and malnutrition causes poor resistance to infection. A malnourished person can easily suffer from diseases and vice versa, leading to the Malnutrition Infection Complex (MIC). Any increase in morbidity and mortality trends are therefore a cause for concern and need to be carefully analysed to identify targets for response. Namibia has a high incidence of diarrhoeal diseases as a result of poor environmental conditions, with only 80.4 percent access to safe water in rural areas, and 78 percent of households in rural areas have no sanitation facilities (MOHSS, 2008a).

BIRTH WEIGHT

A child's birth weight, which is influenced by the mother's health and nutritional status, is an important indicator of vulnerability to the risk of childhood illnesses and the chances of survival. Children whose birth weight is less than 2.5 kg are considered to have a higher than average risk of early childhood death. According to the NDHS 2006–2007, among the children with a reported birth weight, 14 percent weighed less than 2.5 kg at birth. Kunene, Otjozondjupa, Caprivi and Kavango all reported more than 15 percent of infants with birth weights lower than 2.5 kg, and in Hardap the incidence was especially high at 26.5 percent (Figure 6).



Figure 6. Low birth weight by region, 2006

TUBERCULOSIS (TB) AND HIV

TB is a leading cause of death in the world and a major public health problem in developing countries. In 2005 Namibia reported 15,894 TB cases, a rate of 790 cases per 100,000, which was one of the world's highest notification rates. By the end of the National Development Plan II in March 2006, Namibia achieved a treatment success rate of 70 percent for new smear-positive pulmonary TB cases started on Directly Observed Treatment-Short Course Strategy (DOTS) treatment (MoHSS, 2008a).

TB makes malnutrition worse, and malnutrition weakens immunity, increasing the likelihood that latent TB will develop into active disease. Many patients with active TB experience severe weight loss, and some show signs of vitamin and mineral deficiencies. Co-infection with HIV and TB poses an additional metabolic, physical and nutritional burden, resulting in further increase in energy expenditure, malabsorption and micronutrient deficiency. There is evidence that adults and children co-infected with HIV and TB are at greatest risk of malnutrition, poor treatment outcomes and death (Papathakis, 2008).

Currently around 28 percent of deaths in Namibia are AIDS-related (MoHSS, 2008b). According to HIV sentinel site data, nearly 20 percent of the population is HIV positive, and in some regions prevalence could reach more than 40 percent. Undernutrition is one of the major complications of HIV infection and a significant factor in advancing the disease. HIV is associated with symptoms that cause reduced food consumption, interfere with nutrient digestion and absorption and changed metabolism. This cycle leads to weight loss (wasting), loss of muscle tissue and body fat, vitamin and mineral deficiencies, reduced immune function and competence and increased susceptibility to secondary infections.

HIV combined with pre-existing undernutrition makes it difficult for PLHIV to remain healthy and economically productive. The high nutritional needs of PLHIV are accompanied by decreased work and agricultural capacities, threatening the food security of members of their households. Diets are modified according to the income sources available and therefore compromised. A balanced diet consisting of the different food groups, rich in energy, protein, vitamins and minerals, is recommended for PLHIV (MoHSS, 2007; Wafaie, 2007; Donovan, 2007; Byron, 2007).

During a 2008 assessment of food and nutrition needs of PLHIV in Namibia conducted by the MoHSS and Food and Nutrition Technical Assistance (FANTA) Project, anthropometric measurements were taken for 319 HIV-positive clinic patients, 80 percent of whom were on antiretroviral therapy (ART). The assessment yielded the findings in Table 2.

Table 2. Food and nutrition needs of PLHIV in Namibia, 2008

Proportion with body mass index (BMI) within the healthy range (BMI 18.5–24.9)	64.6%
Proportion undernourished (BMI <18.5)	20.1%
Proportion severely malnourished (BMI <16)	2.5%
Proportion moderately or mildly malnourished (BMI 16–18.5)	17.6%
Proportion overweight or obese:	15.4%
Proportion overweight (BMI 25.0-29.9):	9%
Proportion obese (BMI 30 and over):	3.4%

Almost all clients rated access to healthy foods as their most serious concern after unemployment, and almost all reported food insecurity. In addition, staff and clients perceived nutrition as a food security issue rather than a clinical issue.

The assessment team recommended the following actions to address gaps in integrating nutrition activities into HIV care and treatment:

- 1. Increase nutrition capacity at national, regional, district and facility levels;
- 2. Designate a person responsible for nutrition programming in each health facility providing HIV services; and
- 3. Identify nutrition indicators for monitoring and evaluation and incorporate them into the quality monitoring programme at Namibian ART clinics (MoHSS, 2008).

Global acute malnutrition (GAM) is also widely seen among children living with HIV. Many of these children are not tested for HIV until the infection has progressed into the late stage of the disease. Indicators of malnutrition are often a first sign of possible HIV infection, having often preceded a decrease in CD4 count or immune response. It is highly recommended that these children are treated intensively for malnutrition and, once they are well nourished or at least stabilised, re-evaluated for highly active antiretroviral therapy (HAART). In many situations, if malnutrition is correctly treated, children with adequate nutritional status will be able to delay treatment and fight off other infections.

In June 2010 the World Food Programme (WFP) assisted the MoHSS in conducting a nutrition assessment and vulnerability profiling study of pre-ART and ART clients in Namibia to obtain more quantitative data on the prevalence of malnutrition among pre-ART and ART patients. The results of this process should be used to guide ongoing activities to address the nutritional needs of PLHIV.

OVER-NUTRITION AND NON-COMMUNICABLE CHRONIC DISEASES

Over-nutrition is the result of an excess of one or more nutrients, usually energy. The diseases associated with obesity are diabetes, insulin resistance, dyslipidemia, hypertension and other non-communicable diseases such as cardiovascular diseases, cancer, osteoporosis, asthma and dental diseases.

WHO (2004) wrote that "Non-communicable diseases account for almost 60 percent of the 56 million deaths annually and 47 percent of the global burden of disease...the burden of mortality, morbidity, and disability attributable to non-communicable diseases is currently greatest and continuing to grow in developing countries, where 66 percent of these deaths occur... the most important risks included high blood pressure, high concentrations of cholesterol in the blood, inadequate intake of fruits and vegetables, overweight or obesity, and physical inactivity that are closely related to diet and overweight and obesity".

The NDHS 2006–2007 reported that 16 percent of mothers were overweight, with a BMI between 25 and 29, and 12 percent were obese, with a BMI over 30 (giving a total overweight/obesity rate of 28 percent).¹² Slightly more than 4 percent of children were overweight or obese. This situation was more prevalent in urban settings (7 percent) than in rural areas (3 percent) and in wealthier households. Health facility-based data indicate hypertension and diabetes as the first and second causes of disability among adults respectively. From the Health Information System (HIS) reports, heart failure, hypertension and stroke collectively were responsible for 5 percent of all health facility deaths in 2005. The proportion of these NCD deaths grew from 6 percent in 2006 to 8 percent in 2007.

The prevalence of overweight, obesity and associated non-communicable diseases (NCD) are of public health concern as these are emerging as important causes of morbidity and mortality in Namibia. Namibia is using standardised surveillance methods and rapid assessment tools such as the WHO STEPwise approach to the surveillance of risk factors for non-communicable diseases in order to assess the current situation, trends, impact of interventions and measure changes in the distribution of risk such as patterns in diet, nutrition and physical activity.

EMERGENCIES AND NUTRITION

Namibia has recently experienced a number of emergencies related to climate change and environmental safety.

All major emergencies, by definition, threaten human life and public health. These often result in food shortages, impair or jeopardise the nutritional status of a community and cause excess mortality in all age groups. Nutrition is therefore a key public health concern in emergency management.

¹² The NDHS table indicates that the risk of overweight and obesity increases with higher levels of education and income and is more prevalent in certain regions, with Karas, Erongo and Otjozondjupa reporting over 40 percent of women overweight and obese.

The MoHSS role in emergency management is to provide education, advocacy and technical expertise to ensure vulnerability reduction and preparedness for appropriate nutrition-related relief. This includes the treatment and prevention of malnutrition and ultimately promotion of nutrition in the context of overall health, community rehabilitation and development.

The National Health Emergency Management Committee and its chairperson should coordinate and collaborate with and provide policy and standards to the National Disaster Risk Management Committee as well as to all levels in the health sector. The MoHSS will provide nutritional and epidemiological updates, technical guidance on the scope of general and selective feeding programmes, advice on micronutrient supplementation and information on disease control activities in emergency preparedness and response.

ALCOHOL AND NUTRITION

The prevalence of alcohol abuse and the use of tobacco are nutritional and socio-economic problems in Namibia, with adverse effects such as poor nutritional status and possible increased susceptibility of alcoholics to diseases and infections such as pellagra, diarrhoea and cirrhosis of the liver. Family members of alcoholics suffer from low work productivity and consequent reductions in the level of resources available for food and other requirements. The Namibia household income and expenditure survey of 2003–2004 reported that Namibians spend an average of N\$556 per annum on alcoholic beverages and tobacco (Central Bureau of Statistics, NPC, 2006). This expenditure is much higher in males (N\$729) than in females (N\$310) and in urban settings (N\$821) than in rural settings (N\$376). However, these data cannot be related to actual consumption because most rural households produce local sorghum beer for their own consumption. No national survey assessing and reporting the actual consumption of alcohol and other related variables (quantity, frequency, type) has been conducted in Namibia. Because alcohol abuse in Namibia is a serious issue which impacts nutrition, it is necessary to carry out further research to establish these facts and assess the nutritional impact.

The MoHSS has developed Guidelines on the Management of Substance Intoxication and Withdrawal in 2010 to provide uniformed management of substance abuse, intoxication and withdrawal. The primary goal of the draft National Demand Reduction Policy on Alcohol Use and Misuse is to minimise health and social harm stemming from the use of alcohol. The draft Bill was developed to provide for the establishment of the Alcohol and Drug Rehabilitation Council of Namibia, the Regional Alcohol and Drug Rehabilitation Boards, rehabilitation programmes, treatment centres, rehabilitation centres and community-based care centres and shelters. The Coalition on Responsible Drinking (CORD) is a group of stakeholders who have committed themselves to different types of interventions to prevent and control the abuse of alcohol in Namibia and to mitigate its consequences.

2.5. NUTRITION POLICIES AND PROGRAMMES

Appendix 2 details the policies, guidelines and resource guides that have been developed and disseminated in Namibia since Independence. These include the 1995 Food and Nutrition Policy for Namibia, 2003 National Policy on Infant and Young Child Feeding and Guidelines on Nutrition Management for People Living with HIV/AIDS. While policy development and the production of IEC

materials are core functions of the Food and Nutrition Subdivision of the Directorate of Primary Health Care and policies and materials that have been developed to date have supported nutrition programmes at all levels, there is a lot still to be done. A number of these documents are outdated and in need of revision. Improvements also need to be made for more effective dissemination and use of such documents. For example, the lack of IEC materials in local languages reduces the effectiveness of available guidelines, and there is little information in any language on locally available foods.

Some important nutrition programmes have been implemented to date with support from various organisations including government, civil society and multilateral and bilateral development agencies. A summary of the status of these programmes is given in Appendix 1.

PROGRAMME FOR NUTRITION SURVEILLANCE AND MATERNAL AND CHILD NUTRITION PROMOTION

The Programme for Nutrition Surveillance and Maternal and Child Nutrition Promotion focuses on nutrition surveillance for timely warning and planning purposes, maternal nutrition to promote healthy pregnancy outcomes and optimal nutrition and growth of children under 5 through appropriate infant and young child feeding practices as well as growth monitoring and nutrition promotion (GMP). This programme has been supported by UNICEF since 1991. The level of implementation and resulting impact indicators are low, with 2006 figures for wasting, stunting and underweight still above the targets set by the Government at independence (National Food Security and Nutrition Council, 1995). According to the NDHS, rates of undernutrition per region, the number of children assessed by weight as declared in the National Health Information System (HIS) (40 percent underweight and 23 percent severely underweight) and growth monitoring activities in Namibia do not cover adequate numbers of children. These statistics also highlight the fact that a small proportion (16 percent) of children with SAM is treated in paediatric wards and the death rate of these fragile children is high (21 percent). One reason for the low coverage of GMP is an inadequate supply of equipment for growth monitoring in some facilities.

INFANT AND YOUNG CHILD FEEDING

This programme is supported by UNICEF and has been running since 2000. It focuses on the development of policies and guidelines for the promotion, protection and support of breastfeeding and complementary feeding of infants and young children, including optimal and safe feeding of infants exposed to HIV. The programme has achieved some impact, with the prevalence of exclusive breastfeeding for the first 6 months improving from 4.1 percent in 2000 to 23.9 percent in 2006.

BABY AND MOTHER FRIENDLY INITIATIVE

The Baby and Mother Friendly Initiative was launched in 1992 and is supported by UNICEF. The programme has been implemented successfully, with 35 hospitals declared Baby and Mother Friendly since 1997. The status of these facilities must now be reassessed and measures implemented to ensure it is sustained.

CODE OF MARKETING OF BREAST-MILK SUBSTITUTES

The International Code of Marketing of Breast-milk Substitutes has been drafted and included in the Public Health Bill. The aim of the Code is to regulate marketing practices of breastmilk substitutes that undermine breastfeeding.

MICRONUTRIENT DEFICIENCY CONTROL

The Micronutrient Deficiency Control Programme focuses on the prevention, control and treatment of vitamin A deficiency, iodine deficiency, iron-deficiency anaemia and zinc supplementation. This involves setting food standards and legislation regarding food fortification initiatives in Namibia. These deficiencies are addressed through a universal salt iodisation strategy, vitamin A supplementation and food-based dietary interventions. The programme has been supported by UNICEF, WHO and Kiwanis International. The level of implementation has been high, with improved vitamin A supplementation and salt iodisation, but more research is needed to assess complete micronutrient status.

NUTRITION MANAGEMENT OF PLHIV

People with HIV and AIDS are more vulnerable to malnutrition than the general population, and nutritional status is a good predictor of their mortality risk. Increased energy requirements combined with poor nutrient absorption caused by HIV and inadequate food intake as a result of lowered productivity and income are the main reasons for malnutrition in PLHIV. Nutrition care and support helps break this cycle by helping PLHIV maintain and improve nutritional status, boost immune response, manage the frequency and severity of symptoms and improve response to ART and other medical treatment. Guidelines on nutrition assessment, counselling and support (NACS) for PLHIV have been developed and training has been conducted with support from USAID, I-TECH and FANTA-2. The implementation of the programme will begin in 2011.

NON-COMMUNICABLE DISEASES

The Non-communicable Diet-Related Diseases Programme focuses on delaying mortality from noncommunicable diseases and promoting healthy ageing through the implementation of the Global Strategy on Diet, Physical Activity and Healthy Lifestyles (WHO, 2004). The programme includes initiatives to identify strategic orientations for interventions for prevention and optimal control of NCCDs in line with the PHC approach; to strengthen prevention of NCCDs through inter-sectoral collaboration and coordination; and to raise awareness for prevention, early detection, treatment, rehabilitation and control of NCCDs. The programme receives technical assistance from WHO. Although the programme was initiated in 1994, it has not yet been implemented because of lack of capacity at national level.

INTEGRATED MANAGEMENT OF ACUTE MALNUTRITION (IMAM)

This programme includes both institution- and community-based management of malnutrition through early identification of cases of SAM in children under 5 and treatment with ready-to-use therapeutic food (RUTF) according to standardised guidelines at clinical inpatient, health facility and community levels. With support from the Clinton Foundation, UNICEF and WHO, the IMAM programme has been piloted in seven districts (Katima Mulilo, Rundu, Oshakati, Engela, Oshikuku, Onandjokwe and Okahandja). Five hundred and seventy-seven children have been enrolled in the IMAM programme and only 111 (19 percent) restored to adequate nutritional status at community level. These children were lost to follow up, largely because of inadequate community involvement. In contrast, inpatient management of SAM has had a cure rate of 83.6 percent and a death rate of 12.9 percent. The community follow-up system urgently needs strengthening. It is envisaged that the programme will be rolled out to all districts over a 5-year period.

FOOD STANDARDS AND INSTITUTIONAL FEEDING

This programme involves setting food standards and legislation and developing and monitoring menus for hospitals and other institutions. Food standards are in place, and institutions are evaluated every 3 years.

2.6. GAP ANALYSIS

This section summarises issues that need to be addressed to improve nutritional status in Namibia.

RESOURCE MOBILISATION

The low level of implementation and impact of the Growth Monitoring and Promotion Programme is partly due to lack of equipment and human resources at national, district and community levels. The human resource issue at national level has been addressed through the employment of designated programme administrators for the various nutrition programmes. Some equipment has been distributed, and the activity is ongoing.

ORGANISATIONAL FRAMEWORK

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 (currently under revision) delineate no formal structures for health extension workers at community level. This situation needs urgent attention, as the work of community-based health care workers is vital to the improvement of the nutrition situation in Namibia.

At facility level, Namibia has 35 hospitals, 44 health centres and 265 clinics (MoHSS, 2008a).

There is a District Coordinating Committee in each district responsible for all PHC and DSP functions. There are currently no nutritionists at **district level**. At **national level**, nutrition programmes are administered by the Food and Nutrition Subdivision of the Family Health Division of the PHC Directorate in the MoHSS. Its mandate is to plan, implement, monitor and evaluate food and nutrition activities. The Food and Nutrition Subdivision has the following functions and responsibilities:

- 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 and analyse and report on routine surveillance data;
- To coordinate social mobilisation;
- To coordinate community involvement; and
- To collaborate with other stakeholders in nutrition.

The current components and post structure of the Ministry of Health and Social Services specifies a Chief Health Programme Administrator (CHPA) and three Senior Health Programme Administrators (SHPAs) at national level. This staff complement would be adequate for the completion of all functions in all programmes. However, until the third quarter of 2009, only the CHPA post was filled, which seriously diminished the ability of the national office to fulfil its functions. Currently all SHPA posts are filled, creating a much more adequate human resource base at national level. There is currently only one nutritionist in the MoHSS, and that person occupies the post of CHPA in the national office.

There are no nutritionists at **regional** level, where nutrition activities are currently integrated into the responsibilities of two Chief Health Programme Administrators (CHPAs) and two Senior Health Programme Administrators (SHPAs) in every region, one CHPA and SHPA responsible for PHC and the others responsible for special programming functions. Regional health administrators are currently overloaded, and as a result nutrition activities are compromised, especially considering the high level of regional differentiation in Namibia and the consequent need for decentralisation of decision-making and activities.

RESEARCH, MONITORING AND SURVEILLANCE

Nutrition planning to date has been based largely on international recommendations rather than a full analysis of problems and causes associated with malnutrition in the local context. The paucity of specific data on nutrition is a major stumbling block for effective planning, implementation and monitoring of nutrition programmes.

CAPACITY DEVELOPMENT

The basic training in nutrition that is available to health workers through pre-service and in-service courses at the University of Namibia (UNAM) and National Health Training Centre (NHTC) is inadequate, but the foundation is there to build on. To date there has been little collaboration between the MOHSS

and educational institutions because of a lack of human resources, in particular nutritionists, for nutrition programmes. Specific capacity building at the health facility and community level and promotional activities are essential for the implementation of new and ongoing initiatives.

LIMITED USE OF IEC MATERIALS

One factor which has hampered the effective implementation of policies and guidelines is the limited production, translation, dissemination and use of IEC materials. See Appendix 2 for a detailed record of the production and dissemination of nutrition materials to date.

PROGRESS TOWARD THE MDGS

According to the 2nd MDG Report for Namibia (Republic of Namibia, 2008), it is possible for Namibia to achieve most of its 2012 targets for nutrition-related goals, with some having already been met.

The prevailing political, social and economic stability as well as sound infrastructure provides an enabling environment to address the underlying causes of malnutrition, such as illiteracy, unemployment, lack of safe water, poor sanitation and food insecurity, through initiatives such as the expansion of green schemes and encouragement of home gardening projects. These issues fall outside the mandate of the MoHSS, but advocacy and collaboration with other line ministries and their partners in the civil society and private sectors will enhance sustained changes in the nutritional status of the Namibian population.

3. DEVELOPMENT OF THE STRATEGIC PLAN FOR NUTRITION

Some nutrition activities have been implemented since the country's independence, but the low amplitude of these activities and lack of strong and continuous follow-up have inhibited sustainable change, hence, the lack of progress towards achieving the Food and Nutrition goals set in 1995. While the picture is complicated by the prevalence of HIV and AIDS during this period, it is clear that the absence of a clear strategy and embedded activities has contributed to the limited impact of nutrition activities on the health and nutrition situation of the population. Nutrition needs to be addressed as a dynamic new challenge in Namibia, and all aspects need increased attention and close monitoring.

The Office of the Prime Minister (OPM) has once more placed nutrition high on the national agenda by establishing the National Alliance for Improved Nutrition (NAFIN) Trust. This body can help to galvanise and harmonise multisectoral support for nutrition programmes as it brings together a wide range of stakeholders, including the private sector, multilateral and bilateral development agencies and civil society organisations. Food fortification initiatives in particular will benefit from the readiness of commercial food producers to collaborate in this forum.

At the Ministry level, the completion of the MoHSS Strategic Plan 2009–2013 (MoHSS, 2008) has paved the way for enhanced strategic planning at all levels, and the SPN is part of this process. The MoHSS Strategic Plan sets out the overarching mission, vision, core values, strategic themes and objectives of the MoHSS for the 5-year period. Among these objectives are to reduce malnutrition, decrease morbidity rates and decrease mortality rates, all of which require substantial contributions from nutrition programmes. This SPN identifies priorities for the Ministry's programming for nutrition. It is intended to guide the annual activity plans of food and nutrition programmes in the MoHSS and to provide direction and focus for all stakeholders currently involved in nutrition activities, as well as those who are not yet involved but whose contribution is vital. The SPN is therefore a tool which can help facilitate greater collaboration and the alignment of approaches, plans, activities (and their monitoring and evaluation) of all parties.

3.1. PURPOSE

The SPN is a response to global and local calls to action as well as renewed political commitment in Namibia and strategic direction within the MoHSS. This 5-year plan aims to re-emphasise 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 MDGs. The SPN provides a framework for interventions and activities at national, regional, district and community level, with considerable collaboration from multilateral and bilateral development agencies, other line ministries, civil society organisations and private institutions. Below are the vision, goal and key principles of the SPN.

VISION:

A HEALTHY AND PRODUCTIVE NAMIBIAN NATION WITH IMPROVED QUALITY OF LIFE FOR ALL

GOAL:

To improve the nutritional status of the Namibian population, with special emphasis on children, women and people living with HIV and TB, resulting in the reduction of morbidity and mortality due to or associated with malnutrition.

Key Principles

- Nutrition is not only a health issue, therefore solutions require multisectoral collaboration.
- Strategies must be evidence based in order to address the causes of malnutrition effectively in the local context.
- The life course approach is the best way to ensure good nutrition for all, so special attention must be paid to maternal nutrition and infant and young child feeding, as well as nutrition during adolescence and ageing.
- Household food security and relationships within the family and household have a critical impact on access to nutrition.
- Community involvement is essential to effective implementation of nutrition strategies at the community and household level.
- Nutrition is a key component in the healthy survival of people living with HIV and TB.
- Good nutrition and healthy lifestyles are key to reducing the risks associated with noncommunicable diseases.

3.2. METHODOLOGY

In response to the urgency of the nutrition situation, the PHC Directorate in the MoHSS initiated the development of this plan in order to provide strategic guidelines on nutrition at national level according to the principles outlined in the Food and Nutrition Policy for Namibia 1995 (National Food Security and Nutrition Council, 1995). The SPN was developed through a process of consultation with a cross-section of internal and external stakeholders.

4. STRATEGIC PRIORITIES

The overarching priorities for planning within the MoHSS over the next 5 years are set out in the MoHSS Strategic Plan 2009–2013. Reducing malnutrition is one of the key objectives identified under the Customer and Constituency perspective in this plan, with a focus on good child care practices and healthy lifestyles. A comprehensive strategy for reducing malnutrition must broaden this focus to ensure that causes of malnutrition are addressed at appropriate levels and that all relevant groups are targeted. Integrated nutrition interventions will also be critical to the achievement of other Ministry objectives within the Customer and Constituency perspective, including decreasing morbidity rates (C6), and decrease mortality rates (C7).

The strategic priorities and specific objectives for nutrition in the next 5 years in the box below were identified through a thorough analysis of the health and nutrition situation in Namibia, notwithstanding the lack of quantitative data in specific areas. They were developed in consultation with a range of internal and external stakeholders, including regional health administrators, multilateral and bilateral development agencies, commercial businesses, community groups and educational institutions. To help make the outcomes achievable within the internal and external environment, they are oriented toward maximising strengths and opportunities and minimising weaknesses and threats that were identified in the SWOT analysis (see Appendix 1).

STRATEGIC PRIORITIES

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

While these priorities are presented as distinct elements, they are all interrelated, and initiatives that address one area will also contribute to others. For example, Integrated Management of Acute Malnutrition relates to both priorities 1 and 4. It is therefore important to read the priorities and strategies in conjunction with each other. Nutrition advice for emergencies cuts across all priorities, and is therefore integrated in the entire plan.

4.1. PRIORITY 1: MATERNAL AND CHILD NUTRITION

RATIONALE

As described under 2. Situation Analysis, undernutrition is the most pressing nutritional issue facing Namibia, with critical action required at pre-natal, infant and young child stages. The improvement of infant and young child feeding practices, maternal nutrition and Integrated Management of Acute Malnutrition are therefore priority objectives.

While relevant guidelines and policies need to be updated on an ongoing basis, capacity building at health facility and community level and promotional activities are essential for sustained improvements. The promotion of breastfeeding is particularly important, as this provides infants with the best possible start in life. In line with MoHSS guidelines for PMTCT, exclusive breastfeeding is recommended for HIV-positive mothers for the first 6 months of their infants' lives.¹³ Community-based therapeutic feeding programmes (which are integrated into the IMAM programme) need to be enhanced through training and supervision.

Public education on basic hygiene and food preparation needs to be supported in schools through collaboration with the Ministry of Education, and access to safe water and adequate sanitation require enhanced commitment and collaboration from the Ministry of Agriculture, Water and Forestry (MAWF) and Ministry of Regional and Local Government, Housing and Rural Development (MRLGH), together with civil society organisations, community-based organisations and development organisations working in these fields. Without universal access to safe drinking water, the widespread provision of infant formula to prevent mother-to-child transmission of HIV is not a viable option, as the risks of diarrhoea could outweigh the risks of HIV infection when it comes to reducing infant mortality rates. This is in line with the National Policy on Infant and Young Child Feeding (2003), which states:

"...in seeking the best ways to prevent mother to child transmission, the Government recognises the need to prevent other diseases that could result from a rush to use breast milk substitutes. It is for this reason that the Government is taking firm action to ensure that breastfeeding will continue to be protected and that children born to HIV positive mothers will have the best possible nutrition, and above all that any artificial feeding will not spill over to the populations that should be breastfeeding". The government also recognises that infant feeding practices recommended to mothers known to be HIV infected should support the greatest likelihood for HIV-free survival of their children and not harm the health of the mother.

All the interventions that target women of reproductive age will integrate with the Adolescent Friendly Health Services initiative proposed in the Road Map for Accelerating the Reduction of Maternal and Newborn Morbidity and Mortality 2007.

¹³ National Policy on Infant and Young Child Feeding, MoHSS, 2003

SPECIFIC OBJECTIVES

- 4.1.2.1. Underweight in under-fives reduced from 17 percent to 10 percent and severely underweight from 4 percent to 1.5 percent¹⁴
- 4.1.2.2. Chronic malnutrition in women of reproductive age reduced from 16 percent to 12 percent

STRATEGIES

- I. Growth Monitoring and Nutrition Promotion
- II. Universal implementation of Baby and Mother Friendly Hospital Initiative
- III. Infant and Young Child Feeding
- IV. Integrated Management of Acute Malnutrition
- V. Code of Marketing of Breast-milk Substitutes
- VI. Maternal and Child Nutrition Promotion
- VII. Nutrition Surveillance

4.2. PRIORITY 2: MICRONUTRIENT DEFICIENCIES

RATIONALE

Micronutrient deficiencies should be addressed by promoting good nutrition practices and encouraging people to eat a varied diet. Fortified food in some cases can be used to address these deficiencies. In addition, micronutrient supplementation may also be appropriate as an immediate intervention.

In order to support effective programming, the paucity of available data on the overall nutritional and specific micronutrient status of under-5s and women of reproductive age must be addressed through surveillance and improved growth monitoring.

From the food intake and supplementation data available, micronutrient intake is inadequate in many Namibians, as most people consume locally milled maize meal and millet which is not fortified and do not take supplements.

Disorders associated with deficiencies in vitamin A, iodine and iron need special attention in children and women of reproductive age. A revitalised supplementation program and the promotion and regulation of commercial food fortification in partnership with local food producers will help to alleviate

¹⁴ The MoHSS Strategic Plan 2009-2013 (MoHSS, 2008) includes the following measures: 'Reduce rate of underweight from 17% to 1% and stunting rate from 30% to 15%'. The SPN addresses stunting within measures to address underweight (Specific Objective 1.1).

the threat of micronutrient deficiencies. The promotion of food fortification (using accessible foods) at household level will also be a worthwhile intervention.

SPECIFIC OBJECTIVE

4.2.2.1. Disorders associated with iodine, iron, zinc and vitamin A deficiencies eliminated

STRATEGIES

- I. National household food consumption and micronutrient deficiency survey
- II. Micronutrient supplementation (iron, zinc, vitamin A)
- III. Universal salt iodisation
- IV. Food fortification
- V. Promotion of dietary diversification
- VI. Legislative framework

4.3. PRIORITY 3: DIET-RELATED DISEASES AND LIFESTYLES

RATIONALE

As outlined under 2. Situation Analysis, Namibia is experiencing a transitional phase in which obesity doubles the burden of malnutrition. This trend is seen in many other African countries (UN Standing Committee on Nutrition No 33, 2006; Vorster HH, 2005; Popkin, 2004). The trend is observable first in adults before having an impact on children (Mendez MA, 2005). It is therefore vital to step up interventions to target early detection and management of obesity and implement a life-course approach to preventing and treating chronic diet-related diseases with specific interventions at all stages of life (foetus, infancy and childhood, teenage years, adulthood and ageing). As WHO/FAO guidelines explain, there is a link between undernutrition in the womb and/or during infancy and higher risk for non-communicable diseases in adulthood. Therefore, programmes addressing maternal and child nutrition have an important part to play in the prevention of NCCDs (WHO/FAO, 2002).

Prevention of weight gain needs to be considered as well as promotion of weight maintenance or weight loss and management of obesity-related diseases (National Board of Health, Denmark, 2003). While not yet highly visible, the NCCD that are associated with obesity make it a potentially serious threat that can be reduced by implementing preventive measures in the current planning period. These include the promotion of healthy eating, which will require the training of health workers and social marketing campaigns.

An assessment of the prevalence and causes of obesity, overweight and NCCD is essential to ensure that interventions are properly targeted.

SPECIFIC OBJECTIVE

4.3.2.1. Prevalence of obesity reduced from 12 percent to 8 percent and overweight from 16 percent to 10 percent in women of reproductive age and from 4.3 percent to 1.5 percent in under-5s.

STRATEGIES

- I. Assessment of prevalence and causes of obesity and associated NCCD in the general population
- II. Monitoring and promotion of healthy diets and physical activity
- III. Dietary management of diet-related non-communicable diseases
- IV. Regulation of food safety, food standards and food labelling

4.4. PRIORITY 4: NUTRITIONAL MANAGEMENT OF COMMUNICABLE DISEASES

RATIONALE

As described under 2. Situation Analysis, diarrhoea, fever and acute respiratory infection pose a serious threat to children's health in Namibia, and nutrition is an important aspect of the integrated management of such communicable diseases.

Nutrition and food security also play a critical role in all four of the main strategies for combating HIV and AIDS: prevention, care, treatment and mitigation. Possible interventions at health facility and community levels include counselling and programmes which provide necessary dietary supplements and therapeutic food.

Although most evidence of the impact of food support on TB patients' nutritional status, quality of life, treatment adherence and outcome is anecdotal, there is reason to believe that such support will provide direct benefits to adults and children infected with TB both during and following drug therapy. Other low-cost interventions such as periodic nutrition assessment, counselling on diet and nutritional management of symptoms and drug side-effects may help TB patients maintain or increase their food intake and adhere to TB treatment (Dr. P. Papathakis, 2008).

Integrated programming within the MoHSS is vital to ensure adequate nutritional care and support to vulnerable groups. Issues of food security, sanitation and water supply must also be addressed in this regard, requiring the commitment of various line ministries and other stakeholders.

SPECIFIC OBJECTIVES

4.4.2.1. Appropriate nutrition care provided for at least 80 percent of people living with HIV and TB

4.4.2.2. Nutrition care integrated into management of malaria and other communicable diseases

STRATEGIES

- I. Integrated Management of Acute Malnutrition
- II. Promotion of appropriate nutrition for PLHIV and TB
- III. Raise awareness on water and food safety, hygiene and sanitation
- IV. Nutrition surveillance
- V. Nutrition assessment, counselling and support

5. MONITORING AND EVALUATION

Monitoring and evaluation are in-built components of the SPN to guide policy, guideline and protocol development and review, programme planning and management. Together with government-supported formative and applied research, close monitoring of progress will help to ascertain which strategies work best for the Namibian situation and ensure that the Namibian population benefits from the latest knowledge in the field of nutrition.

5.1. Key Indicators

The following indicators have been developed to monitor and evaluate programmes objectives. They are incorporated in the action plans under the relevant priorities for tracking purposes.

OUTPUT INDICATORS

- Percentage of target group trained
- Percentage of facilities equipped with relevant resources (child and adult mid-upper arm circumference [MUAC] tapes , height boards, weighing scales, food scales)
- Number of relevant supplies enlisted, ordered and stocked (vitamin A, iron/folate, zinc, therapeutic vitamin and mineral complex [CMV], ready-to-use therapeutic food [RUTF], fortified blended food [FBF])
- Number of guidelines, protocols, job aids and counselling cards) developed, distributed and used
- Number of laws enacted and regulations gazetted
- Number of IEC materials (posters, leaflets, DVDs) developed, distributed and used
- Level and reach of promotional and social marketing activities
- Number and distribution of surveillance sites operational
- National nutrition surveillance system operational
- Availability of survey results in all concerned agencies
- Percentage of health facilities offering adequate treatment of acutely malnourished children
- Percentage of maternity wards meeting the Ten Steps to Successful Breastfeeding
- Level of salt monitoring and testing
- Coverage of supplementation programmes

OUTCOME INDICATORS

- Percentage of children 0–36 months old seen for any reason whose anthropometric measurements have been taken and whose mothers have received counselling on adequate nutrition
- Percentage of children who are exclusively breastfeeding at 6 months of age
- Percentage of children under 5 years old who are stunted
- Percentage of children who are still breastfeeding with appropriate complementary food at 12– 15 months old
- Percentage of households who are using salt adequately iodised to 50–80 ppm
- Percentage of population knowing about and consuming vitamin A-rich foods
- Percentage of women who have received a vitamin A capsule postpartum
- Percentage of children 9 months to 6 years old who have received a vitamin A capsule within the past 6 months
- Percentage of women who have received iron supplementation for duration of pregnancy
- Number of under-5s receiving zinc supplements
- Percentage of population knowing and consuming zinc-rich foods
- Number of HIV-positive adults treated for malnutrition in outpatient facilities
- Number of HIV-positive adults treated for malnutrition in inpatient facilities
- Percentage of adult PLHIV with BMI < 18.5 kg/m²
- Number of people living with HIV receiving adequate counselling for appropriate nutrition¹⁵
- Increased proportion of children and adults at healthy body weight by 3 percentage points within 10 years
- Increase in diabetics with normal blood sugar readings
- Decrease in diabetics with continuous poor control over their blood sugar for over a period of 6 months
- Percentage of patients with hypertension with records of blood pressure in the previous 9 months
- Percentage of patients with hypertension in whom the last blood pressure (measured in the previous 9 months) is 150/90 or less
- Reduction of the prevalence of low birth weight babies to 10 percent of all live births

¹⁵ PEPFAR-recommended nutrition Indicators are being developed for PLHIV in all NACS sites.

- Reduction of iodine deficiency rates among women of reproductive age
- Reduced HIV incidence and AIDS mortality rates
- Reduced incidence and mortality rates for vaccine-preventable diseases
- Increased immunization coverage rates

IMPACT INDICATORS

- Percentage of children under 5 who are underweight
- Percentage of children under 5 who are stunted
- Percentage of children under 5 who are wasted
- Percentage of women of reproductive age who are well nourished
- Percentage of women with BMI < 18.5
- Percentage of pregnant women with haemoglobin < 10g/dl
- Proportion of children 8 12 years with urinary iodine below 100µg/l
- Proportion of children 8 12 years with urinary iodine below 50μg/l
- Percentage of children 6–60 months old receiving vitamin A supplementation in the previous 6 months
- Percentage of women given vitamin A supplementation postpartum
- Population-based percentage of overweight or obese adults, adolescents and children (BMI ≥ 25)
- Prevalence of hypertension
- Prevalence of diabetes mellitus
- Percentage of HIV-positive adults exiting treatment for SAM and MAM from malnutrition
- Percentage of relapse of malnutrition in HIV-positive adults
- Percentage of PLHIV in the "Working" category of the three WHO-recommended functional status categories

5.2. MECHANISMS FOR MONITORING AND EVALUATION

Monitoring and evaluation tools will be revised or developed to collect data for all indicators. Periodic reviews and evaluations will be undertaken to ensure that activities are carried out as planned. This will be done through progress review meetings, quarterly and annual plans and reports, programme reviews and research.

6. IMPLICATIONS FOR IMPLEMENTATION

The implementation of the SPN has implications for the structuring of nutrition programmes, resource mobilisation, research, monitoring and surveillance and capacity building. This chapter is intended to serve as a guide for internal planning and for the identification of critical areas for support from development partners.

6.1. ORGANISATIONAL FRAMEWORK

This Strategic Plan takes cognisance of the concerted Government efforts in preventing and reducing poverty, food insecurity and malnutrition, therefore implementation is based on the NDP3 and ministerial strategic plan at all levels.

There is urgent need to decentralise activities and decision-making around nutrition to respond to the high level of regional differentiation in Namibia.

COMMUNITY LEVEL

Good and poor nutrition develop at the community and household level. Interventions therefore need to focus at these levels to have sustainable and lasting solutions. Changes in food intake patterns depend on improved awareness of nutrition issues and may affect some cultural practices and beliefs. Behaviour change can be addressed by enhancing community involvement, which in turn can be supported through collaboration with civil society organisations and implementing partners.

Community workers and volunteers are essential personnel to liaise with the community and provide community-based health Care (CBHC) by identifying malnutrition cases, providing advice on nutrition issues and referring acute cases for treatment at the nearest health facility. They can also be tasked to monitor the intake of recommended RUTF, FBF and other recommended diets.

To achieve an impact on the nutrition status of the population, health facility staff need to form and support teams to work at the community level. Successful community partnerships require a high level of community ownership. Ownership should be built through involvement of communities in various stages of programme planning and implementation, in accordance with the National Primary Health Care/Community Based Health Care Guidelines.¹⁶

The SPN will focus on actions to "strengthen family and community capacities to protect, nurture and care for women and children" based on the 16 caring practices (Appendix 3). In collaboration with the CBHC, Environmental Health and Integrated Management of Newborn and Childhood Illnesses (IMNCI) programmes as well as the MRLGH, the MoHSS through its Health Extension Programme will support communities' capacity to assess, analyse and act upon development challenges using the Triple A cycle of Assessment, Analysis and Action (Appendix 4).

¹⁶ National Primary Health Care/Community Based Health Care Guidelines, MoHSS, February 1992

FACILITY LEVEL

Health care providers such as doctors and nurses will need to identify critical nutrition problems through diagnoses, give advice on good nutrition and treatment, manage and implement the various programmes which address malnutrition, such as infant and young child feeding, maternal health, management of nutrition for PLHIV and growth monitoring. It will also be vital to conduct continuous operational research on nutrition in order to identify new problems and interventions. Designated facilities will collect nutritional surveillance data.

DISTRICT LEVEL

The District Coordinating Committee in collaboration with the District Advisory Committee in each district will be responsible for supportive supervision; distribution of IEC materials; mobilising youth, mothers and fathers, families and communities and mobilising resources for implementation of nutrition programmes. Each district will appoint a person responsible for coordination and implementation of nutrition initiatives.

REGIONAL LEVEL

The Regional Management Teams (RMTs) will collaborate with the Regional Development Coordinating Committees (RDCCs) to ensure that nutrition initiatives are incorporated in RDCC plans and activities. This will include planning, implementation, supervision, monitoring and evaluation of nutrition activities in each region. Other activities will include resource mobilisation, identification of areas for funding and support and overseeing the utilisation of resources. Each region will appoint a trained person (preferably a nutritionist) responsible for the coordination and implementation of nutrition initiatives. This nutritionist will be a member of the RMT.

NATIONAL LEVEL

The national office will consist of a CHPA and three SHPAs. These administrators will focus on the programmes for each Strategic Priority.

6.2. RESOURCE MOBILISATION

The Government of the Republic of Namibia through the MoHSS will mobilise adequate resources needed for the implementation of the SPN. Budgeting for nutrition activities will be done through the development of an annual plan based on the SPN.

Resources will be mobilised from all partners, including multilateral and bilateral agencies, civil society organisations, faith-based organisations and the private sector. An advocacy document depicting the cost of malnutrition to the nation should be developed and used to mobilise resources from government and partners.

Human resources will be mobilised from key implementing ministries, the private sector, development partners, training institutions, professional bodies, social groups and the community to support capacity development, service delivery and research through involvement at all levels of the implementation process.

Most of the resource requirements for implementation of the SPN will go toward the development of national capacity to promote optimal nutrition. This will include exploring the most cost-effective ways to impart knowledge and skills to as many people as possible.

The MoHSS and other line ministries will, in collaboration with non-governmental organisations (NGOs), strengthen and expand the infrastructure needed for efficient implementation of the SPN. This will be done through regular coordination, planning, implementation, monitoring and evaluation of nutrition interventions with all partners at all levels.

6.3. Research, Monitoring and Surveillance

There is very little information available in Namibia to give a complete overview of the nutrition situation and the impact of malnutrition on the health of children and mothers. Nutrition surveillance would provide timely warning to ensure appropriate response to and mitigation of cyclical droughts and floods and inform programme planning and management. Programme monitoring and evaluation are also important components of nutrition programme implementation. Thus, substantial research and surveillance is required under every priority area for nutrition to ensure more informed programming.

6.4. CAPACITY DEVELOPMENT

Capacity building is a vital component of nutrition plans because effective roll-out of nutrition policies, guidelines and programmes depends on in-service training of health care workers at all levels (national, regional and district). Training supports the strategy of decentralisation, which is essential to ensure the broadest possible reach and impact for nutrition programmes.

The MoHSS will also need support to improve and extend the nutrition components of pre-service health worker training through curriculum reviews in collaboration with training institutions.

The MoHSS recognises the urgent need to address severe lack of nutritionists in the country, as it will be some years before the first graduates begin to emerge from the Namibia Medical School. One strategy is to develop and implement a scholarship programme for the training of nutritionists abroad and at the same time marketing nutrition as a rewarding career. The PHC Directorate must assess staffing deficits and inform the Directorate of Policy Planning and Human Resource Development of personnel and training needs during its annual management planning.

It would also be beneficial to implement a professional development programme to increase the technical capacity as well as leadership and management skills of administrators at all levels. This should include support for long-term training (such as postgraduate studies in public health) for managers of nutrition programmes.

7. MULTISECTORAL STAKEHOLDER INVOLVEMENT AND COLLABORATION

Malnutrition is not an isolated problem and cannot be addressed through isolated interventions. The causes and effects of malnutrition cut across almost every sector. When identifying nutrition initiatives, it is essential to first address the basic and underlying causes in order to curb malnutrition at household level from a broader perspective. This requires a multisectoral approach, as it involves interventions which are not within the mandate and capacity of the MoHSS. Factors of poverty such as food insecurity, lack of safe and affordable water, lack of knowledge about good sanitation and lack of alternative sources of income are all contributors to malnutrition and marginal dietary intake, which in turn cause diseases and infections. While this plan takes cognisance of the concerted government effort to ensure food security at the household level in order to address nutrition countrywide, it recognises that urgent and concerted action must be taken to address these challenges.

Growing awareness of nutrition issues has enhanced the political will to intervene and the readiness of multiple stakeholders to support interventions, as evidenced by the emergence of the National Alliance for Improved Nutrition under the stewardship of the Office of the Prime Minister (OPM). With these opportunities comes the challenge of coordination, both within the MoHSS and across other sectors.

This section identifies the various partners and the roles they are called on to play in relation to nutrition.

7.1. Office of the Prime Minister

The OPM is a public service coordinating body which ensures that policies and procedures are implemented and oversees staff recruitment for the various ministries. It also coordinates resource mobilisation in case of emergencies. The OPM has already used its coordinating power to place nutrition high on the national agenda through the establishment of the Namibia Alliance for Improved Nutrition (NAFIN) Trust. All ministries and various other stakeholders, including UN agencies, donors, civil society organisations and private organisations, are represented on this Trust. The objectives of the Trust are as follows:

- Develop/update a costed national nutrition plan of action to scale up core integrated services to accelerate achievement of MDG 1, 4 and 5 in the country;
- Develop a national advocacy and communication strategy in support of nutrition and promote maternal and infant and young child feeding and nutrition based on formative research and using multiple media channels;
- Support coordinated implementation of essential integrated nutrition actions to address malnutrition, including micronutrients and food and nutrition insecurity;

- Strengthen nutrition and food security in the health, agriculture, social welfare and education sectors; and
- Support development of national tools for monitoring and evaluation.

NAFIN has a key role in the coordination of multisectoral stakeholders. Some initiatives that may be taken forward by NAFIN include updating the Nutrition Policy to address all aspects of nutrition and developing and maintaining a database of partners in nutrition, to include development organisations, line ministries, the private sector, educational institutions and NGOs. In order to ensure the effectiveness and longevity of the Trust, it is necessary to maintain a fully functioning secretariat.

The OPM has responsibility for the coordination of disaster risk management through the Directorate of Disaster Risk Management (DDRM). Coordination for disaster risk management is conducted through the National Disaster Risk Management Committee (NDRMC), Regional Disaster Risk Management Committees, Constituency and local authority and settlement disaster risk management committees. The activities for disaster risk management are guided by the National Disaster Risk Management Policy. The national policy is broad based, covering different hazard risks to which Namibian citizens are vulnerable. The policy seeks to address the root causes of disaster losses. Gender mainstreaming is a pivotal component of disaster risk management, as the policy fully considers the integration of the concerns of women and men and those more vulnerable to natural hazards in programmes to prevent and mitigate disaster impacts. In emergency situations the DRM policy gives priority to child protection and reproductive health

7.2. MINISTRY OF HEALTH AND SOCIAL SERVICES

The MoHSS is responsible for the overall coordination and implementation of the SPN. The plan will be rolled out to all the regions and districts through its PHC structure.

The MoHSS can provide guidelines to broaden partners' perceptions of nutrition beyond existing programmes and help to regulate interventions in accordance with PHC practices. The MoHSS will need to engage actively with policy makers to promote best practices and prepare policy briefs of best practices so that all parties understand the importance and benefits of good nutrition.

The role of various directorates such as the Directorate of Special Programming, Directorate of Developmental Social Welfare and Directorate of Finance and Logistics should be emphasised, as these directorates are equally important in monitoring and surveillance of nutrition issues and funding is channelled through them for the implementation of various programmes such as HIV and TB.

Donor support for special programmes to manage emergency disease situations such as HIV and AIDS and TB, whilst necessary and welcome, has catalysed the emergence of project-oriented structures which lack integration and sustainability. The MoHSS recognises this dilemma at a high level, as indicated by objective IP3: Streamline and harmonise the fragmented services/programmes/functions in

the MoHSS strategic plan 2009–2013. It is particularly important that Special Programming and Food and Nutrition structures at regional and district level are coordinated to facilitate the provision of comprehensive care.

The Directorate of Policy Planning and Human Resource Development has the vital role of overseeing overall implementation of the SPN in the context of the MoHSS Strategic Plan framework and other plans, as well as planning for adequate human resources and career marketing.

7.3. MINISTRY OF AGRICULTURE, WATER AND FORESTRY (MAWF)

The MAWF is a key partner for the MoHSS in the attainment of reduced malnutrition. Its role in nutrition is to ensure food security and food self-sufficiency at national level. The National Agricultural Policy of 1995 provides "an enabling environment for increased food production by smallholder producers and households, as a means of improving employment opportunities, incomes, household food security and the nutritional status of all Namibians". It outlines the MAWF's objectives for agricultural development, which includes "Ensuring food security and improved nutritional status".¹⁷ The Ministry is implementing initiatives geared to improving food production, including the diversification of crop production to bring about improved nutritional status in the country. These initiatives include projects such as the Green Scheme, National Horticulture Development, dryland crop production for grain producers and Strategic food reserve facilities (such as silos). The MAWF is also responsible for ensuring adequate sanitation and the provision of safe and reliable water at household level, which is vital for the safe preparation of food and prevention of water-borne disease. In addition, the MAWF should assist in the implementation of the SPN through the production of micronutrient-rich foods, production of drought resistant food crops and continued research on these topics.

The National Food Security and Nutrition Council is a coordinating body for nutrition programmes of the MAWF and MOHSS. As the chair of this Council, the MOHSS must take the lead in ensuring regular meetings and monitoring of coordinated activities.

7.4. MINISTRY OF REGIONAL AND LOCAL GOVERNMENT, HOUSING AND RURAL DEVELOPMENT (MRLGHRD)

The MRLGHRD is an important coordinating ministry responsible for ensuring that decentralised functions are implemented. The Regional Development Coordinating Committees (RDCCs), Constituency Development Committees (CDCs), Local Authorities and Village/Community Development Committees will coordinate community-based nutrition and income generation activities in conjunction with civil society organisations. Food distribution to vulnerable groups and in emergencies should also be coordinated through these agencies to ensure that food reaches those in most need. The MRLGHRD is responsible for ensuring access to proper sanitation through the installation of appropriate toilets. Municipal health inspectors play an import role in implementing food safety regulations and regulating

¹⁷ National Agricultural Policy, MAWF, 1995

the activities of the informal food sector. The MRLGHRD should use its structures to assist with the implementation of the research agenda for nutrition.

7.5. MINISTRY OF GENDER, EQUALITY AND CHILD WELFARE (MGECW)

The MGECW is an important coordinating ministry for social welfare services. Some of its responsibilities which complement nutrition programmes are the provision of temporary food supplies to needy families caring for OVC, including children on the street, and improving OVC access to clean and safe water.

Collaboration with this Ministry will be needed in order to address the nutrition of OVC as well as HIVpositive mothers and children in their care; improve access to nutrition services by these vulnerable groups; develop an appropriate system for referrals of OVC who are in need of nutrition assistance; train communities and home-based care volunteers in monitoring and encouraging basic nutrition practices; target preventative nutrition services for young children (0–3 years old) in the care of the elderly or Early Child Development Centres and strengthen growth monitoring to identify children in these circumstances who are not thriving and record health and nutrition information on OVC to provide data for measuring progress (MGECW, 2007).

7.6. MINISTRY OF EDUCATION (MOE)

The MoE provides knowledge and skills on nutrition topics for the general population through the education system at primary, secondary and tertiary levels. The school curriculum includes units on nutrition in the following subjects: Life Skills; Home Ecology; Home Economics; and Educare (Eros Girls School). The syllabi for these subjects are available from the National Institute for Educational Development (NIED).

The following higher education institutions include modules on nutrition and healthy lifestyles in order to inform and educate students on the importance of good nutrition and the prevention and effects of malnutrition: Namcol (Educare Distance Training), Teacher Training Colleges and UNAM (Diploma in Home Economics). The MoHSS will provide technical assistance for curriculum development to ensure that it is aligned with the latest guidelines and knowledge in the field of nutrition.

The MoE constantly controls the quality of food under the Namibia School Feeding Programme, and provides training to ensure safety of food being served.

Research in nutrition is also an important aspect which should be spearheaded and encouraged at higher institutions of learning in order to provide valuable nutritional data in the country.

The MoE as the custodian of the Namibia Students Financial Assistance Fund (NSFAF) could provide study loans and bursaries to students of nutrition.

7.7. MINISTRY OF INFORMATION AND COMMUNICATION TECHNOLOGY (MOICT)

The MOICT should raise awareness on nutrition issues and disseminate information in collaboration with the MoHSS through print and electronic media such as the Namibia Broadcasting Corporation (NBC) and newspapers in various local languages. The NBC radio services are a particularly powerful medium for informing and educating the public.

7.8. MINISTRY OF DEFENCE (MOD)

This Ministry has a primary role to ensure a safe and secure environment for the production of food. The Ministry has embarked on educational awareness campaigns on HIV, TB and other related communicable diseases which may lead to nutrition deficiency and is striving to achieve self-sustenance in food production through small scheme agricultural activities.

The MoD provides logistical and human resource support for food delivery in emergencies, including the drought relief delivery programme. The Ministry is committed to participating in health awareness and promotion campaigns related to micronutrient deficiencies, diet-related diseases and lifestyles.

7.9. Other Ministries

The Ministry of Trade and Industry (MIT) regulates imports and exports and should play a role in regulating safe food products and as ensuring that food standards are adhered to through laboratory analysis at the Namibian Standard Institution (NSI).

The Ministry of Justice (MoJ) ensures equal distribution of resources and protection of land rights and ensures that the laws and regulations regarding food safety and food standards are enforced.

The Ministry of Lands and Resettlement (MLR) ensures adequate access to land for food production.

The Ministry of Labour and Social Welfare (MLSW) provides social and disability grants and ensures justice in the labour market, which underpins a healthy socio-economic environment and access to income for food. The Ministry ensures adherence to the labour law regarding maternity leave in order to protect breastfeeding and mother's health and nutritional status.

The Ministry of Fisheries and Marine Resources (MFMR) contributes to food security and adequate micronutrient intake through the coordination of fish production and promotion of fish as a nutritious food item. It should also support the research agenda for nutrition.

The Ministry of Youth, Sport and Culture (MYSC) supports raising awareness among youth for improved food production at household level and healthy lifestyles.

The Ministry of Safety and Security (MSS) contributes to health and nutrition by ensuring a safe and secure environment for all. The MoHSS will collaborate with the Prison Services in the MSS to ensure that food provided for inmates is safe and nutritious.

7.10. NATIONAL PLANNING COMMISSION (NPC)

The NPC's role in relation to nutrition programmes is to bring together stakeholders such as ministries, organisations, agencies and donors as required for coordination and/or resource mobilisation. The NPC also facilitates discussions on issues that are cross-sectoral and not within the ambit of one line ministry. The NPC should play a role in the overall monitoring of programmes and resources allocated for nutrition programmes.

7.11. EDUCATIONAL INSTITUTIONS

Educational institutions such as the NHTC and UNAM have a critical role to play in the pre-service and in-service training of nurses. The MoHSS will provide technical support for the revision of nutrition modules of training curricula to ensure that nurses are adequately trained and up to date with the latest knowledge and guidelines in the field of nutrition.

7.12. CIVIL SOCIETY ORGANISATIONS

The Namibia Non-governmental Organisation Trust (NANGOF Trust) should be tasked to help coordinate nutrition activities such as therapeutic feeding programmes for TB patients and PLHIV.

The Namibia National AIDS Support Organisation (NANASO) coordinates NGOs such as CRIAA and others involved in HIV and AIDS control. There is a need to strengthen collaboration between these umbrella bodies and the MoHSS.

Some of the prominent civil society organisations involved in nutrition activities and programmes are the Namibia Red Cross Society (NRCS), Catholic Aids Action (CAA), and Catholic Health Services (CHS). These organisations are keen to help bridge the gap at community level through their extensive volunteer networks.

7.13. DEVELOPMENT AGENCIES

Development agencies are important stakeholders, as they render financial and/or technical support in order to enhance human resources and capacity building in health-related matters. The following 16 development partners have pledged their support to the MoHSS (MoHSS, 2008a):

- Multilateral agencies: WHO, UNICEF, UNFPA, EU/EC, GFATM, FAO, WFP
- **Bilateral agencies:** USAID, CDC, PEPFAR (USA), Health Unlimited (Britain), GTZ (Germany), Doctors of the World (Spain), CESTAS (Italy), People in Need (Czech Republic), Chinese Medical Programme, German Development Services (GDZ/DED)
- International and local civil society organisations: KFW/GITEC (NASOMA), Bristol Myers Squibb, Voluntary Service Overseas (VSO)

The support of these agencies for nutrition programmes must be coordinated in order to maximise resources and avoid duplication of efforts.

7.14. PRIVATE ORGANISATIONS

The private organisations involved in nutrition-related activities are the Namibian grain producers Bokomo, Namib Mills and Southern Choice Mills. These companies operate under the Namibia Agronomic Board (NAB). Their collaboration is sought in efforts to ensure food security as well as the regulation of food fortification. Other local food producers, such as Namibia Dairies and salt manufacturers, should be invited to participate.

Formal and informal commercial food outlets such as food distributors, grocery shops, supermarkets, restaurants, hotels and catering companies should participate in the development of and compliance with food safety regulations.

Private health and fitness institutions such as private clinics and hospitals, gyms, medical aid providers, pharmacies and health practices should support nutrition and healthy lifestyles education and promotion activities as well as provide information and statistics.

7.15. TRADITIONAL LEADERSHIP STRUCTURES

Traditional leaders are important partners in mobilising community involvement and addressing cultural practices which hinder the reduction of malnutrition.

8. Action Plans

Implementing initiatives for each identified strategic priority detailed in the tables below. The initiatives have been formulated in accordance with the PHC approach as set out in the Official Primary Health Care/Community Based Health Care Guidelines of February 1992.

8.1 PHC APPROACH

- Promotion of proper nutrition and an adequate supply of safe water;
- Maternal and child care, including family spacing;
- Immunisation against the major preventable infectious diseases;
- Basic housing and basic sanitation;
- Prevention and control of locally endemic diseases;
- Education and training concerning prevailing health problems in communities and the methods of preventing and controlling them;
- Appropriate treatment for common diseases and injuries; and
- Community participation in health and social matters (MoHSS, 1992).

Good nutrition underpins most of these strategies. Promotion, education/training and community participation feature prominently in the planned nutrition activities, as a change in practices at the household level is crucial to reducing malnutrition.

Responsibility for all the actions detailed below rests with nutrition programmes, requiring leadership and coordination at national, regional and district levels. This means that Regional Management Teams (RMTs) will play a pivotal role in the implementation and supervision of all activities.

8.2 PRIORITY 1: MATERNAL AND CHILD NUTRITION

Specific Objective 8.2.1: Underweight in under-5s reduced from 17 percent to 10 percent and severe underweight reduced from 4 percent to 1.5 percent

Impact indicators

- Percentage of children under 5 years old who are underweight
- Percentage of children under 5 years old who are stunted
- Percentage of children under 5 years old who are wasted

Outcome indicators

- Percentage of children 0–36 months old seen for any reason whose anthropometric measurements have been taken and whose mothers have received counselling on adequate nutrition
- Percentage of children who are exclusively breastfeeding at 6 months of age
- Percentage of children who are still breastfeeding with appropriate complementary food at 12–15 months
Table 3. Reduction in underweight in under-5s from 17 percent to 10 percent and severe underweight from 4 percent to 1.5percent

				٦	FARGET	S				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
reduced from derweight from	% of health workers trained in growth monitoring and assessment of nutritional status in children	2	20	40	60	80	100	Train health workers in growth monitoring and assessment of nutritional status in children.	Food and Nutrition Sub- division(FNS)	N\$1,500,000
nder-fives everely und 6 to 1.5%	% of districts appropriately equipped	20	20	40	60	80	100	Provide districts with		
Underweight in u 17% to 10% and se 49	% of children 0-36 months seen for any reason whose anthropometric measurements have been taken and whose mothers have received counselling on adequate nutrition	2	20	40	60	80	100	complete growth monitoring and nutritional status assessment ¹⁸	FNS	N\$2,000,000

¹⁸ Scales, height board, arm band for mid-upper arm circumference

				٦	TARGET	S				
OBJECTIVE	MEASURE	BASE	VR11	VR12	VR13	VR14	VR15	INITIATIVE	RESPONSIBLE	COST
OBJECHVE	MERSONE	DAJE			11114	INIS		UNIT		
ss 14%	Number and distribution	0	13	13	13	13	13			N\$50,000
five % a	of surveillance sites							Monitor wasting in Namibian		
der- o 10 t fro	operational National							children on a quarterly basis		(Supervision,
uno % to %	Nutrition Surveillance							and assess on an annual basis	ENC	data collection
ht in n 175 erwe o 1.5	system operational								FINS	and analysis)
/eig fror tund	Number of therapeutic	0	3	3	3	3	3	Enlist therapeutic products		
lerw ely	products enlisted in the							necessary for the treatment of		00
Und educ	Essential Medication List							severe acute malnutrition in	FNS	00
se re –								the Essential Medication List ¹⁹		

¹⁹ Supplementary feeding ration for moderate acute malnutrition; and Plumpy Nut for outpatient treatment if non-complicated severe acute malnutrition; and Complex of Mineral and Vitamin (CMV) to make F75, F100 and ReSoMal for inpatient treatment if complicated severe acute malnutrition)

				-	TARGET	s				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
nder-fives to 10% and t from 4% to	% of children cured	10	80	80	80	80	100	Order national supply of supplementary feeding ration for moderate acute malnutrition	FNS	N\$1,800,000
Underweight in ur reduced from 17% i severely underweigh 1.5%	% of health workers trained	0	20	40	60	80	100	Train facility and community based health workers in the treatment of moderate and severe malnutrition according to Namibia's guidelines for IMAM	FNS	N\$1,500,000

				•	TARGET	S					
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST	
ed from 17% to om 4% to 1.5%	Percentage of health facilities offering adequate treatment of acutely malnourished children	10	26	40	60	80	100	Monitor and ensure adherence to treatment protocols for acutely malnourished children in health facilities according to guidelines for IMAM ²⁰	FNS	N\$60,000	
fives reduc erweight fr	Availability of the policy and guidelines in all concerned agencies	0	20	40	60	80	100	Revise and disseminate IYCF policy and guidelines ²¹	FNS	N\$500,000	
t in under- erely unde	Percentage of health workers oriented	0	20	40	60	80	100	Train health workers in revised IYCF policy and guidelines	FNS	N\$100,000	
Underweigh ¹ 10% and sev	Percentage of maternity wards reaching all criteria Baby and Mother friendly Hospitals	0	20	40	60	80	100	Implement Baby and Mother Friendly Hospitals initiative in all maternity wards	FNS	N\$100,000	

²⁰ >75% of children cured; <15% children defaulted; <10% mortality; 40-60 days of stay in outpatient program; 4-7 days of stay in paediatric ward; 4g/kg/day of weight gain in outpatient program; 8g/kg/day of weight gain in paediatric ward; coverage of severe undernourished children of >70% in urban settings and >50% in rural settings

²¹ These guidelines include reference to the Integrated Management of Newborn and Childhood Illnesses (IMNCI)

				TAR	GETS					
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
0 %	Availability of the Code of	0	20	40	60	80	100	Raise awareness on Code	FNS	N\$500,000
7% 1 1.5%	Marketing of Breastmilk							for Marketing of Breast		
to 1	Substitutes in all concerned							Milk Substitutes		
fror 4%	agencies							legislation		
om	Percentage of health	0	20	40	60	80	100	Train health inspectors in	Environmental	N\$500,000
duc it fr	inspectors trained							marketing code	Health Department	
eigh								adherence monitoring		
erve	Availability of IEC materials in	0	20	40	60	80	100	Produce IEC material on	FNS	
ler-1 nde	all concerned agencies and							IYCF adequate practices		N\$1,000,000
n ∧l	communities							(in local languages)		
ere	Availability of IEC materials in	0	20	40	60	80	100	Disseminate IEC material	FNS	N\$1,000,000
ight sev	all concerned agencies and							to communities and		
and	communities							health facilities		
iapu 0% !	Survey Report	0	0	0	1	1	1	Multi Indicator Cluster	FNS	
1 L								Survey		1932,500,000

Specific Objective 8.2.2: Chronic malnutrition in women of reproductive age reduced from 16 percent to 12 percent

Impact Indicators:

- Percentage of women of reproductive age who are well nourished
- Percentage of women with Body Mass Index < 18.5%

Outcome Indicators

- Percentage of women who have received a vitamin A capsule postpartum
- Percentage of women who have received iron supplementation for duration of pregnancy
- Number of pregnant women treated for malnutrition in outpatient facilities
- Number of pregnant women treated for malnutrition in inpatient facilities
- Reduction of the prevalence of low birth weight babies to 10% of all live births
- Reduction of lodine deficiency rates among women of reproductive age

				•	TARGET	s				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
ductive age	Availability of policy and guidelines in all concerned areas	0	20	40	60	80	100	Develop and disseminate maternal nutrition policy and guidelines	FNS	N\$150000
en of reprod % to 12%	Percentage of health workers trained	0	20	40	60	80	100	Train health workers in maternal nutrition	FNS	N\$1,500,000.00
nutrition in wome reduced from 16	Availability of IEC materials in all concerned agencies and communities	0	20	40	60	80	100	Produce IEC material on maternal nutrition adequate practices (in local languages)	FNS	N\$1,000,000.00
Chronic malr	Availability of IEC materials in all concerned agencies and communities	0	20	40	60	80	100	Dissemination of IEC material to community and to health facilities (in local languages)	FNS	N\$1,000,000.00

Table 4. Chronic malnutrition in women of reproductive age reduced from 16 percent to 12 percent

8.3 PRIORITY 2: MICRONUTRIENT DEFICIENCIES

Specific Objective 8.3.1: Disorders associated with iodine, iron, zinc and vitamin A deficiencies eliminated

Impact indicators

- Percentage of pregnant women with haemoglobin < 10g/dl
- Urinary Iodine : Proportion below 100µg/l and Proportion below 50µg/l
- Thyroid size in school children 6-12 years of age: Proportion with enlarged thyroid by palpation or ultrasound
- Percentage of children 6-60months of age receiving Vitamin A supplementation in the previous 6 months
- Percentage of women given Vitamin A supplementation postpartum

Outcome Indicators

- Percentage of households who are using salt adequately iodised to 50–80 ppm
- Percentage of population knowing about and consuming vitamin A rich foods
- Percentage of women who have received a vitamin A capsule postpartum
- Percentage of children 9 months to 6 years who have received a vitamin A capsule within the last 6 months
- Percentage of population knowing and consuming iron and folic acid rich foods
- Percentage of women who have received iron supplementation for duration of pregnancy
- Percentage of children under five years who are stunted

			•	TARGET	S					
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
s Elimination	Availability of results in all concerned agencies	0	0	1	1	1	1	Conduct national household food consumption and micronutrient deficiency survey of vitamin A, iodine, iron, zinc and niacin in children under 5 years of age and in women of reproductive age, stratified by HIV status	FNS	N\$3,000,000.00
Deficiencie	Number of meetings held	0	4	8	12	16	20	Establish public-private partnership for regulation of food safety and food fortification	FNS	N\$25,000.00
on, Zinc and Vitamin A D	Number of regulations developed and gazette Develop and gazette regulations for food safety and food fortification	0	1	1	1	1	1	Develop and gazette regulations for food safety and food fortification	FNS	N\$1,000.00
lodine, Irc	Guidelines available for training	0	1	1	1	1	1	Design guidelines for internal and external quality control of food safety and food fortification	FNS	N\$250,000.00
ciated with	% of industries and importers trained	0	20	40	60	80	100	Train industries and importers on control, testing and regulations for food safety and food fortification	Environmental Health Department/FNS	N\$750.000.00
ders Assoc	% of health inspectors trained	0	20	40	60	80	100	Train health inspectors on control, testing and regulations for food safety and food fortification	Environmental Health Department/FNS	113730,000.00
Disor	Availability of IEC materials in all concerned agencies and communities	0	20	40	60	80	100	Produce and disseminate list of safe fortified foods and accompanying IEC materials (in local languages)	FNS	N\$5,000.00

Table 5. Disorders associated with iodine, iron, zinc and vitamin A deficiencies elimination

				٦	TARGET	S				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
Deficiencies	Availability of IEC materials in all concerned agencies and communities	0	20	40	60	80	100	Develop and disseminate IEC materials on food fortification at the household level (using accessible food items)	FNS	N\$50,000.00
ne, Iron, Zinc and Vitamin A Elimination	Level and reach of promotional activities	0	20	40	60	80	100	Revitalise promotion of vitamin A supplementation by health workers and communities (twice per year in children 6 months to 6 years and once in post-partum women)	Family Reproductive and Child Health/FNS	Vitamin A capsules for supplementation: N\$700,000 x 1 year Total: N\$3,500,000 for 5 years
lers Associated with lodi. E	Number of IEC materials produced and disseminated	0	20	40	60	80	100	Promote Vitamin A-rich food consumption through development and dissemination of IEC materials (in local languages) and social marketing campaign	FNS	N\$300,000.00
Disord	Level of salt monitoring and testing	0	20	40	60	80	100	Monitor and control quality of iodised salt in Namibia	FNS	N\$500,000.00

Table 5/ ...continued

			-	TARGET	S				
MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
lodised salt for animals gazetted	0	0	0	1	1	1	Advocate to Ministry of Agriculture to gazette iodised salt for animals	Ministry of Agriculture/FNS	N\$1,000.00
Number of IEC materials produced and disseminated	0	10	10	10	10	10	Promotion of iodised salt consumption through development and dissemination of IEC materials (in local languages) and social marketing campaign	FNS	N\$100,000.00
Level and reach of promotional activities	0	20	40	60	80	100	Revitalise promotion of iron and folic acid supplementation during pregnancy and lactation period for women by health workers and communities	FNS	N\$150,000.00
Number of IEC materials produced and disseminated Level and reach of social marketing campaign	0	10 20	10 40	10 60	10 80	10	Promotion of iron and folic acid rich food consumption through development and dissemination of IEC materials (in local languages) and social marketing campaign	FNS	N\$300,000.00
	MEASURE Iodised salt for animals gazetted Number of IEC materials produced and disseminated Level and reach of promotional activities Number of IEC materials produced and disseminated Level and reach of social marketing campaign	MEASUREBASEIodised salt for animals gazetted0Number of IEC materials produced and disseminated0Level and reach of promotional activities0Number of IEC materials produced and disseminated0Level and reach of promotional activities0Number of IEC materials produced and disseminated0Number of IEC materials produced and disseminated0Level and reach of social marketing campaign0	MEASUREBASEYR11lodised salt for animals gazetted00Number of IEC materials produced and disseminated010Level and reach of promotional activities020Number of IEC materials produced promotional activities020Level and reach of promotional activities020Number of IEC materials produced and disseminated020Number of IEC materials produced and disseminated020Level and reach of social marketing campaign020	MEASUREBASEYR11YR12lodised salt for animals gazetted000Number of IEC materials produced and disseminated01010Level and reach of promotional activities02040Number of IEC materials produced and disseminated01010Level and reach of promotional activities02040Number of IEC materials produced and disseminated01010Level and reach of social marketing campaign02040	MEASUREBASEYR11YR12YR13lodised salt for animals gazetted0001Number of IEC materials produced and disseminated0101010Level and reach of promotional activities0204060Number of IEC promotional activities0101010Level and reach of promotional activities0204060Number of IEC materials produced and disseminated0204060Level and reach of social marketing campaign0204060	MEASUREBASEYR11YR12YR13YR14Iodised salt for animals gazetted00011Number of IEC materials produced and disseminated010101010Level and reach of promotional activities020406080Number of IEC materials produced promotional activities010101010Level and reach of 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disseminated020406080100Revitalise promotion of iron and folic acid supplementation during pregnancy and lactation period for women by health workers and communitiesNumber of IEC materials produced and disseminated0204060801010Number of IEC materials produced and disseminated0204060801010Level and reach of social marketing campaign02040608010010Level and reach of social marketing campaign02040608010010Level and reach of social marketing campaign02040608010010Level and reach of social marketing campaign0204060801001010Level and reach of social marketing campaign <td< td=""><td>MEASUREBASEYR11YR12YR13YR14YR15INITIATIVERESPONSIBLE UNITIodised salt for animals gazetted00111Advocate to Ministry of Agriculture to gazette iodised salt for animalsMinistry of Agriculture/FNSNumber of IEC materials produced and disseminated010101010Promotion of iodised salt consumption through development and dissemination of IEC materials (in local languages) and social marketing campaignFNSLevel and reach of promotional activities010101010Revitalise promotion of iron and folic acid supplementation during pregnancy and lactation period for women by health workers and communitiesFNSNumber of IEC materials produced and disseminated010101010Number of IEC materials produced and disseminated010101010Number of IEC materials produced and disseminated020406080100Number of IEC materials produced and disseminated010101010Number of IEC materials produced and disseminated020406080100Level and reach of social marketing campaign020406080100Level and reach of social marketing campaign020406080100Level and reach of social marketing campaign02040608</td></td<>	MEASUREBASEYR11YR12YR13YR14YR15INITIATIVERESPONSIBLE UNITIodised salt for animals gazetted00111Advocate to Ministry of Agriculture to gazette iodised salt for animalsMinistry of Agriculture/FNSNumber of IEC materials produced and disseminated010101010Promotion of iodised salt consumption through development and dissemination of IEC materials (in local languages) and social marketing campaignFNSLevel and reach of promotional activities010101010Revitalise promotion of iron and folic acid supplementation during pregnancy and lactation period for women by health workers and communitiesFNSNumber of IEC materials produced and disseminated010101010Number of IEC materials produced and disseminated010101010Number of IEC materials produced and disseminated020406080100Number of IEC materials produced and disseminated010101010Number of IEC materials produced and disseminated020406080100Level and reach of social marketing campaign020406080100Level and reach of social marketing campaign020406080100Level and reach of social marketing campaign02040608

Table 5/ ...continued

					TARGETS					
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
ciencies Elimination	Guidelines available for training & % of health workers trained	0	20	40	60	80	100	Development of guidelines & training of health workers on the use of zinc in the management of diarrhoea	FNS	N\$60,000.00
nc and Vitamin A Defi	Number of IEC materials produced and disseminated	0	10	10	10	10	10	Promotion of zinc rich foods consumption through development and dissemination of IEC materials (in local languages) and social	FNS	N\$1,500,000
le, Iron, Zii	Level and reach of social marketing campaigns	0	20	40	60	80	100	marketing campaigns		
Associated with lodin	Publication and disseminating results on the far reaching consequences of malnutrition on children and mothers to decision makers.	0	0	1	1	1	1	Profiles analysis	FNS	N\$100,000
Disorders /	Results of survey with recommendations disseminated to policy makers for action.	0	0	0	1	1	1	Household food consumption survey	FNS	N\$2,500,000

8.4 PRIORITY 3: DIET-RELATED DISEASES AND LIFESTYLES

Specific Objective 8.4.1: Prevalence of obesity reduced from 12 percent to 8 percent and overweight from 16 percent to 10 percent in women of reproductive age and from 4.3 percent to 1.5 percent in under-fives

Impact Indicators:

- Population-based percentage of overweight or obese adults, adolescents and children (BMI ≥ 25)
- Prevalence of hypertension
- Prevalence of diabetes mellitus

Outcome indicators:

- Increase the proportion of children and adults at healthy body weight by 3% points
- Increase in diabetics with normal blood sugar readings
- Decrease in diabetics with continuous poor control over their blood sugar for over a period of six months
- Percentage of patients with hypertension in whom there is a record of the blood pressure in the previous 9 months
- Percentage of patients with hypertension in whom the last blood pressure (measured in the previous 9 months) is 150/90 or less

Table 6: Prevalence of obesity reduced from 12 percent to 8 percent and overweight from 16 percent to 10 percent in women ofreproductive age

					TARGETS	;				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
0	Availability of survey	0	1	0	1	1	1	Assess prevalence and	Non-	
in <u>t</u>	results in all							causes of obesity and	Communicable	
. 12	concerned agencies							associated NCCD in the	Diseases	N\$500,000.00
rom to 1 Age								general population ²²	(NCD)/FNS	
6% ive	Number of	0	0	1	1	1	1	Develop and		
huce n 1 ucti	documents							disseminate guidelines		
Rec fror rod	developed and							for nutritional	NCD/FNS	N\$100,000.00
sity ght Rep	disseminated							prevention and		
bes veig								treatment of obesity		
of O verv nen								and NCCD		
d O Von	80% of health	0	10	10	40	60	80		NCD/FNS	N\$1,500,000.00
aler V	workers trained							Train health workers		
8%	according to							on guidelines	NCD/FNS	
۵.	guidelines									

²² Survey tool to be incorporated in next NDHS (2010)

Table 6/... Continued

				•	TARGET	S				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	COST
om 12% to 8% and in Women of e.	Number of IEC materials produced and disseminated	0	0	5	5	5	5	Produce and disseminate IEC materials for nutritional prevention and treatment of obesity and NCCD (in local languages)	NCD/FNS	
Prevalence of Obesity Reduced fr Overweight from 16% to 10% Reproductive Age	Number of TV and radio spots, and newspaper ads published	0	0	5	5	5	5	Conduct social marketing campaign for the prevention of obesity and associated NCCD	NCD/FNS	N\$2,500,000.00

8.5 PRIORITY 4: NUTRITION MANAGEMENT OF COMMUNICABLE DISEASES

Specific Objective 8.5.1: Appropriate nutritional care provided to at least 80 percent of adults living with HIV or AIDS

Impact Indicators

- Proportion of adult PLHIV with BMI < 18.5 kg/m^2
- Proportion of PLHIV in the "Working" category of the three WHO-recommended functional status categories²³

Outcome Indicators

- Number of HIV-positive adults treated for malnutrition in outpatient facilities
- Number of HIV-positive adults treated for malnutrition in inpatient facilities
- Percentage of HIV-positive adults cured from malnutrition
- Percentage of relapse of malnutrition in HIV-positive adults
- Number of people living with HIV receiving adequate counselling for appropriate nutrition²⁴

²³ The three WHO-recommended functional status categories are Working, Ambulatory, and Bedridden.

²⁴ PEPFAR Recommended Nutrition Indicators are being developed for all nutrition assessment, counselling, and support (NACS) sites.

				٦	TARGET	S				
OBJECTIVE	MEASURE	BASE	YR11	YR12	YR13	YR14	YR15	INITIATIVE	RESPONSIBLE UNIT	СОЅТ
Appropriate nutrition	Availability of guidelines in all concerned agencies	0	1	1	1	1	1	Revision of guidelines for the nutrition management of people living with HIV/AIDS	FNS	N\$100,000.00
provided to	% of health workers trained	2	20	40	60	80	100	Train health workers in implementation of guidelines	FNS	N\$1,500,000.00
of adults living with HIV or AIDS	Annual orders of therapeutic products	0	2	2	2	2	2	Ensure a national supply of therapeutic products and supplementary feeding rations for the treatment of severe acute malnutrition is available	FNS	N\$54,000,000.00
-	Stock levels	0	80	80	80	80	80			
	Number of IEC materials produced and disseminated	0	4	5	5	5	5	Develop IEC materials for nutrition assessment, counselling, and support for people living with HIV (in local languages)	FNS	N\$250,000.00
	% of health workers and community health care providers trained	2	20	40	60	80	100	Train health workers and community health care providers in nutrition assessment, counselling, and support for people living with HIV	FNS	N\$1,500,000.00
	% of health workers and community health care providers trained	2	20	40	60	80	100	Promote appropriate nutrition for people living with HIV through counselling by health workers and community health care providers	FNS	N\$1,500,000.00

Table 7. Appropriate nutrition care provided to at least 80% of adults living with HIV or AIDS

Specific Objective 8.5.2: Integrate nutrition care into management of malaria and other communicable diseases

Impact Indicators:

- Infant mortality rate
- Child mortality rate
- Maternal mortality rate

Outcome indicators

- Reduced incidence and mortality rates for HIV/AIDS
- Reduced incidence and mortality rates for vaccine preventable diseases
- Increased immunization rates

				•	TARGET	S				
OBJECTIVE	MEASURE	BAS	YR1	YR1	YR1	YR1	YR1	INITIATIVE	RESPONSIBLE	COST
		E	T	Z	3	4	5		UNIT	
Integrate nutrition	Guidelines	0	1	1	1	1	1	Develop guidelines and Train		
care into	available for							Health Community Workers		
management of	training and							health community workers		
malaria and other	percentage of							In nutrition assessment,		
communicable	health community							counselling and disease	FNS	N\$1,500,000.00
diseases	workers trained							management		
		0	0	1	1	1	1	Development of IEC		
	IEC Materials							Materials for Nutrition in the		
	produced and							management of	FNS	N\$250,000
	disseminated							communicable diseases in		
								local languages		

Table 8. Nutrition care integrated into management of malaria and other communicable diseases

APPENDIX 1. SUMMARY OF SWOT ANALYSIS

	STRENGTHS	WEAKNESSES
_	 SPN in development Some policies in place Commitment to deliver and implement policies Programmes in place to reduce malnutrition 	 Poor implementation, monitoring and evaluation of policies; many documents in draft form and some outdated Lack of human resources (especially at district and regional level) to implement policies and programmes
INTERNAI	 Programme to train doctors and nurses (in HIV, nutrition and HIV, growth monitoring and IMAM) 	 Inadequate staff complement and cumbersome recruitment process (criteria too rigid)
	 Commitment to restructure at national, regional and district level 	 Lack of rollout of piloted projects, e.g., IMAM, to other regions
		 Lack of functioning tools to detect/measure malnutrition
		Lack of IEC materials in local languages
		Lack of data-driven nutrition programmes
	OPPORTUNITIES	THREATS
	Donor funding available	Priorities driven by donors
	• Technical support available from organisations such as I-TECH, UNICEF, USAID and WHO	 Lack of skills and knowledge in nutrition and lack of qualified nutritionists
	 OPM involvement in nutrition issues through NAFIN 	 Need for proper multi-sectoral coordination of commitment from various stakeholders
	Collaboration among various sectors	Dependence on expensive imported food
	 Dynamic business community ready to assist with food fortification 	(especially fruit and vegetables)
RNAL	Community involvement in nutrition	what to eat and what is available locally
хтег	programmes	Cultural practices and beliefs which hinder
Ш	 Potential to use existing institutions to maximise basic training in nutrition 	 good nutrition at the household level Inadequate basic nutrition modules at tertiary
	Possibility of sending Namibians abroad for	institutions
	training in nutrition	No training for nutritionists in Namibia
	School of Medicine	 Poor sanitation and lack of access to safe water
	Expansion of green scheme projects	Food insecurity
	Political, social and economic stability	Unemployment and illiteracy
	weil-developed intrastructure	Natural disasters due to global climate change

APPENDIX 2. NUTRITION POLICIES AND PROGRAMMES IN NAMIBIA

POLICIES

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
1.	Breastfeeding is Best for the Baby: Resource Guide for Health Workers	1994	MoHSS UNICEF	Health Workers	Promotion of exclusive breastfeeding, description of benefits associated with breastfeeding, breastfeeding position, tips about complementary feeding	Low	Low, lack of HIV related information	2011	Needs to be updated with current international recommendations.
2.	Breastfeeding is Best for the Baby: The Benefits of Breastfeeding. A Resource Book for Mothers in Namibia. Book 1.	1994	MoHSS UNICEF	Mothers	Promotion of the benefits of breastfeeding	Low	Low, lack of HIV related information	2010	Needs translation into local languages
3.	Breastfeeding is Best for the Baby: The Advantages of Exclusive Breastfeeding for 4 to 6 months. A Resource Book for Mothers in Namibia. Book 2.	1994	MoHSS UNICEF	Mothers	Promotion of exclusive breastfeeding up to 4-6 months	Low	Low, lack of HIV related information	2010	Needs translation into local languages
4.	Breastfeeding is Best for the Baby:	1994	MoHSS	Mothers	Promotion of breastfeeding up to 2	Low	Low, lack of HIV related information	2010	Needs translation into local languages

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
	Important Facts About Breastfeeding. A Resource Book for Mothers in Namibia. Book 3.		UNICEF		years and during sickness of child and mother and negative impact of alcohol on lactation				
5.	Breastfeeding is Best for the Baby: How to Overcome Common Breastfeeding Problems. A Resource Book for Mothers in Namibia. Book 4.	1994	MoHSS UNICEF	Mothers	Explanation of what can be done when the infant refuses to breastfeed and when mother has cracked / abscessed nipples or full breasts	Low	Low, lack of HIV related information	2010	Needs translation into local languages
6.	Feeding Young Children From Birth to 5 years of Age: A Resource Book for Mothers in Namibia. Book 5.	1994	MoHSS UNICEF	Mothers	Explanation about slow introduction of food and the importance of food diversity	Low	Low, lack of HIV related information	2010	Needs translation into local languages
7.	National Declaration on Food and Nutrition	1995	National Food Security and Nutrition Council	Namibia's population	Declaration on the food security and hunger situation with defined key points of action to be accomplished before 2000: - to eliminate famine, starvation, nutritional deficiencies - to reduce incidence of underweight, stunting	Low dissemination and low actions undertaken by MoHSS to reach the targeted thresholds determined in the Declaration	Medium	2011	Needs to be updated based on national priorities

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
					and wasting in children - to reduce infant, <5y children and maternal mortality - to increase duration of exclusive breastfeeding up to 6 months, breastfeeding up to 2 years, access to potable water, agricultural outputs, consumption of fish				
8.	Food and Nutrition Policy for Namibia	1995	National Food Security and Nutrition Council	Ministry of Health and Social Services, Ministry of Agriculture, Water and Rural Development Ministry of Trade and Industry, Ministry of Labour and Manpower Development , Ministry of Education and Culture, Ministry of Higher Education,	Description of current policy initiatives and intersectoral policy linkages and description of Food and Nutrition Policy : - To improve household level resources - To improve knowledge, attitudes and practices - To improve social and supporting services	High	Safety nets and agricultural aspects of the policy could focus more on the importance of household gardening all year round other than staple crops once a year as a regular food and income source for families with and without HIV. Education regarding maternal and child nutrition should be addressed to the population but also to all health workers and other health partners.	2010-11	During NAFIN meetings, the Prime Minister has noted that this policy needs review and a sub- committee should be mandated to deal with it. Diet and food consumption survey to be conducted before revision of policy

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
				Vocational Training, Science and Technology, all other Ministries					
9.	Prevention, Control and Treatment of Vitamin A Deficiency: Policy Guidelines for Health Workers	1999	MoHSS UNICEF	Health Workers	Description of sources of foods rich in vitamin A, the function of vitamin A, the consequences vitamin A deficiency and prevention, control and treatment of vitamin A deficiency	Low	Medium Timing for supplementation not adequate: first supplementation should take place at 6 months when breast milk not sufficient to cover needs	2010	Prevalence of children who received a vitamin A capsule in the last 6 months improved from 38.1% in 2000 to 51.5% in 2006. Prevalence of postpartum women who received a vitamin A capsule improved from 33.4% in 2000 to 51.0% in 2006.
10.	The Prevention and Care of Malnourished Children in our Communities and at Health Facilities: Policy Guideline for Health Workers	1999 New complete guidelines were produced and partially disseminat ed in 2008- 9	MoHSS UNICEF	Health Workers	To promote a community approach but without therapeutic or supplementary feeding and only based on education, and describe briefly the treatment of complications in health facilities	Low	Low	2010	IMAM guidelines developed based on current international recommendations.
11.	How to Use the Child Growth Card to Promote Growth. A Guideline for	2000	MoHSS UNICEF	Operational level and community health	Reading of the child's growth card, weighing techniques, interpretation of the card and identification	High	 No mention of the importance of <u>monthly</u> growth monitoring Weighing techniques 	2009- 2010	Update to current international recommendations and the revision of the child growth

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
	Operational Level and Community Health Workers – 2 nd edition			workers	of malnutrition causes		not adequate - Suggested introduction of complementary food to early		charts.
12.	Food and Nutrition Guidelines for Namibia. Food Choices for a Healthy Life	2000	National Food Security and Nutrition Council	Health professionals	Explanation of the importance of food variety, iodised salt clean water and avoidance of alcohol	High	Medium - Do not explain the difference in size of the Food guide - No emphasis on the importance of 5 fruits and vegetables per day Beans might cost less than fish so why emphasis given on fish - Oil, fat and sugar are presented as a group but no indication of the quantity - It is not clear for Namibians when overweight becomes a health problem instead of being culturally considered as healthy body weight	2013	Update based on research and develop social mobilisation campaigns regarding guidelines.
13.	National Policy on Infant and Young Child Feeding	2003	MoHSS UNICEF	Health Professionals	Describe breastfeeding and HIV nutrition issues	High	Low - Very little information is given on appropriate complementary food to give to child aged 6 months and more (type	2011	Update to include current international recommendations

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
	Frederick 1	2002	Mor	Malantara			of food, frequency, quantity) Policy does not conform with current WHO guidelines, 2010	2004	
14.	Food and Nutrition. A Handbook for Namibian Volunteers Leaders	2003	FAO	volunteers and leaders	Describe the function of food, the importance of a healthy diet, food safety, child feeding and growth monitoring. Contains activities and handouts for the users	Low	Medium - Changes on growth standards need to be made	2014	national recommendations
15.	Nutrition Management for People Living with HIV/AIDS: A Resource Guideline for Clinical Health Workers	2007	MoHSS USAID/CDC I-TECH	Health Professionals	Describes healthy eating habits and malnutrition and its management, gives tips on appropriate feeding habits for HIV infected infants and young children, pregnant and lactating women and adolescent girls. It informs also on the importance of hygiene and food and medication interactions	Medium	High	2011	Revise to include current international recommendations.
16.	Guidelines for the Prevention of Mother-to-Child Transmission of HIV	2008	MoHSS I-TECH DED/GTZ Franco- Namibian Co- operation	Health Professionals and community counsellors	Describe PMTCT. Promote routine HIV testing and counselling as well as routine care during pregnancy, labour, delivery and post-natal period	High	High	2012	Update to reflect current international recommendations.

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
			UNICEF USAID FHI CDC		 Pharmaceutical interventions and management possibilities for HIV- positive pregnant women and infants Nutrition tips on exclusive breastfeeding until 6 months, replacement feeding and complementary feeding 				
17	Integrated Management of Acute Malnutrition (IMAM)	2008	MoHSS UNICEF Clinton Foundation WHO/ USAID/CDC/ FANTA-2 I-TECH	Health professionals	Highlights the difference between chronic undernutrition, underweight and acute malnutrition and actions to prevent malnutrition Explains how to integrate the therapeutic treatment of severe acute malnutrition in children 0–59 months old with no complications in health facilities and in children with complications to the paediatric ward	Low (training done only in targeted sites due to limited supply of therapeutic products)	High Still need to integrate treatment of moderate acute malnutrition Still need to be integrated into the IMNCI guidelines and Community Health Care Provider guidelines	2009	Finalise and print document.
18	Nutrition Assessment, Counselling and Support for People Living with HIV	Draft 2009	FANTA-2	Health professionals	Outlines a coordinated, multi-year approach to integrating nutrition and food support into HIV care and treatment	Low, not implemented yet.	Follows 2007 National Policy on HIV/AIDS and current WHO guidance and is harmonised with national IMAM	2015	Get approval from MHSS and print and disseminate

#	Policies, guidelines and resource guides	Year of publication	Publisher/ technical support	Target group	Content	Degree of dissemination	Agreement with international recommendations	Expected revision	Recommendations
	and AIDS in				services in Namibia,		guidelines		
	Namibia:				addressing human				
	Operational				resources, capacity,				
	Guidelines with				infrastructure and				
	HIV				programme systems.				
					Includes detailed				
					guidance on food and				
					nutrition interventions				
					to improve immune				
					response, symptom				
					management, treatment				
					effectiveness, nutrition				
					status, quality of life and				
					productivity				
			1						

PROGRAMMES

#	Description	Target group	Funding/ technical assistance	Initiated	Level of implementation	Impact	Recommendations
1.	Infant and Young Child Feeding (IYCF)	All ages	UNICEF	2000	Medium	Prevalence of exclusive breastfeeding for the first 6 months improved from 4.1% in 2000 to 23.9% in 2006	Exclusive breastfeeding prevalence to reach 60%
2.	Baby- and Mother- Friendly Initiative (BMFI)	Health workers (nurses and doctors)	UNICEF	1991	High	35 Hospitals Declared Baby and Mother Friendly	Re-asses BMFI status and maintain
3.	Code of Marketing of Breast-Milk Substitutes	Milk manufacturers Retailers Health workers Health Inspectors Judicial System	UNICEF	1991	Low	Drafted, included in Public Health Bill Not yet enacted	Ensure promulgation of Public Health Act
4.	Growth Monitoring and Promotion (GMP)	Children u/5	UNICEF WHO	1991	Low	Wasting: 7.5% Stunting: 29.0% Underweight: 16.6%	Reduce wasting to 4.5% Stunting to 15% Underweight to 15%
5.	Vitamin A supplementation	Children 9 months to 6 years and women postpartum	UNICEF WHO	1994	High	Prevalence of children who received a vitamin A capsule in the last 6 months improved from 38.1% in 2000 to 51.5% in 2006. Prevalence of postpartum women who received a vitamin A capsule improved from 33.4% in 2000 to 51.0% in 2006.	Achieve coverage of 80%
6.	Universal Salt iodisation	All ages	UNICEF Kiwanis International	1994	High	Salt Iodisation Legislation gazetted in 1994	Achieve universal salt iodisation. Achieve coverage of 80% of

#	Description	Target group	Funding/ technical assistance	Initiated	Level of implementation	Impact	Recommendations
						60% of households consume adequately iodised salt	households consuming iodised salt
7.	Non-communicable Diet-related Diseases	All ages	wно	1994	Low	None	Implement the Global Strategy on Diet, Physical Activity and Health
8.	Nutrition Assessment, Counselling and Support for PLHIV	All ages	USAID AED FANTA I-TECH	2006	Low	Guidelines and training curriculum developed Capacity developed Nutrition assessment, counselling, and support (NACS) programme for PLHIV will start in 2011.	Expand nutrition support to PLHIV nationwide. Achieve a cure rate of 75% and a case fatality rate of <10%
9.	Integrated Management of Acute Malnutrition (IMAM)	Children u/5 and pregnant and lactating women	Clinton Foundation UNICEF WHO	2008	Low	Seven (7) districts covered. 577 children enrolled in IMAM programme and only 111 cured at community level, a cure rate of 19%. Inpatient management of severe acute malnutrition has a cure rate of 83.6% and a death rate of 12.9%.	Expand IMAM nationwide. Achieve a cure rate of 75% and a case fatality rate of <10%
10.	Nutrition surveillance	All ages	FANTA UNICEF	2010	Low	None	Implement in 13 sites.
11.	Food Fortification	All ages	UNICEF GAIN	2010	Low	None	Implement nationwide

APPENDIX 3. UNICEF's 16 Key FAMILY PRACTICES

(From UNICEF's Nutrition Fact Sheet, available at: http://www.UNICEF.org/nutrition/23964_ family practices.html)

- 1. Breastfeed infants exclusively for 6 months (taking into account WHO/UNICEF/UNAIDS policy and recommendations on HIV and infant feeding).
- 2. Starting at 6 months of age, feed children freshly prepared, energy- and nutrient-rich complementary foods while continuing to breastfeed for up to 2 years or longer.
- 3. Provide children with adequate amounts of micronutrients (vitamin A and iron, in particular), either in their diet or through supplements.
- 4. Take children for a full course of immunizations (Bacille Calmette-Guerin, diphtheria, pertussis and tetanus, oral polio vaccine and measles) before their first birthday.
- 5. In malaria-endemic areas, ensure that children sleep under recommended insecticide-treated mosquito nets.
- 6. Promote children's mental and social development by being responsive to their needs for care and stimulating them through talking, playing and other appropriate physical and affective interactions.
- 7. Continue to feed and offer more fluids to children when they are sick.
- 8. Give sick children appropriate home treatment for infections.
- 9. Recognise when sick children need treatment outside the home and take them for health care to the appropriate providers.
- 10. Follow health workers' recommendations regarding treatment, follow-up and referral.
- 11. Dispose of faeces (including children's faeces) safely and wash hands with soap after defecation and before preparing meals and feeding children.
- 12. Ensure that every pregnant woman receives the recommended four antenatal visits and doses of tetanus toxoid vaccination and is supported by family and community in seeking appropriate care, especially at the time of delivery and during the postpartum/breastfeeding period.
- 13. Take action to prevent child abuse, recognise it has occurred and take appropriate action.
- 14. Adopt and sustain appropriate behaviour regarding HIV prevention and care for the sick and orphans.
- 15. Ensure that men actively participate in providing childcare and are involved in reproductive health initiatives.
- 16. Prevent and provide appropriate treatment for child injuries.

APPENDIX 4. THE 'TRIPLE A' APPROACH

(Adapted from Unicef, 2006)

The Triple A Approach²⁵ is a widely utilised programme tool that emphasises a cyclical approach to address constantly changing contextual factors that may or may not be affecting nutritional status. It involves the initiation and continuation of three steps: Assessment, Analysis and Action. A nutrition surveillance system is, in essence, the Triple A process itself; assessments are carried out and data is collected, these data are analysed to determine the situation and transformed into usable information and based on the findings, actions/interventions can be carried out. This process can (and should) be utilised at all levels, i.e., local, district and national.

At facility level, this approach should be adopted not only in sentinel facilities but also in all health centres and clinics. Notable improvements in service delivery only in sentinel sites would run the risk of monitoring trends (improvements resulting from improved service delivery and education) that are different in sentinel sites and other sites. To facilitate analysis at facility level, a chart template has been developed to allow health workers to monitor trends in underweight and diarrhoea in their facilities.

Information-based action at facility-level may include the following measures:

- Emphasise growth promotion in GMP;
- Understand underlying causes of growth failure and try to act on them;
- Follow up on malnourished children (for instance, by strengthening the use of registers);
- Establish linkages with various support services (social services, food aid, counselling, referral to district hospitals); and
- Establish linkages with community health workers and volunteers.

In addition, immediate feedback mechanisms need to be put in place so that immediate action can be taken to address problems identified by the nutrition surveillance system at the appropriate level.

²⁵ Strategy for Improved Nutrition of Children and Women in Developing Countries. UNICEF Policy Review. UNICEF, 1990.

APPENDIX 5. PROFILES ANALYSIS AND INTEGRATED MANAGEMENT OF ACUTE MALNUTRITION

PROFILES is a nutrition policy and advocacy tool developed by the Academy for Educational Development (AED) which is used to demonstrate the medium- and long-term impact of nutrition action on human and economic development.

PROFILES has been applied in numerous developing countries to communicate to decision makers that investment in nutrition programmes can contribute to economic growth and is cost effective in improving child survival and development. The programme examines a status quo scenario that demonstrates the future nutritional status of a population and the costs to society and government if nothing is done to address nutrition problems. A second scenario shows the impact of the proposed interventions policymakers are asked to support.

The tool uses national data to facilitate understanding of technical nutrition information by estimating the costs and the benefits of nutrition programmes, mainly the treatment of undernutrition, as well as programmes addressing low birth weight and neonatal and infant mortality and iron deficiency anaemia. PROFILES calculators are available on the Internet for simple and quick assessment of the impact of nutrition programmes.

Below are the results of the preliminary PROFILES Analysis that was conducted in Namibia in 2009 with support from UNICEF.

Underweight

The calculator for underweight allows the investigator to determine the length of time for activities. The Integrated Management of Acute Malnutrition (IMAM) programme has been piloted in the existing health system and communities in seven targeted districts. If this approach can be rolled out to all districts in all regions in the next 3 years with a target to reduce the underweight prevalence from 16.6 percent²⁶ to 10 percent, the under-5 mortality rate could be reduced from 69/1000²⁷ to 59/1000 births. The programme could save 1,129 children's lives per year during this period. If IMAM is implemented over 5 years instead of 3, close to 670 children lives could be saved every year.

²⁶ Namibia Demographic and Health Survey 2006–2007, MoHSS 2008

²⁷ Ibid.

Low Birth Weight

The low birth weight (LBW) proportion reported in the Namibia Demographic and Health Survey (DHS) 2006–2007 was 14 percent, and the census of 2001 counted 273,067 births per year. Using the known relative risk associated with the impact of LBW on neonatal and infant mortality, PROFILES estimates that 29.6 percent of neonatal (<1 month) infant deaths (1,938) and 12.3 percent of post-neonatal (1–11 months) infant deaths (738) are attributable to LBW, which represent a total of 2,676 deaths of infants under 1 year old. In Namibia, 21.3 percent of infant deaths are attributable to LBW. It is estimated that the cost for LBW-related neonatal care for infants born in health facilities is US\$800,000 and the cost for infants born at home is US\$720,000. The costs also extend into the post-neonatal period and are estimated at US\$1,492,475. The total cost of LBW-related medical care in the first year of life is therefore around US\$3,010,564.

This simple calculation does not allow for an estimate of the impact of strong and adequate nutrition programmes on LBW rates and costs. Technical support and deeper analysis are required to gather the data and perform the complete analysis.

Iron Deficiency Anaemia

This calculator estimates the proportion and number of maternal mortalities attributable to iron deficiency anaemia. Unfortunately, data on iron deficiency and anaemia during pregnancy from iron deficiency in Namibia are not available. A national survey on micronutrient deficiency would provide these essential data, among others.

A complete PROFILES analysis for Namibia should be conducted for a more complete overview of the impact of malnutrition on children's and mothers' health. This would provide evidence-based information on the consequences of inaction vs. strong and adequate nutrition programmes on intellectual development and productivity, two important criteria for social, human and economic development, and detailed costs and benefits of actual and future actions. Such a deep and complete analysis requires basic data on micronutrient deficiencies in children and mothers.

APPENDIX 6. DEFINITIONS

Nutrition/malnutrition: Nutrition is the science of foods, the nutrients and other substances therein and their action, interaction, and balance in relationship to health and disease. Nutrition also refers to the processes by which the body ingests, digests, absorbs, transports and utilises nutrients and disposes of their waste products.

Food is a source of nutrients and an important part of nutrition but is not by itself sufficient for nutrition. Other necessary inputs include good caring practices and good health services. Nutrition is both the outcome and the process of providing the nutrients needed for health, growth, development and survival.

Malnutrition is a condition that develops when the body does not get the right amount of protein, carbohydrates, vitamins, minerals and other nutrients it needs to maintain healthy tissues and organ function. Malnutrition includes both undernutrition and overnutrition. Malnutrition should be closely monitored and addressed, whether in its worse scenario of under- or overnutrition, as both can have serious adverse health effects.

Morbidity/mortality: Morbidity refers to a diseased state, disability or poor health from any cause, or the incidence of a disease and the rate at which a population which is affected. Morbidity rate is used here to refer to the incidence rate, or the prevalence of a disease or medical condition.

Mortality refers to death. *Mortality rate* refers to the proportion of people dying during a given time interval. Mortality rate is expressed in units of deaths per 1000 individuals per year.

Eradication/elimination: *Eradication* is the reduction of an infectious disease's prevalence in the global population to zero. It is sometimes confused with *elimination*, which describes either the reduction of an infectious disease's prevalence in a regional population to zero, or the reduction of the global prevalence to a negligible amount.

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