MINISTRY OF HEALTH AND SOCIAL SERVICES

STRATEGIC PLAN FOR NUTRITION
2011–2015

Directorate: Primary Health Care Services
Division: Family Health
Sub-Division: Food and Nutrition

Private Bag 13198
Windhoek
Republic Of Namibia
Tel: +264 61 203-2712
Fax: +264 61 234 968
E-mail: foodnut@mhss.gov.na

March 2011
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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7.4. **MINISTRY OF REGIONAL AND LOCAL GOVERNMENT, HOUSING AND RURAL DEVELOPMENT (MRLGHRD)**

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<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>ARNS</td>
<td>African Regional Nutrition Strategy</td>
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<td>ARV</td>
<td>Antiretroviral</td>
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<td>AU</td>
<td>African Union</td>
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<td>BMFI</td>
<td>Baby and Mother Friendly Initiative</td>
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<td>BMI</td>
<td>Body Mass Index</td>
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<td>CAA</td>
<td>Catholic AIDS Action</td>
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<td>CBO</td>
<td>Community-Based Organisation</td>
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<td>CBHC</td>
<td>Community-Based Health Care</td>
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<td>CDC</td>
<td>U.S. Centers for Disease Control and Prevention</td>
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<td>CHS</td>
<td>Catholic Health Services</td>
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<td>CHPA</td>
<td>Chief Health Programme Administrator</td>
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<td>CMO</td>
<td>Chief Medical Officer</td>
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<td>CMV</td>
<td>Therapeutic Vitamin and Mineral Complex</td>
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<td>CORD</td>
<td>Coalition on Responsible Drinking</td>
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<tr>
<td>CRIAA</td>
<td>Centre for Research Information Action in Africa</td>
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<td>CSO</td>
<td>Civil Society Organisation</td>
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<td>DDRM</td>
<td>Directorate of Disaster Risk Management</td>
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<td>DEM</td>
<td>Directorate for Emergency Management</td>
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<td>DFL</td>
<td>Directorate of Finance and Logistics</td>
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<td>DHS</td>
<td>Demographic and Health Survey</td>
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<td>DOTS</td>
<td>Directly Observed Treatment-Short Course Strategy</td>
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<td>DPHC</td>
<td>Directorate of Primary Health Care</td>
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<td>DPPHRD</td>
<td>Directorate of Policy Planning and Human Resources Development</td>
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<td>DSP</td>
<td>Directorate of Special Programmes</td>
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<td>DSS</td>
<td>Directorate Social Services</td>
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<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<td>FANTA-2</td>
<td>Food and Nutrition Technical Assistance II Project</td>
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<td>Acronym</td>
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<tr>
<td>FBF</td>
<td>Fortified Blended Food</td>
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<td>FBO</td>
<td>Faith-Based Organisation</td>
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<td>FHI</td>
<td>Family Health International</td>
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<td>GAM</td>
<td>Global Acute Malnutrition</td>
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<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
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<tr>
<td>GMP</td>
<td>Growth Monitoring and Promotion</td>
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<td>GNI</td>
<td>Gross National Income</td>
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<td>HAART</td>
<td>Highly Active Anti-Retroviral Therapy</td>
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<td>HIS</td>
<td>Health Information System</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>ICN</td>
<td>International Conference on Nutrition</td>
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<td>IDA</td>
<td>Iron Deficiency Anaemia</td>
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<td>IDD</td>
<td>Iodine Deficiency Disorder</td>
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<tr>
<td>IEC</td>
<td>Information Education Communication</td>
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<td>IMAM</td>
<td>Integrated Management of Acute Malnutrition</td>
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<td>IMAAI</td>
<td>Integrated Management of Adult and Adolescent Infections</td>
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<td>IMNCI</td>
<td>Integrated Management of Newborn and Childhood Illnesses</td>
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<td>I-TECH</td>
<td>International Training &amp; Education Centre on HIV</td>
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<td>IYCF</td>
<td>Infant and Young Child Feeding practices</td>
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<td>LBW</td>
<td>Low Birth Weight</td>
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<td>M&amp; E</td>
<td>Monitoring and Evaluation</td>
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<td>MAM</td>
<td>Moderate Acute Malnutrition</td>
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<td>MAWF</td>
<td>Ministry of Agriculture, Water and Forestry</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MFMR</td>
<td>Ministry of Fisheries and Marine Resources</td>
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<td>MGECW</td>
<td>Ministry of Gender Equality and Child Welfare</td>
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<tr>
<td>MICS</td>
<td>Multiple Indicators Cluster Survey</td>
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<tr>
<td>MLR</td>
<td>Ministry of Lands and Resettlement</td>
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<tr>
<td>MLSW</td>
<td>Ministry of Labour and Social Welfare</td>
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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
NHHEMC  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
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<tr>
<th>Acronym</th>
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<tr>
<td>OPM</td>
<td>Office of the Prime Minister</td>
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<tr>
<td>OVC</td>
<td>Orphans or Vulnerable Children</td>
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<td>PEM</td>
<td>Protein-Energy Malnutrition</td>
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<tr>
<td>PEPFAR</td>
<td>U.S. President’s Emergency Plan for AIDS Relief</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PLHIV</td>
<td>People Living with HIV or AIDS</td>
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<td>PMTCT</td>
<td>Prevention of Mother-to-Child Transmission of HIV</td>
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<td>RD</td>
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<td>RMT</td>
<td>Regional Management Team</td>
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<td>RUTF</td>
<td>Ready-to-Use-Therapeutic Food</td>
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<td>SMART</td>
<td>Specific, Measurable, Agreed, Realistic, Time based</td>
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<tr>
<td>SPN</td>
<td>Strategic Plan for Nutrition</td>
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<td>SWOT</td>
<td>Strengths, Weaknesses, Opportunities, Threats</td>
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<td>Tuberculosis</td>
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<td>ToT</td>
<td>Training of Trainers</td>
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<td>University of Namibia</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>United Nations Educational Scientific and Cultural Organisation</td>
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<td>USAID</td>
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<td>VAD</td>
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<td>World Health Organization</td>
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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 non-diversified 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, 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.
- 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. 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 non-communicable 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 communities. The importance of maternal nutrition and early infant nutrition in the prevention of non-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**


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 non-governmental 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.

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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**

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### 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). This situation is linked with the impact of the high HIV prevalence (17.8 percent nationally), which is on the decline among the adult population. It is estimated that 13 percent of orphans live in urban areas, while 30 percent grow up in rural households. 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. Namibia’s GNI per capita exceeds by far the average GNI per capita of US$951 for sub-Saharan Africa. However, this classification obscures pervasive inequalities, which are rooted in the country’s long colonial history and apartheid.

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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.
9 The 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). 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.

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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.
**Figure 2. Trends in infant and child mortality in Namibia 1992–2006/2007**

![Bar chart showing trends in infant and child mortality](chart.png)

### 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.
**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:
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 productivity\(^\text{11}\) (Ministry of Health Eritrea, 2005). Micronutrient deficiencies are also associated with pregnancy complications and maternal mortality.

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\(^{11}\) 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 non-diversified 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.
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.

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion with body mass index (BMI) within the healthy range (BMI 18.5–24.9)</td>
<td>64.6%</td>
</tr>
<tr>
<td>Proportion undernourished (BMI &lt;18.5)</td>
<td>20.1%</td>
</tr>
<tr>
<td>Proportion severely malnourished (BMI &lt;16)</td>
<td>2.5%</td>
</tr>
<tr>
<td>Proportion moderately or mildly malnourished (BMI 16–18.5)</td>
<td>17.6%</td>
</tr>
<tr>
<td>Proportion overweight or obese:</td>
<td>15.4%</td>
</tr>
<tr>
<td>Proportion overweight (BMI 25.0-29.9):</td>
<td>9%</td>
</tr>
<tr>
<td>Proportion obese (BMI 30 and over):</td>
<td>3.4%</td>
</tr>
</tbody>
</table>
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). 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 non-communicable 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.
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. 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.

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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 percent\(^{14}\)

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 nutrition
- 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

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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 disasters through reducing exposure and vulnerability of people and economic assets in order to reduce 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”. 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 important 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 HIV-positive 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 1.5 percent

<table>
<thead>
<tr>
<th>TARGETS</th>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Underweight in under-fives reduced from 17% to 10% and severely underweight from 4% to 1.5%</td>
<td>% of health workers trained in growth monitoring and assessment of nutritional status in children</td>
<td>2</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train health workers in growth monitoring and assessment of nutritional status in children.</td>
<td>Food and Nutrition Sub-division(FNS)</td>
<td>N$1,500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% of districts appropriately equipped</td>
<td>20</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Provide districts with appropriate equipment to complete growth monitoring and nutritional status assessment</td>
<td>FNS</td>
<td>N$2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% of children 0-36 months seen for any reason whose anthropometric measurements have been taken and whose mothers have received counselling on adequate nutrition</td>
<td>2</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
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</table>

18 Scales, height board, arm band for mid-upper arm circumference
Table 3/ Continued

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight in under-fives reduced from 17% to 10% and severely underweight from 4% to 1.5%</td>
<td>Number and distribution of surveillance sites operational National Nutrition Surveillance system operational</td>
<td>0</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>Monitor wasting in Namibian children on a quarterly basis and assess on an annual basis</td>
<td>FNS</td>
<td>N$50,000 (Supervision, data collection and analysis)</td>
</tr>
<tr>
<td></td>
<td>Number of therapeutic products enlisted in the Essential Medication List</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Enlist therapeutic products necessary for the treatment of severe acute malnutrition in the Essential Medication List</td>
<td>FNS</td>
<td>00</td>
</tr>
</tbody>
</table>

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.
<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
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<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight in under-fives reduced from 17% to 10% and severely underweight from 4% to 1.5%</td>
<td>% of children cured</td>
<td>10</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>100</td>
<td>Order national supply of supplementary feeding ration for moderate acute malnutrition</td>
<td>FNS</td>
<td>N$1,800,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of health workers trained</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train facility and community based health workers in the treatment of moderate and severe malnutrition according to Namibia's guidelines for IMAM</td>
<td>FNS</td>
<td>N$1,500,000</td>
</tr>
</tbody>
</table>
Table 3/ Continued

<table>
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<tr>
<th>OBJECTIVE</th>
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<th>YR12</th>
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<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight in under-fives reduced from 17% to 10% and severely underweight from 4% to 1.5%</td>
<td>Percentage of health facilities offering adequate treatment of acutely malnourished children</td>
<td>10</td>
<td>26</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Monitor and ensure adherence to treatment protocols for acutely malnourished children in health facilities according to guidelines for IMAM(^{20})</td>
<td>FNS</td>
<td>N$60,000</td>
</tr>
<tr>
<td></td>
<td>Availability of the policy and guidelines in all concerned agencies</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Revise and disseminate IYCF policy and guidelines(^{21})</td>
<td>FNS</td>
<td>N$500,000</td>
</tr>
<tr>
<td></td>
<td>Percentage of health workers oriented</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train health workers in revised IYCF policy and guidelines</td>
<td>FNS</td>
<td>N$100,000</td>
</tr>
<tr>
<td></td>
<td>Percentage of maternity wards reaching all criteria Baby and Mother friendly Hospitals</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Implement Baby and Mother Friendly Hospitals initiative in all maternity wards</td>
<td>FNS</td>
<td>N$100,000</td>
</tr>
</tbody>
</table>

\(^{20}\) >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)
<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
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<th>YR12</th>
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<th>YR14</th>
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<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight in under-fives reduced from 17% to 10% and severely underweight from 4% to 1.5%</td>
<td>Availability of the Code of Marketing of Breastmilk Substitutes in all concerned agencies</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Raise awareness on Code for Marketing of Breast Milk Substitutes legislation</td>
<td>FNS</td>
<td>N$500,000</td>
</tr>
<tr>
<td></td>
<td>Percentage of health inspectors trained</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train health inspectors in marketing code adherence monitoring</td>
<td>Environmental Health Department</td>
<td>N$500,000</td>
</tr>
<tr>
<td></td>
<td>Availability of IEC materials in all concerned agencies and communities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Produce IEC material on IYCF adequate practices (in local languages)</td>
<td>FNS</td>
<td>N$1,000,000</td>
</tr>
<tr>
<td></td>
<td>Availability of IEC materials in all concerned agencies and communities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Disseminate IEC material to communities and health facilities</td>
<td>FNS</td>
<td>N$1,000,000</td>
</tr>
<tr>
<td></td>
<td>Survey Report</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Multi Indicator Cluster Survey</td>
<td>FNS</td>
<td>N$2,500,000</td>
</tr>
</tbody>
</table>

Table 3/ Continued
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 Iodine deficiency rates among women of reproductive age
Table 4. Chronic malnutrition in women of reproductive age reduced from 16 percent to 12 percent

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic malnutrition in women of reproductive age reduced from 16% to 12%</td>
<td>Availability of policy and guidelines in all concerned areas</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Develop and disseminate maternal nutrition policy and guidelines</td>
<td>FNS</td>
<td>N$150000</td>
</tr>
<tr>
<td>Chronic malnutrition in women of reproductive age reduced from 16% to 12%</td>
<td>Percentage of health workers trained</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train health workers in maternal nutrition</td>
<td>FNS</td>
<td>N$1,500,000.00</td>
</tr>
<tr>
<td>Chronic malnutrition in women of reproductive age reduced from 16% to 12%</td>
<td>Availability of IEC materials in all concerned agencies and communities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Produce IEC material on maternal nutrition adequate practices (in local languages)</td>
<td>FNS</td>
<td>N$1,000,000.00</td>
</tr>
<tr>
<td>Chronic malnutrition in women of reproductive age reduced from 16% to 12%</td>
<td>Availability of IEC materials in all concerned agencies and communities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Dissemination of IEC material to community and to health facilities (in local languages)</td>
<td>FNS</td>
<td>N$1,000,000.00</td>
</tr>
</tbody>
</table>
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 6-60 months 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
<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>TARGETS</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of results in all concerned agencies</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Number of meetings held</td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Number of regulations developed and gazette regulations for food safety and food fortification</td>
<td>0</td>
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<td>Guidelines available for training</td>
<td>0</td>
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<td>% of industries and importers trained</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
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<tr>
<td>% of health inspectors trained</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
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<tr>
<td>Availability of IEC materials in all concerned agencies and communities</td>
<td>0</td>
<td>20</td>
<td>40</td>
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<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Disorders Associated with Iodine, Iron, Zinc and Vitamin A Deficiencies Elimination</td>
<td>Availability of IEC materials in all concerned agencies and communities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Level and reach of promotional activities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Number of IEC materials produced and disseminated</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Level of salt monitoring and testing</td>
<td>0</td>
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</tbody>
</table>
Table 5 ...continued

<table>
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<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disorders Associated with Iodine, Iron, Zinc and Vitamin A Deficiencies Elimination</td>
<td>Iodised salt for animals gazetted</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Advocate to Ministry of Agriculture to gazette iodised salt for animals</td>
<td>Ministry of Agriculture/FNS</td>
<td>N$1,000.00</td>
</tr>
<tr>
<td></td>
<td>Number of IEC materials produced and disseminated</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>Promotion of iodised salt consumption through development and dissemination of IEC materials (in local languages) and social marketing campaign</td>
<td>FNS</td>
<td>N$100,000.00</td>
</tr>
<tr>
<td></td>
<td>Level and reach of promotional activities</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Revitalise promotion of iron and folic acid supplementation during pregnancy and lactation period for women by health workers and communities</td>
<td>FNS</td>
<td>N$150,000.00</td>
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<tr>
<td></td>
<td>Number of IEC materials produced and disseminated</td>
<td>0</td>
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<td>10</td>
<td>10</td>
<td>10</td>
<td>Promotion of iron and folic acid rich food consumption through development and dissemination of IEC materials (in local languages) and social marketing campaign</td>
<td>FNS</td>
<td>N$300,000.00</td>
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<tr>
<td>OBJECTIVE</td>
<td>MEASURE</td>
<td>BASE</td>
<td>YR11</td>
<td>YR12</td>
<td>YR13</td>
<td>YR14</td>
<td>YR15</td>
<td>INITIATIVE</td>
<td>RESPONSIBLE UNIT</td>
<td>COST</td>
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<td>-----------------------</td>
</tr>
<tr>
<td>Disorders Associated with Iodine, Iron, Zinc and Vitamin A Deficiencies Elimination</td>
<td>Guidelines available for training &amp; % of health workers trained</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Development of guidelines &amp; training of health workers on the use of zinc in the management of diarrhoea</td>
<td>FNS</td>
<td>N$60,000.00</td>
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<tr>
<td></td>
<td>Number of IEC materials produced and disseminated</td>
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<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>Promotion of zinc rich foods consumption through development and dissemination of IEC materials (in local languages) and social marketing campaigns</td>
<td>FNS</td>
<td>N$1,500,000</td>
</tr>
<tr>
<td></td>
<td>Level and reach of social marketing campaigns</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Publication and disseminating results on the far reaching consequences of malnutrition on children and mothers to decision makers.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Profiles analysis</td>
<td>FNS</td>
<td>N$100,000</td>
</tr>
<tr>
<td></td>
<td>Results of survey with recommendations disseminated to policy makers for action.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Household food consumption survey</td>
<td>FNS</td>
<td>N$2,500,000</td>
</tr>
</tbody>
</table>
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 of reproductive age

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR1</th>
<th>YR2</th>
<th>YR3</th>
<th>YR4</th>
<th>YR5</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence of Obesity Reduced from 12% to 8% and Overweight from 16% to 10% in Women of Reproductive Age.</td>
<td>Availability of survey results in all concerned agencies</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Assess prevalence and causes of obesity and associated NCCD in the general population</td>
<td>Non-Communicable Diseases (NCD)/FNS</td>
<td>N$500,000.00</td>
</tr>
<tr>
<td></td>
<td>Number of documents developed and disseminated</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Develop and disseminate guidelines for nutritional prevention and treatment of obesity and NCCD</td>
<td>NCD/FNS</td>
<td>N$100,000.00</td>
</tr>
<tr>
<td></td>
<td>80% of health workers trained according to guidelines</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>Train health workers on guidelines</td>
<td>NCD/FNS</td>
<td>N$1,500,000.00</td>
</tr>
</tbody>
</table>

---

22 Survey tool to be incorporated in next NDHS (2010)
Table 6/... Continued

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence of Obesity Reduced from 12% to 8% and Overweight from 16% to 10% in Women of Reproductive Age.</td>
<td>Number of IEC materials produced and disseminated</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>Produce and disseminate IEC materials for nutritional prevention and treatment of obesity and NCCD (in local languages)</td>
<td>NCD/FNS</td>
<td>N$2,500,000.00</td>
</tr>
<tr>
<td></td>
<td>Number of TV and radio spots, and newspaper ads published</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>Conduct social marketing campaign for the prevention of obesity and associated NCCD</td>
<td>NCD/FNS</td>
<td>N$2,500,000.00</td>
</tr>
</tbody>
</table>
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/m²
- Proportion of PLHIV in the “Working” category of the three WHO-recommended functional status categories\(^{23}\)

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 nutrition\(^{24}\)

\(^{23}\) 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.
### Table 7. Appropriate nutrition care provided to at least 80% of adults living with HIV or AIDS

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BASE</th>
<th>YR11</th>
<th>YR12</th>
<th>YR13</th>
<th>YR14</th>
<th>YR15</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate nutrition care provided to at least 80% of adults living with</td>
<td>Availability of guidelines in all concerned agencies</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Revision of guidelines for the nutrition management of people living with</td>
<td>FNS</td>
<td>N$100,000.00</td>
</tr>
<tr>
<td>HIV or AIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HIV/AIDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health workers trained</td>
<td></td>
<td>2</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train health workers in implementation of guidelines</td>
<td>FNS</td>
<td>N$1,500,000.00</td>
</tr>
<tr>
<td>Annual orders of therapeutic products</td>
<td></td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Ensure a national supply of therapeutic products and supplementary feeding</td>
<td>FNS</td>
<td>N$54,000,000.00</td>
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<tr>
<td>Stock levels</td>
<td></td>
<td>0</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>for the treatment of severe acute malnutrition is available</td>
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<td>Number of IEC materials produced and disseminated</td>
<td></td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>Develop IEC materials for nutrition assessment, counselling, and support</td>
<td>FNS</td>
<td>N$250,000.00</td>
</tr>
<tr>
<td>% of health workers and community health care providers trained</td>
<td></td>
<td>2</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>for people living with HIV (in local languages)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health workers and community health care providers trained</td>
<td></td>
<td>2</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>Train health workers and community health care providers in nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>assessment, counselling, and support for people living with HIV</td>
<td>FNS</td>
<td>N$1,500,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Promote appropriate nutrition for people living with HIV through</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>counselling by health workers and community health care providers</td>
<td>FNS</td>
<td>N$1,500,000.00</td>
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</tbody>
</table>
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
### Table 8. Nutrition care integrated into management of malaria and other communicable diseases

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>MEASURE</th>
<th>BAS</th>
<th>YR1</th>
<th>YR2</th>
<th>YR3</th>
<th>YR4</th>
<th>YR5</th>
<th>INITIATIVE</th>
<th>RESPONSIBLE UNIT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrate nutrition care into management of malaria and other communicable diseases</td>
<td>Guidelines available for training and percentage of health community workers trained</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Develop guidelines and Train Health Community Workers in nutrition assessment, counselling and disease management</td>
<td>FNS</td>
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<td>IEC Materials produced and disseminated</td>
<td>IEC Materials for Nutrition in the management of communicable diseases in local languages</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Development of IEC Materials for Nutrition in the management of communicable diseases in local languages</td>
<td>FNS</td>
<td>N$250,000</td>
</tr>
</tbody>
</table>
## APPENDIX 1. SUMMARY OF SWOT ANALYSIS

<table>
<thead>
<tr>
<th>INTERNAL</th>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
</table>
|          | • SPN in development  
|          | • Some policies in place  
|          | • Commitment to deliver and implement policies  
|          | • Programmes in place to reduce malnutrition  
|          | • Programme to train doctors and nurses (in HIV, nutrition and HIV, growth monitoring and IMAM)  
|          | • Commitment to restructure at national, regional and district level | • 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  
|          |                                                                 | • Inadequate staff complement and cumbersome recruitment process (criteria too rigid)  
|          |                                                                 | • 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 |

<table>
<thead>
<tr>
<th>EXTERNAL</th>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
</table>
|          | • Donor funding available  
|          | • Technical support available from organisations such as I-TECH, UNICEF, USAID and WHO  
|          | • OPM involvement in nutrition issues through NAFIN  
|          | • Collaboration among various sectors  
|          | • Dynamic business community ready to assist with food fortification  
|          | • Community involvement in nutrition programmes  
|          | • Potential to use existing institutions to maximise basic training in nutrition  
|          | • Possibility of sending Namibians abroad for training in nutrition  
|          | • School of Medicine  
|          | • Expansion of green scheme projects  
|          | • Political, social and economic stability  
|          | • Well-developed infrastructure | • Priorities driven by donors  
|          |                                                                 | • Lack of skills and knowledge in nutrition and lack of qualified nutritionists  
|          |                                                                 | • Need for proper multi-sectoral coordination of commitment from various stakeholders  
|          |                                                                 | • Dependence on expensive imported food (especially fruit and vegetables)  
|          |                                                                 | • Lack of community information/awareness of what to eat and what is available locally  
|          |                                                                 | • Cultural practices and beliefs which hinder good nutrition at the household level  
|          |                                                                 | • Inadequate basic nutrition modules at tertiary institutions  
|          |                                                                 | • No training for nutritionists in Namibia  
|          |                                                                 | • Poor sanitation and lack of access to safe water  
|          |                                                                 | • Food insecurity  
|          |                                                                 | • Unemployment and illiteracy  
|          |                                                                 | • Natural disasters due to global climate change |
## APPENDIX 2. NUTRITION POLICIES AND PROGRAMMES IN NAMIBIA

### PREFERENCES

<table>
<thead>
<tr>
<th>#</th>
<th>Policies, guidelines and resource guides</th>
<th>Year of publication</th>
<th>Publisher/technical support</th>
<th>Target group</th>
<th>Content</th>
<th>Degree of dissemination</th>
<th>Agreement with international recommendations</th>
<th>Expected revision</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>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.</td>
<td>1994</td>
<td>MoHSS UNICEF</td>
<td>Mothers</td>
<td>Promotion of exclusive breastfeeding up to 4-6 months</td>
<td>Low</td>
<td>Low, lack of HIV related information</td>
<td>2010</td>
<td>Needs translation into local languages</td>
</tr>
<tr>
<td>4.</td>
<td>Breastfeeding is Best for the Baby:</td>
<td>1994</td>
<td>MoHSS</td>
<td>Mothers</td>
<td>Promotion of breastfeeding up to 2</td>
<td>Low</td>
<td>Low, lack of HIV related information</td>
<td>2010</td>
<td>Needs translation into local languages</td>
</tr>
<tr>
<td>#</td>
<td>Policies, guidelines and resource guides</td>
<td>Year of publication</td>
<td>Publisher/technical support</td>
<td>Target group</td>
<td>Content</td>
<td>Degree of dissemination</td>
<td>Agreement with international recommendations</td>
<td>Expected revision</td>
<td>Recommendations</td>
</tr>
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</tr>
<tr>
<td>5</td>
<td>Breastfeeding is Best for the Baby: How to Overcome Common Breastfeeding Problems. A Resource Book for Mothers in Namibia. Book 4.</td>
<td>1994</td>
<td>MoHSS UNICEF</td>
<td>Mothers</td>
<td>Explanation of what can be done when the infant refuses to breastfeed and when mother has cracked / abscessed nipples or full breasts</td>
<td>High</td>
<td>Low, lack of HIV related information</td>
<td>2010</td>
<td>Needs translation into local languages</td>
</tr>
<tr>
<td>6</td>
<td>Feeding Young Children From Birth to 5 years of Age: A Resource Book for Mothers in Namibia. Book 5.</td>
<td>1994</td>
<td>MoHSS UNICEF</td>
<td>Mothers</td>
<td>Explanation about slow introduction of food and the importance of food diversity</td>
<td>High</td>
<td>Low, lack of HIV related information</td>
<td>2010</td>
<td>Needs translation into local languages</td>
</tr>
<tr>
<td>7</td>
<td>National Declaration on Food and Nutrition</td>
<td>1995</td>
<td>National Food Security and Nutrition Council</td>
<td>Namibia's population</td>
<td>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</td>
<td>Low dissemination and low actions undertaken by MoHSS to reach the targeted thresholds determined in the Declaration</td>
<td>Medium</td>
<td>2011</td>
<td>Needs to be updated based on national priorities</td>
</tr>
<tr>
<td>#</td>
<td>Policies, guidelines and resource guides</td>
<td>Year of publication</td>
<td>Publisher/technical support</td>
<td>Target group</td>
<td>Content</td>
<td>Degree of dissemination</td>
<td>Agreement with international recommendations</td>
<td>Expected revision</td>
<td>Recommendations</td>
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<td>----</td>
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</tr>
</tbody>
</table>
- 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 | 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 |
<table>
<thead>
<tr>
<th>#</th>
<th>Policies, guidelines and resource guides</th>
<th>Year of publication</th>
<th>Publisher/technical support</th>
<th>Target group</th>
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<th>Degree of dissemination</th>
<th>Agreement with international recommendations</th>
<th>Expected revision</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td>9.</td>
<td>Prevention, Control and Treatment of Vitamin A Deficiency: Policy Guidelines for Health Workers</td>
<td>1999</td>
<td>MoHSS UNICEF</td>
<td>Health Workers</td>
<td>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</td>
<td>Low</td>
<td>Medium Timing for supplementation not adequate: first supplementation should take place at 6 months when breast milk not sufficient to cover needs</td>
<td>2010</td>
<td>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.</td>
</tr>
<tr>
<td>10.</td>
<td>The Prevention and Care of Malnourished Children in our Communities and at Health Facilities: Policy Guideline for Health Workers</td>
<td>1999</td>
<td>MoHSS UNICEF</td>
<td>Health Workers</td>
<td>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</td>
<td>Low</td>
<td>Low</td>
<td>2010</td>
<td>IMAM guidelines developed based on current international recommendations.</td>
</tr>
<tr>
<td>11.</td>
<td>How to Use the Child Growth Card to Promote Growth. A Guideline for</td>
<td>2000</td>
<td>MoHSS UNICEF</td>
<td>Operational level and community health</td>
<td>Reading of the child’s growth card, weighing techniques, interpretation of the card and identification</td>
<td>High</td>
<td>- No mention of the importance of monthly growth monitoring - Weighing techniques</td>
<td>2009-2010</td>
<td>Update to current international recommendations and the revision of the child growth</td>
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<tr>
<td>#</td>
<td>Policies, guidelines and resource guides</td>
<td>Year of publication</td>
<td>Publisher/technical support</td>
<td>Target group</td>
<td>Content</td>
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<td>13.</td>
<td>National Policy on Infant and Young Child Feeding</td>
<td>2003</td>
<td>MoHSS, UNICEF</td>
<td>Health Professionals</td>
<td>Describe breastfeeding and HIV nutrition issues</td>
<td>High</td>
<td>Low</td>
<td>2011</td>
<td>Update to include current international recommendations</td>
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<tr>
<td>#</td>
<td>Policies, guidelines and resource guides</td>
<td>Year of publication</td>
<td>Publisher/technical support</td>
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<td>14.</td>
<td>Food and Nutrition. A Handbook for Namibian Volunteers Leaders</td>
<td>2003</td>
<td>MOE FAO</td>
<td>Volunteers and leaders</td>
<td>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</td>
<td>Low</td>
<td>Medium</td>
<td>2014</td>
<td>Update to reflect current national recommendations</td>
</tr>
<tr>
<td>15.</td>
<td>Nutrition Management for People Living with HIV/AIDS: A Resource Guideline for Clinical Health Workers</td>
<td>2007</td>
<td>MoHSS USAID/CDC I-TECH</td>
<td>Health Professionals</td>
<td>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</td>
<td>Medium</td>
<td>High</td>
<td>2011</td>
<td>Revise to include current international recommendations</td>
</tr>
<tr>
<td>#</td>
<td>Policies, guidelines and resource guides</td>
<td>Year of publication</td>
<td>Publisher/technical support</td>
<td>Target group</td>
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<td>Expected revision</td>
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<td></td>
<td>Integrated Management of Acute Malnutrition (IMAM)</td>
<td>2008</td>
<td>MoHSS UNICEF Clinton Foundation WHO/USAID/CDC/FANTA-2 I-TECH</td>
<td>Health professionals</td>
<td>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</td>
<td>Low (training done only in targeted sites due to limited supply of therapeutic products)</td>
<td>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</td>
<td>2009</td>
<td>Finalise and print document.</td>
</tr>
<tr>
<td></td>
<td>Nutrition Assessment, Counselling and Support for People Living with HIV</td>
<td>Draft 2009</td>
<td>FANTA-2</td>
<td>Health professionals</td>
<td>Outlines a coordinated, multi-year approach to integrating nutrition and food support into HIV care and treatment</td>
<td>Low, not implemented yet.</td>
<td>Follows 2007 National Policy on HIV/AIDS and current WHO guidance and is harmonised with national IMAM</td>
<td>2015</td>
<td>Get approval from MHSS and print and disseminate</td>
</tr>
<tr>
<td>#</td>
<td>Policies, guidelines and resource guides</td>
<td>Year of publication</td>
<td>Publisher/technical support</td>
<td>Target group</td>
<td>Content</td>
<td>Degree of dissemination</td>
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<td></td>
<td>and AIDS in Namibia: Operational Guidelines with HIV</td>
<td></td>
<td></td>
<td></td>
<td>services in Namibia, addressing human resources, capacity, infrastructure and 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</td>
<td></td>
<td>guidelines</td>
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<td>#</td>
<td>Description</td>
<td>Target group</td>
<td>Funding/ technical assistance</td>
<td>Initiated</td>
<td>Level of implementation</td>
<td>Impact</td>
<td>Recommendations</td>
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<tr>
<td>1.</td>
<td>Infant and Young Child Feeding (IYCF)</td>
<td>All ages</td>
<td>UNICEF</td>
<td>2000</td>
<td>Medium</td>
<td>Prevalence of exclusive breastfeeding for the first 6 months improved from 4.1% in 2000 to 23.9% in 2006</td>
<td>Exclusive breastfeeding prevalence to reach 60%</td>
<td></td>
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<td>2.</td>
<td>Baby- and Mother-Friendly Initiative (BMFI)</td>
<td>Health workers (nurses and doctors)</td>
<td>UNICEF</td>
<td>1991</td>
<td>High</td>
<td>35 Hospitals Declared Baby and Mother Friendly</td>
<td>Re-asses BMFI status and maintain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Growth Monitoring and Promotion (GMP)</td>
<td>Children u/S</td>
<td>UNICEF WHO</td>
<td>1991</td>
<td>Low</td>
<td>Wasting: 7.5% Stunting: 29.0% Underweight: 16.6%</td>
<td>Reduce wasting to 4.5% Stunting to 15% Underweight to 15%</td>
<td></td>
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</tr>
<tr>
<td>5.</td>
<td>Vitamin A supplementation</td>
<td>Children 9 months to 6 years and women postpartum</td>
<td>UNICEF WHO</td>
<td>1994</td>
<td>High</td>
<td>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.</td>
<td>Achieve coverage of 80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Universal Salt iodisation</td>
<td>All ages</td>
<td>UNICEF Kiwanis International</td>
<td>1994</td>
<td>High</td>
<td>Salt Iodisation Legislation gazetted in 1994</td>
<td>Achieve universal salt iodisation. Achieve coverage of 80% of</td>
<td></td>
<td></td>
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<tr>
<td>#</td>
<td>Description</td>
<td>Target group</td>
<td>Funding/ technical assistance</td>
<td>Initiated</td>
<td>Level of implementation</td>
<td>Impact</td>
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<td>7</td>
<td>Non-communicable Diet-related Diseases</td>
<td>All ages</td>
<td>WHO</td>
<td>1994</td>
<td>Low</td>
<td>None</td>
<td>Implement the Global Strategy on Diet, Physical Activity and Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Nutrition Assessment, Counselling and Support for PLHIV</td>
<td>All ages</td>
<td>USAID, AED, FANTA I-TECH</td>
<td>2006</td>
<td>Low</td>
<td>Guidelines and training curriculum developed. Capacity developed. Nutrition assessment, counselling, and support (NACS) programme for PLHIV will start in 2011.</td>
<td>Expand nutrition support to PLHIV nationwide. Achieve a cure rate of 75% and a case fatality rate of &lt;10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Integrated Management of Acute Malnutrition (IMAM)</td>
<td>Children u/S and pregnant and lactating women</td>
<td>Clinton Foundation UNICEF WHO</td>
<td>2008</td>
<td>Low</td>
<td>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%.</td>
<td>Expand IMAM nationwide. Achieve a cure rate of 75% and a case fatality rate of &lt;10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Nutrition surveillance</td>
<td>All ages</td>
<td>FANTA, UNICEF</td>
<td>2010</td>
<td>Low</td>
<td>None</td>
<td>Implement in 13 sites.</td>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>Food Fortification</td>
<td>All ages</td>
<td>UNICEF GAIN</td>
<td>2010</td>
<td>Low</td>
<td>None</td>
<td>Implement nationwide</td>
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</table>
APPENDIX 3. UNICEF’S 16 KEY FAMILY PRACTICES


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.


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 Approach\textsuperscript{25} 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.

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 percent\(^{26}\) to 10 percent, the under-5 mortality rate could be reduced from 69/1000\(^{27}\) 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.
9. **BIBLIOGRAPHY**


