



**Maternal and Child Health Directorate
National Nutrition programme**

**Federal Ministry of Health
Republic of Sudan**

**National Nutrition Policy
& Key Strategies
(2008 - 2012)**

June 2008

This document has been developed with support from



Table of contents

Forward	4
Acknowledgements	5
Preface	6
Abbreviations.....	7
Executive Summary	8
Section One.....	9
Rationale for policy development	9
Purpose of the policy	12
Section Two.....	13
Situation Analysis	13
Nutrition outcomes.....	15
Immediate causes of malnutrition.....	16
Basic causes.....	18
Key Challenges and Barriers.....	19
Section Three	21
Mission statement.....	21
Guiding principles	21
Policy themes, objectives, strategies and activities	22
1. Prevention, detection and treatment of nutrition related disorders.....	22
2. Addressing the intergenerational cycle of malnutrition.....	25
3. Food Utilization	27
4. Using an integrated approach to address malnutrition and morbidity	28
5. HIV/AIDS.....	29
6. Food safety and quality.....	30
7. Nutrition education/ behaviour change communication.....	30
8. Capacity Building	31
9. Multi-sectoral engagement in nutrition related activity	33
10. Nutrition information, research and advocacy	34
Collaboration.....	37
Implementation Monitoring and Evaluation	43
Annex 1: Nutrition Policy Task Force.....	45

Tables and Figures

Figure 1: UNICEF's conceptual framework of causes of malnutrition	13
Figure 2: Malnutrition - Infection cycle	14
Figure 3: Intergenerational cycle of malnutrition.....	15
Table 1: Nutrition Directorate collaboration within the FMoH	37
Table 2: Areas of collaboration between FMoH and other ministries.....	38
Table 3: Areas of collaboration between the Nutrition Directorate and International organizations.....	40
Table 4: Areas of collaboration between FMoH and the private sector	41
Table 5: Nutrition and nutrition related interventions according to health facility level.	42
Table 6: Areas of collaboration between FMoH and community level actors.....	43
Table 7: Overview of Monitoring of policy implementation	43
Table 8. Indicators for evaluating the policy.....	44

Forward

The Comprehensive Peace Agreement (CPA) represented a milestone in the history of Sudan. Consequently this created an organizational setup where the Ministry of Health (MoH) in the Government of National Unity (GONU) became responsible for overall health policies. Dealing with this task, MoH of GONU, developed an overall health policy and 5-year strategy with an overall goal of improving the health of the nation. The commitment to the MDGs and their achievements represents a core issue in the policy and strategy alike. Nutrition issues represent the focus of the first goal of the MDGs and constitute a considerable factor in MDGs 4 and 5; hence it is a priority issue for the country.

Nutrition by its nature is a cross-cutting issue where many sectors are involved in planning and implementation, and it meets the interests of many actors and donors who are driven by the frequent emergency situation of the country. These factors necessitated the development of this National Nutrition Policy, which will guide, organize and streamline the interventions which ultimately result in the best possible impact on the nutrition status of the nation.

Since the National Nutrition Policy document serves as the point of reference in providing a sound foundation for the planning, organization and management of the nation's overall sectors involved in nutrition, the involvement of those sectors in its development and implementation has been mandatory.

It is also pertinent, at this juncture, to ensure that the National Nutrition Policy constitutes a suitable framework for the design and successful development and implementation of State level nutrition plans according to their specific nutrition status and problems.

I wish to emphasize the need for all interest groups, actors in health and other sectors to collaborate with my Ministry and health authorities at the state and local government levels to ensure the successful implementation of this policy. This would result in more effective and efficient health services and in the overall better performance of our national health system and ultimately in the achievement of improved health status of the Sudanese citizenry.

I commend this document to all stakeholders in the health sector in particular and the Sudanese public and the international health community in general.



Dr. Tabita Butrus
National Minister of Health

Acknowledgements

The Federal Ministry of Health of the Republic of Sudan would like to acknowledge the contributions of many individuals and organisations towards the development of the National Nutrition Policy.

The National Nutrition Policy Task Force, comprised of members of institutions and departments (Annex 1) (The University of Khartoum, Ahfad University, Ministry of Agriculture, distinguished paediatricians, National Nutrition Directorate (FMoH), Department of International Health (FMoH), UNICEF and WFP) guided the development process.

In particular, the Federal Ministry of Health would like to acknowledge the work of Judith Appleton, Dr. Osama Awad Saleh and Professor Khatab, who prepared the document with a wide range of stakeholders.

On behalf of the Ministry, I wish to congratulate the UNICEF Sudan and the Task Force members for a job well done. I look forward to their continued support in the dissemination and the development of State level plans based on this National policy.



Dr. Mohammed Ali Yehia Elabassi
PHC, Director General, Chair of the Task force

Preface

The National Nutrition Policy has been developed with wide stakeholder and multi-sector participation and outlines the broad strategies that will be used in Sudan to provide basic nutrition services for prevention and treatment of malnutrition and to address the underlying causes of malnutrition.

Core nutrition services and counselling will be provided through the primary health care system, at health facility and community level, and all efforts will be made to ensure nutrition services are integrated with routine primary health care services. The policy addresses the need for increased human resource capacity and outlines strategies to build the capacity of FMOH staff to provide quality nutrition services across Sudan.

In recognition of the essential need for interventions beyond the health sector for prevention of malnutrition, and to address the underlying causes of malnutrition; the policy outlines strategies for multi-sector engagement and coordination of nutrition related programming at Federal and State level.

The Nutrition Directorate will lead the development of Action Plans and guide the overall implementation this policy. However successful implementation is dependant on the collaboration of a wide range of stakeholders; from Federal level through to operational activity at community level. Thus, I appeal to the various stakeholder groups and sectors to pro-actively engage; so that we can work together to improve the health and nutritional status of the population of Sudan.



Dr Amani Abdelmoneim
Nutrition Director, FMOH.

Abbreviations

CPA	Comprehensive Peace Agreement
CMAM	Community Management of Acute Malnutrition
ENP	Essential Nutrition Package
EPI	Expanded Programme on Immunization
FAO	Food and Agricultural Organization of the United Nations
FMoH	Federal Ministry of Health
FRC	Food Research Centre
GAM	Global Acute Malnutrition
GDP	Gross Domestic Product
GNP	Gross National Product
GMP	Growth Monitoring and Promotion
HAC	Humanitarian Aid Commission
IDD	Iodine Deficiency Disorders
IDP	Internally Displaced Person
IMCI	Integrated Management of Childhood Illnesses
INGO	International Non-Governmental Organization
MDG	Millennium Development Goal
MDD	Micronutrient Deficiency Disorders
NGO	Non-Governmental Organization
NND	National Nutrition Directorate
NNP	National Nutrition Policy
PHC	Primary Health Care
RH	Reproductive Health
SMOH	State Ministry of Health
SFC	Supplementary Feeding Centre
TFC	Therapeutic Feeding Centre
UNICEF	United Nations Children's Fund
VAD	Vitamin A deficiency
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

Improving the health and nutrition status of the people of Sudan is one of the priorities for the Federal Government of Sudan, and is vital to its development. Malnutrition undermines individual well being, reduces national productivity, and is the result of direct and underlying causes in a variety of sectors, which are in turn dependent on wider economic, social and political factors. Many actors are currently engaged in preventing and treating malnutrition in both emergency and development settings, however strengthening of coordination and standardization of efforts is required.

The overall purpose of this policy therefore is to define a framework through which available technical, human, and financial resources may be mobilized in order to ensure the health and nutrition status of all Sudanese citizens is significantly improved.

The policy is grounded in an analysis of the current legal, social development and policy environment, in order to show its links to already existing efforts and highlight how the policy contributes to the fulfillment of national targets and international commitments. An analysis of the situation in Sudan, in terms of nutrition outcomes, direct and underlying causes of these outcomes, as well as basic causes compiles recent data and highlights the various areas and levels at which action is required.

In order to turn the evidence into action, guiding principles for action are defined, and a series of strategies are organised into a framework of policy themes and objectives. The implementation plan outlines area of collaboration between actors within the Federal Ministry of Health, interactions between Federal and State level Nutrition Directorates, between other ministries, agencies, and private sector as well as mechanisms through which this collaboration will take place. Finally, an outline for monitoring the implementation of strategies as well as impact of the policy in improving health and nutrition status is defined.

Section One

Rationale for policy development

Sudan is a nation of great resources and potential, and this is a time of opportunity. The signing of peace accords, including the Comprehensive Peace Agreement (2005), the Darfur Peace Agreement (2005) and the Eastern Peace Agreement (2006), indicates there is hope for stability which is a prerequisite for development. Reform and strengthening of government structures in many areas is underway. Humanitarian and development agencies are very much engaged in addressing short term and long term needs in Sudan through the provision of services. Peace dividends, Sudan's oil revenues, and planning which takes advantage of both these new assets all favour the development of contexts in which the need for emergency interventions is reduced and sustainable nutrition improvements are possible.

Improving the health and nutrition status of the people of Sudan is one of the priorities for the Federal Government of Sudan, and is vital to its development. While Sudan has enormous potential in terms of natural and human resources, it is not on track to meet the Millennium Development Goals by 2015. Health, education, social services, and vital infrastructures for transport and utilities have all stagnated in recent years. Decades of civil conflict have contributed to high rates of morbidity and mortality, for the most part due to preventable communicable diseases and suboptimal health seeking behaviour, which has been exacerbated by the limited coverage and quality of health services and education infrastructure in the context of widespread food insecurity. Recurrent episodes of natural and manmade disasters have crippled the economy and livelihoods of both urban and rural populations, contributing to rising levels of poverty and resulting in well over half of the population living below the poverty line.

Malnutrition is the result of direct and underlying causes in a variety of sectors, which are in turn dependent on wider economic, social and political factors (see Figure 1). There is a need to ensure that efforts to address malnutrition through prevention and treatment do not remain solely within the health sector. Instead, a broader approach is required, one that incorporates an understanding of the influence of food security, the public health environment (including health services as well as water and sanitation), and social and care practices on nutrition status.

The Federal Ministry of Health of the Republic of Sudan (FMoH) is the government body mandated to address nutrition issues, through providing overall leadership to nutrition and nutrition related interventions. The National Nutrition Directorate (NND), established in the Primary Health Care General Directorate, is the body through which the FMoH ensures the provision of high quality nutrition interventions, by defining technical standards for health and nutrition work, facilitating inter-sectoral coordination, as well as monitoring the overall quality of nutrition services.

The leadership of the FMoH National Nutrition Directorate in addressing nutrition issues has a firm foundation on many levels.

Legal basis:

- The Government of Sudan is signatory to a number of international commitments. By so doing, the Government of Sudan has committed itself to actions required to improve and monitor the improvement of conditions for children. These commitments include:
 - the Millennium Declaration and the Millennium Development Goals, adopted by all 191 United Nations Member States in September 2000,
 - the Plan of Action of A World Fit For Children (WFFC), adopted by 189 Member States at the United Nations Special Session on Children in May 2002,
 - the Arab World Fit for Children, the Arab charter for child rights, the second Arab childhood strategy and plan of action, and the programme of action adopted in 2004 at the International Conference on Population and Development.
- The Government of Sudan is signatory to the Convention on the Rights of the Child, which outlines its multisectoral responsibility with reference to nutrition, specifically:
 - Article 24 (c) “To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;”
 - Article 24 (e) “To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents;”
 - Article 27 (3) “States Parties, in accordance with national conditions and within their means, shall take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programmes, particularly with regard to nutrition, clothing and housing.”
- The National Interim Constitution of the Republic of Sudan (2005) states that the “State shall promote public health, establish, rehabilitate, develop basic medical and diagnostic institutions, provide free primary health care and emergency service for all citizens”.

Social basis¹:

- Nutrition indicators from recent studies show a worrying nutrition profile in the country that indicates that at both National and an individual level, the country is not capable of fulfilling its potential without significant investments. Almost one third (31%) of children under the age of five in Sudan are moderately or severely underweight. Similarly, almost one third (32.5%) of children under five years of age suffer from moderate or severe chronic malnutrition, while 14.8% of children under five years suffer from moderate or severe acute malnutrition.
- Overall, nutrition status is found to be positively associated with increasing levels of maternal education and increasing household financial resources, suggesting

¹ Sudan Household Health Survey, 2006
June 2008

that efforts to improve women's education and reduce poverty are necessary to see improvements in nutrition status for the population.

- While not common, 3.6% of children under five are overweight. In the context of increased access to non traditional, and processed foods, as well as limited physical exercise, children are put at risk of developing lifestyle diseases such as type 2 diabetes at a young age.
- Infant and young child feeding practices are not optimal. Less than half of the children in Sudan are exclusively breastfed to four months (42.5 per cent), and only one in three infants (33.7%) are exclusively breastfed to six months. Complementary foods are often introduced early, and continued breastfeeding until two years is not common. Poor infant and young child feeding practices negatively impacts on immunity to disease and the growth and development of a child.

Nutrition cuts across boundaries and affects all areas of governance, growth and development. As such, nutrition strategies must be incorporated into policies, plans and programmes aimed at achieving general human well-being, improving child health and survival rates, and contributing to food security and declining poverty levels. As a result, the work of the FMOH National Nutrition Directorate in addressing nutrition issues needs to make links to existing policy frameworks. There are significant nutritional aspects to work in other sectors, which must be coordinated in order to ensure sustainable impact.

The National Poverty Eradication Strategy which defined pro-poor objectives and equity goals for development is critical to establish the context wherein health and nutrition needs can be addressed.

Nutrition has figured explicitly or been alluded to in a number of national policies including:

- The National Health Policy (2006)
- The National Child Health Policy (2006)
- The National Reproductive Health Policy (2006)
- The Rural Development, Food Security and Poverty Alleviation Act (2005)
- The New Sudan Nutrition Policy and Plan of Action 2004-2010 (2004)
- 25 Years Strategic Plan for the Health Sector (2005)
- The National Policy on HIV/AIDS (2004)
- 10 Year Strategic Plan for Human Resource

Additionally, activities that impact on nutrition status through addressing the underlying and direct causes of malnutrition are taking place in various ministries, including the Federal Ministry of Agriculture and Forestry, the Federal Ministry of Education, Federal Ministry of Irrigation and Water Resources; however these activities are not directly coordinated under a single framework.

- Sudan's First National Food and Nutrition Seminar in 1972 recommended that a "malnutrition problem of such magnitude needs a coordinated and well-planned approach and requires the active cooperation of a large number of agencies". The seminar's findings are still relevant: the same course of action is still the key to improving the situation.

- Sudan's National Plan of Action on Nutrition, written at the request of the 1993 FAO-WHO International Conference on Nutrition, and adopted by the Government of Sudan on 21 May 1995, reiterated the need for coordinated action in the area of nutrition.

Purpose of the policy

The overall purpose of this policy therefore is to define a framework through which available technical, human, and financial resources may be mobilized in order to ensure the health and nutrition status of all Sudanese citizens is significantly improved. Specifically, this policy is intended to:

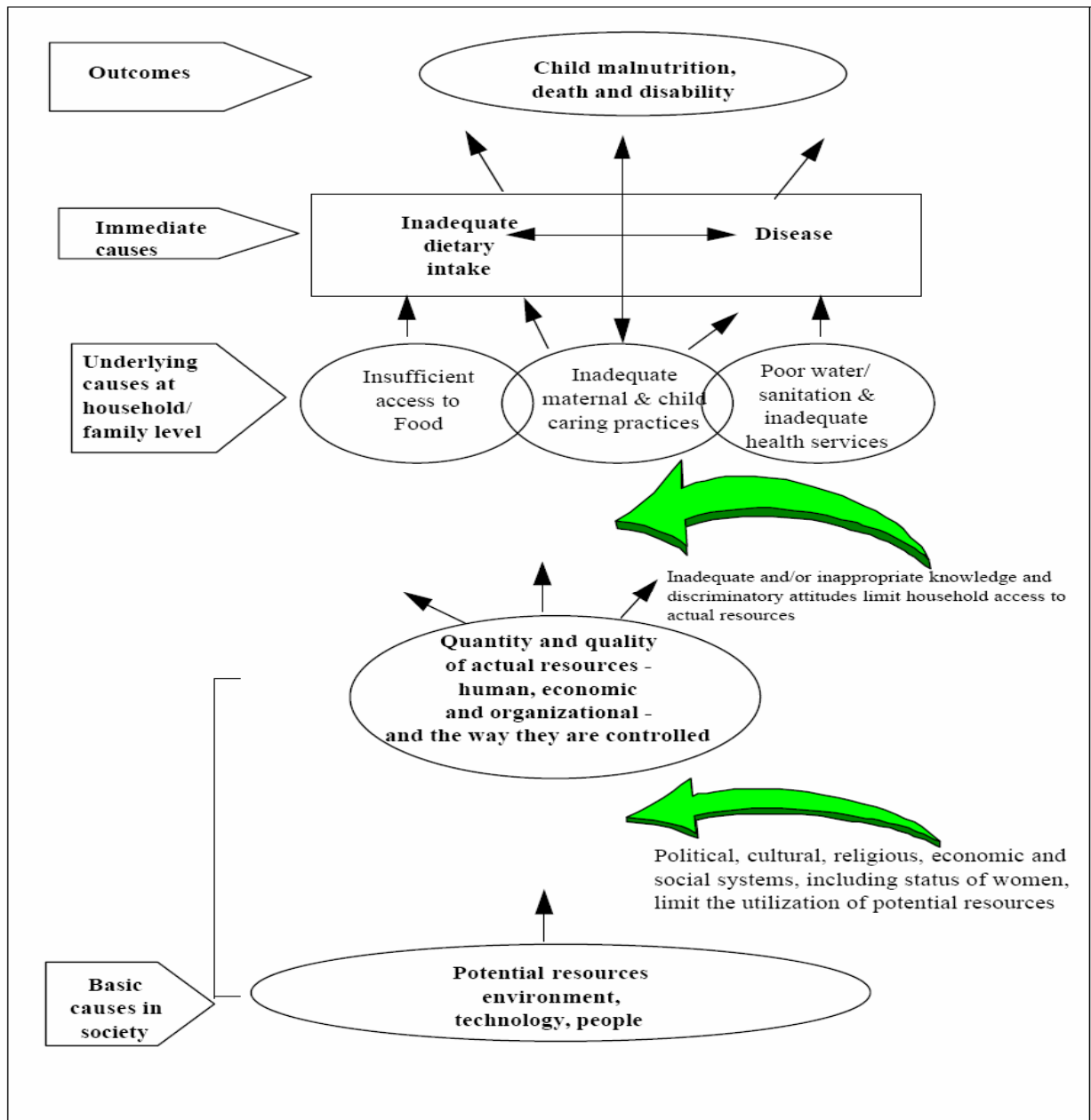
- Define a single guiding framework under which multi-sectoral activities related to improving nutrition status of the population can be carried out.
- Promote national development through investment in human resources.
- Ensure that the current deterioration in nutritional status of individuals of all ages is addressed equitably with respect to gender, ethnic groups, geographic area, and physiological vulnerability.
- Ensure standardised and high quality nutrition services are delivered throughout the country through defining guidelines, developing capacity and building partnerships.
- Ensure that sufficient capacity exists to prevent and address malnutrition in emergencies through community mobilization, application of standards, capacity development of skills, and planning to sustain improved services.
- Develop ways to encourage individuals, families, and communities to make positive choices to the best of their capacity to safeguard their own nutrition status and wellbeing.
- Guide resource mobilization, project implementation, structural development and capacity building in relevant sectors at local and Federal levels in order to address direct and underlying causes of malnutrition.
- Improve the nutrition information evidence base through strengthening information systems, analytical capacity, advocacy, and collaboration mechanisms.

Section Two

Situation Analysis

Nutrition outcomes and factors that contribute to malnutrition in Sudan are presented in the following section. The conceptual framework of causes of malnutrition illustrates how the various direct, underlying, and basic causes are interrelated and contribute to nutrition status.

Figure 1: UNICEF's conceptual framework of causes of malnutrition

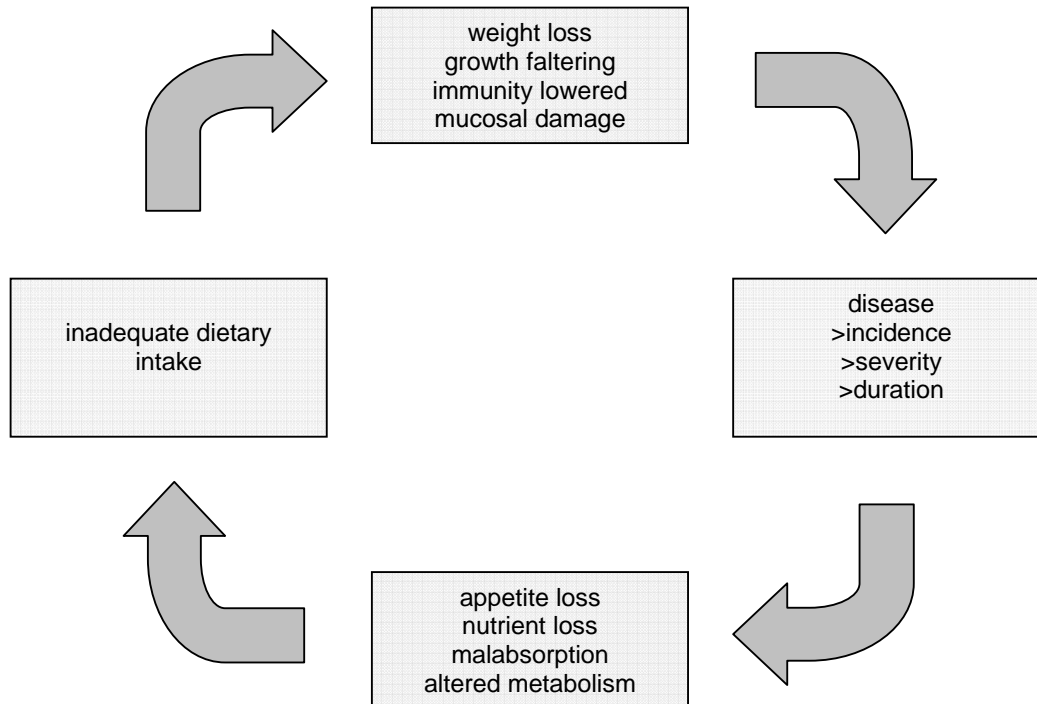


* Source: UNICEF, 1997.

The **immediate or direct causes** of malnutrition are inadequate dietary intake (in terms of quantity and quality) and well as illness. There is a reciprocal relationship

between these two immediate causes - inadequate dietary intake and illness; and the relationship/interplay between these tends to create a vicious cycle: A malnourished child, whose resistance to illness is compromised, falls ill and malnourishment worsens. Children who enter this malnutrition-infection cycle can quickly fall into a potentially fatal spiral as one condition feeds off the other.

Figure 2: Malnutrition - Infection cycle



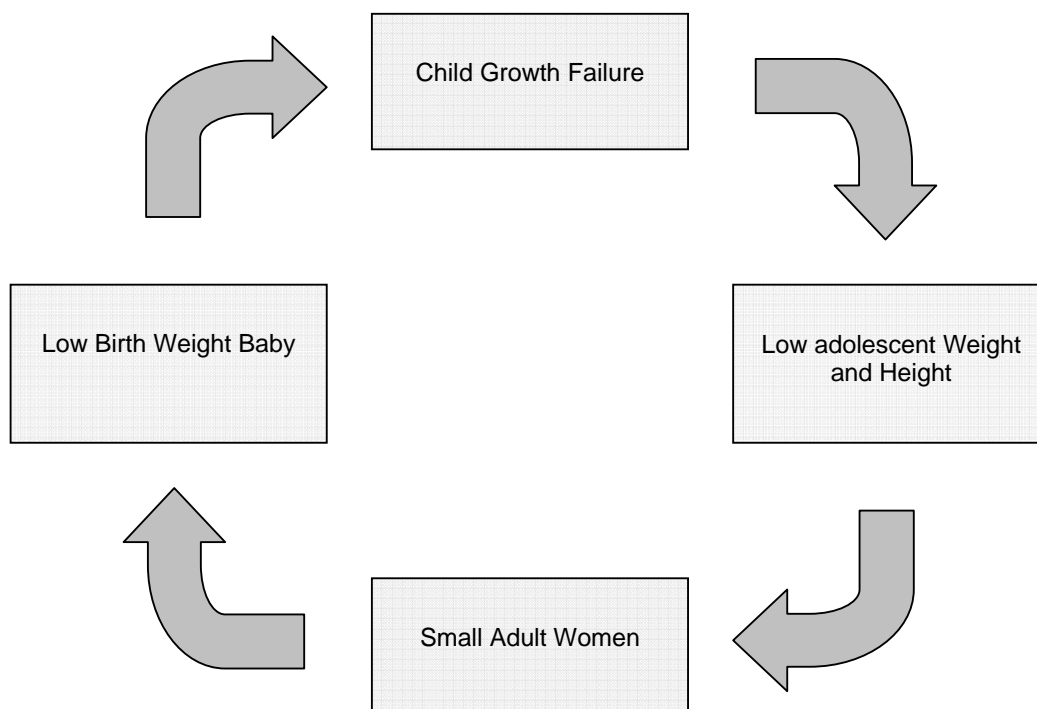
Underlying issues affecting the immediate causes of malnutrition are issues of food insecurity, inadequate public health services and environment and inadequate maternal and child caring practices. The condition in each of these areas (of underlying causes) reflects the contribution of **basic causes** within society including the availability and management of resources and the socio-political context.

In addition to the conceptual framework on the causes of malnutrition it is important to also give due regard to two additional dynamics that underpin nutrition outcomes, namely seasonality and the cycle of malnutrition through the generations.

Levels of acute malnutrition follow a seasonal tendency, increasing during the summer months and decreasing in the winter months, in line with increases in morbidity and decreased access to food resources during the summer months.

Malnutrition affects individuals, but also exerts influence on other generations: Poor maternal nutritional status will contribute to poor intra-uterine growth and low birth weight. If these deficiencies are not addressed early in life through positive infant and young child feeding practices, individuals are at risk nutritionally. This risk may then be compounded by micronutrient deficiencies coupled with a high incidence of morbidity and poor quality and quantity of food; which will lead to another generation of malnourished mothers, who will in turn replicate the cycle (see Figure 3).

Figure 3: Intergenerational cycle of malnutrition



Nutrition outcomes

The nutrition situation in Sudan is poor, characterized by high levels of underweight and chronic malnutrition, as well as persistently elevated levels of acute malnutrition². Nationally, one third (31%) of children under the age of five years in Sudan is moderately or severely underweight (<-2 Z score, weight for age). Almost one third of children (32.5%) suffer from moderate or severe chronic malnutrition (<-2 Z score, weight for height), underlining the long term and prevalent under nutrition and morbidity throughout the country. Nationally, the level of global acute malnutrition (14.8% <-2 Z score, weight for height) is just below internationally recognized standards for indicating a nutrition emergency. These figures vary significantly between states. It is unlikely that these indicators of the Millennium Development Goals will be halved by 2015 without substantial reductions in levels of poverty.

The majority of localised nutrition surveys report an increased risk for malnutrition in children 6-29 months relative to children 30-59 months old, indicating that sustained efforts to address the nutrition needs in this age group are critical. Current international guidance suggests that nutrition interventions to address deficiencies are limited beyond two years of age.

While data is limited, available information suggests that the micronutrient status of the population is poor. Localised surveys have reported night blindness, due to vitamin A deficiency, from between 1% to 4.8%. Although vitamin A deficiency has dropped significantly due to repeated supplementation during National polio days, it still remains high in western and southern parts of the country³. The national

² Please note that nutrition outcomes are generally presented based on data for children 6-59 months old. The Sudan Household Health Survey 2006, reports nutrition outcomes based on children aged 0-59 months old.

³ Review of the Millennium Development Goals for Health, Nutrition and Population, Republic of Sudan, 2003.

prevalence of goitre, indicating iodine deficiency disorders, was 22% in 1997. Intake of iodized salt, which is key in the prevention of iodine deficiency disorders, is low. In 2006, only 11.6% of households, where the iodine content was tested, had adequately iodized salt (i.e. greater than or equal to 15 ppm).⁴

Studies of other age groups show that large sections of the adolescent, adult and elderly populations are equally malnourished. Growing numbers of young and old are diabetic or obese; and there is an accelerating rise in people with heart disease and cancers. While not common, 3.5% of children under five years of age are overweight.

Immediate causes of malnutrition

In terms of infant and child mortality in Sudan, improvements in the last decade are being undermined: the Infant Mortality Rate (IMR) fell from 77 per 1,000 live births in 1990 to 68 deaths per 1,000 live births in the late 1990s, but has increased to 76 per 1,000 live births in 2006⁵. A similar trend is seen in the Under Five Mortality Rate (U5MR) which declined from 124 per 1,000 live births to 104 in 1999, but has increased to 109 per 1,000 live births by 2006⁶.

Overall, health indicators in Sudan are in line with those in Sub Saharan Africa. Malaria, diarrhoea and acute respiratory infections are the major diseases reported, especially in children. Each child aged under 5 years suffers with 4 - 6 episodes of malaria and acute respiratory infection annually⁷. The multiple episodes of illness that children suffer in Sudan contribute to the malnutrition levels in the country which in turn contributes to the increasing IMR and U5MR.

The Household Health Survey 2006 states that 28.7% of children under five had diarrhoea in the two weeks preceding the survey: with 36.7% of children between 6-23 months of age reporting having diarrhoea in the two weeks preceding the survey. These figures have very serious implications, given the well recognised links between diarrhoeal disease and malnutrition throughout Sudan.

While evidence is limited, available information would indicate that dietary intake in term of quantity, quality and diversity is not universally sufficient across the country.

Public Health Environment

Basic health service provision is inadequate in Sudan. It is estimated that the overall coverage of basic health services to the population is between 45-60%. There are substantial inequalities, both geographic and socio-economic, in terms of access to health services. Coverage of services is biased to urban environments, leaving rural populations underserved and with existing services skewed towards hospital and tertiary services, as opposed to preventive public health services. Of those health facilities that are physically in place, actual ability to provide services is variable: a survey of the health system in 2004 reported more than one third of PHC services were not functioning, and that a worrying percentage of facilities did not have key equipment and drugs available.

⁴ Sudan Household Health Survey, 2006

⁵ Sudan Household Health Survey, 2006

⁶ Ibid.

⁷ Review of the Millennium Development Goals for Health, Nutrition & Population, Republic of Sudan, 2003.

Referral systems between services and facilities are limited. The role of the private sector and traditional healers in terms of providing health services are not well characterised, and there is a need to ensure that alternative (traditional and private) health services are complementary to government supported services. Quality and coverage of public health services in formal fixed facilities as well as through campaigns; show room for improvement. In Sudan, less than half of children aged 12-23 months (41.4%) are currently vaccinated against all childhood diseases. In terms of supplementation, while 76% of children 6-59 months received vitamin A supplementation in the last 6 months, only 18.5% of women who had delivered received vitamin A supplementation within 2 months after giving birth⁸.

According to the Sudan Health Strategy 2007-2011, 22% of existing PHC facilities are providing the minimum PHC package; 74% provide EPI services, 20% provide IMCI services and 20% provide nutrition services.

Recent figures suggest that less than two thirds (56.1%) of households used improved sources of drinking water, and less than one third (31.4%) of household members in Sudan live in households using improved sanitation facilities. Causes of diarrhoeal disease include lack of access to safe water supply and sanitation (along with poor hygiene practices in the household / during food preparation, described further in the following section).

In terms of maternal health services, availability and use of needed antenatal and postnatal care also leaves room for improvement. Around 69.6% of pregnant women received antenatal care once or more during their pregnancy.

Maternal and child care practices

Available information on the social and care environment, referring to infant and young child feeding as well as maternal health issues and gender equity, indicates that there is room for improvement.

The majority of infants and young children in Sudan are not optimally fed. Only one third (33.7%) are exclusively breastfed to the recommended duration of 6 months, thus immunity of 64% of infants under six months is reduced due to early exposure to pathogens through premature introduction of complementary foods. Slightly more than half (55.8%) of young children aged 6-12 months receive complementary foods in addition to breast milk, putting them at risk of not meeting their nutrition needs as they develop. Across age groups, approximately only one third of children aged 0-11 months are appropriately fed, which is an indication of poor nutritional counselling. While not common 3.5% of children under-five years of age are overweight. In the context of increased access to non traditional, and process food, as well as limited physical exercise, children are put at risk of developing lifestyle diseases such as type 2 diabetes at a young age. There are growing numbers of young and old people that are diabetic or obese, due to inappropriate food habits.

In terms of health practices, recent studies suggest that family practices in response to illness are mixed. Of the children with suspected pneumonia, 90.1% were taken to an appropriate health provider. However, only 58.3% of children aged 0-59 months with diarrhoea were treated with oral rehydration therapy indicating that there is need for improvement.

⁸ Ibid.

Traditional roles as well may exert a gendered influence in terms of access to resources and decision-making power and various food taboos during pregnancy and lactation potentially compound poor nutrition status.

Food availability and access

The agriculture sector represents a large proportion of National GDP. In 2005, agriculture represented 39% of the GDP, of which 25% was from crop production and 20% was from livestock. Agriculture is the main course of employment and source of household income in rural areas, and about 80% of the labour force is employed in agriculture and related agro-industries⁹.

Crop production, dominated by cereal production, is characterised by fluctuations in yield that are tied to climatic conditions. Recurrent episodes of natural and manmade disasters have crippled the economy and livelihoods of both urban and rural populations. Failures in the quantity, duration and place of the annual rainfall has often led to food shortage and famine, and to migration of people from the areas affected. With 90% of the livestock in the country belonging to traditional pastoral production systems¹⁰, the limited coverage of veterinary services has resulted in preventable outbreaks of animal disease and loss of productive assets.

Recent improvements in overall production at National or State level do not necessarily lead to increased availability and access at the local level. In many cases, infrastructure remains to be repaired or, is developing, impeding the flow of goods to market which is compounded by insecurity. Even when available in the market, falling per capita income coupled with increasing market prices inhibits access to food that may be available in the markets.

Food aid has played a significant role in recent years, in terms of direct consumption as well as acting as an income transfer when sold in the markets for money to cover other basic needs. Its transitioning role needs to be clarified and addressed in future programming.

Coping strategies in response to food shortages vary from state to state, and as well in response to seasonal stress. Some coping strategies, such as collection of materials for sale prior to the hunger gap, location of wild food, changes in quantity or quality of meals, and labour migration are considered insurance or “non-erosive” strategies that serve to mitigate stresses. Crisis coping strategies, however, such as sale of productive assets, and mass migration or displacement are considered to be “erosive” in that they can directly exert negative impact on current nutrition status as well as longer term productive capacity of households to meet their basic needs, which can have knock on effects on future nutrition status. These two types of coping strategies are being employed in Sudan at different times, but the degree each is utilised differs, based on severity of the situation in a given time.

Basic causes

Underpinning the poor conditions related to underlying causes of malnutrition are deficiencies in the management of the human and natural resource base, which is exacerbated by differentials in terms of accessing and utilizing these resources across geographic areas, ethnic groups and gender.

⁹ FAO/WFP Crop and Food Supply Assessment Mission to Sudan, February 2007.

¹⁰ Ibid.

The capacity of the public health system is not sufficient to support the decentralisation of planning and management of services, while the management of the country's natural resources to date has disfavoured those without skills, land, other resources or adequate social and political networks.

There is a bias towards provision of services in urban areas, despite the fact that more than half of the population live in rural areas. Internally displaced persons are marginalized in many ways, and lead precarious lives at the fringes of society, at the same time exerting pressure on basic services for the urban population, while nomadic populations are consistently less able to access basic services than resident populations.

Globally, a mothers' educational attainment level is recognized as having a positive impact on the health and development of her child. Repeatedly, research shows that less educated caregivers (usually the mother) generally have poorer access to information on basic health care than their better educated peers, which in turn can lead to ill informed decisions about when and how to seek care for sick children. It can also lead to poor decision making on the spectrum of recommended health promoting activities such as vaccination, breastfeeding and weaning, general hygiene in the home and in food preparation.

The Sudan Household Health Survey 2006 analyzed indicators against mother's educational level (mother did not attend school; attended primary school; and attended secondary school). This analysis overwhelmingly & systematically illustrated the importance of a mother's educational level on the health of a child; with the children of women who attended secondary school fairing best in terms of higher coverage of health promoting interventions and lower levels of illness. The varying levels of women's education in the country result from different levels of access to formal education services at primary, secondary, and tertiary levels and the informal institutions.

In the end, the provision of services and management of resources are tied to political and economic climate which has until recently been unstable.

Key Challenges and Barriers

There are a number of challenges and barriers to the accomplishment of the goals, objectives and strategies contained within the policy.

Provision of services, management challenges and human resource issues

- The capacity to deliver high quality nutrition services is variable across the states in Sudan.
- The coverage of health and nutrition services across Sudan is limited. Despite the government commitment to significantly increase coverage of basic health and nutrition services, the reality is that it will take many years for adequate coverage to be reached; particularly in areas experiencing conflict. This limitation is exacerbated in areas where collaboration between facility based and community based activities is weak.
- Even if individual knowledge and attitudes are improved, the actual capacity of the population to put recommendations into practice, and to utilise services, is contingent on the availability and access to resources at local levels.

- The planning and management capacity of the public health system requires strengthening at all levels.
- Nutrition is not adequately mainstreamed into either pre-service or in-service training for wider public health staff, nor for staff in related sectors such as education, water and sanitation and agriculture. As a result, the ability to work together across sectors is limited.

Institutional barriers

- Improvements in the health sector alone will not bring about sustained changes in nutrition status, however formal collaboration between relevant line ministries in relation to nutrition is limited.
- The awareness of key decision makers at various institutional levels in other sectors of the potential impact of the work of their sector(s) on nutrition is low, leading to undervaluing the incorporation of nutrition considerations into their planning or monitoring and evaluation.
- Humanitarian and development agencies have their own mandates and institutional obligations which make them more or less able to collaborate with government structures and other partners.

Financial barriers

- There is a high dependency on donor funding, which limits the time frame for planning and the areas where financial resources are available. Additionally, continued insecurity in some areas is a disincentive for donor funding and private investment in the country.
- Available resources could be used more efficiently through coordinated planning; however the capacity to manage the decentralization of public services is limited.
- Nutrition is not assigned a high priority in terms of resource allocation.
- Due to the fact that nutrition status is determined by so many factors, it is challenging to demonstrate direct impact of nutrition and non-nutrition related activities on nutrition status, which in turn diminishes the ability of agencies to mobilize resources.

Section Three

Mission statement

The Federal Ministry of Health will mobilise resources in order to ensure the provision of core nutrition services for the people of Sudan with emphasis on the needs of the poor, the underserved, disadvantaged and vulnerable. The FMOH will also work in close collaboration with other relevant sectors in efforts to address direct and indirect causes of malnutrition, to contribute to the improvement of individual wellbeing, and bring about longer term development and economic prosperity for the nation. The NNP will specifically work towards the achievement of the food and nutrition related Millennium Development Goals and Targets.

Guiding principles

The Federal Ministry of Health will carry out its mission to address nutrition issues based on a number of guiding principles:

Recognizing the multi-causal nature of malnutrition & need for situation analyses

Malnutrition is the outcome of direct and underlying causes. These causes often exert synergistic effects on each other, and their respective contribution can shift over time. Vulnerability also varies across age and gender. Clarity over the needs of different age-groups as well as specific underlying causes of malnutrition will lead to well-focused programming for each group that addresses areas of need.

Promoting multi-sectoral coordination and collaboration

Good nutrition results from, and is sustained by, effective work in many sectors. All actors working on nutrition-related issues bear a responsibility to inform each other of their work, and to communicate to others how they will achieve their successes. The FMOH will be the primary facilitator of coordination between these partners at National level. At State level multi-sectoral activities related to nutrition should be well coordinated to ensure coherence of approach and complementarity; and to prevent duplication of activities. Joint planning and monitoring of activities should be carried out and areas of potential collaboration must be actively explored and developed. SMOH will take the lead in facilitation of coordination at State level.

Strengthening work across Federal and State levels

Decision-makers at national, state and local levels all have the potential to make positive impacts on nutrition status of individuals and the population. Federal, state and local levels share responsibility, but play different roles in ensuring appropriate actions for maximum impact. Definition of roles and responsibilities, as well as methods of communication, between the various levels will be clearly outlined by FMOH.

Building on community capacities

All planning and programming will aim to enable local communities and families to make the most of their own skills and capacities in improving their nutritional situation, through a participatory manner wherever possible that makes best use of available resources. This will be critical for developing community preparedness for known threats to nutrition and food security.

Engaging with the private sector

FMoH will proactively engage with the private sector in efforts to develop services and products which promote the nutritional health of the population, and where appropriate formal partnerships will be developed.

Developing and sharing nutrition information and research

Existing nutrition information systems (monitoring, evaluation, surveillance) will continue to be developed, and mechanisms to promote the sharing and use of information will be strengthened in order to promote evidence based decision making. Research will be carried out to fill in gaps in knowledge, where appropriate.

Effective and efficient utilisation of resources

FMoH will work towards effective and efficient utilisation of resources, prioritising proven high impact treatment interventions and proven high impact-low cost preventative interventions. It is recognised that up-front investment in programmes and capacity-building may be required in the short and medium term to achieve greater impact in the longer term.

Policy themes, objectives, strategies and activities

1. Prevention, detection and treatment of nutrition related disorders

There is an urgent need to put into place policies and programmes that address the many types of malnutrition that are present in Sudan. Nutrition related disorders include acute malnutrition, chronic malnutrition, and underweight, as well as micronutrient deficiency diseases. This also refers to lifestyle diseases, such as obesity, that arise out of people's utilization patterns. There is a need to encourage people to make choices to safeguard their health and wellbeing within their capacity to do so, as well as set in place institutional initiatives that can address these issues at the population level.

During emergencies, both man-made and natural, acute malnutrition may increase as a result of rapid deterioration in the condition of the various underlying factors such as food security, the public health environment, and caring practices. The government must ensure that appropriate capacity to prevent, detect and treat acute malnutrition exists throughout the country during both emergency and non emergency situations. The capacity to respond in emergency and non emergency situations must be guided by national standards.

Objective 1: Ensure the prevention and treatment of nutrition related disorders in emergency and non emergency situations.

Strategies

- a. Prevent chronic malnutrition through improved dietary intake and reduced infant morbidity.
- b. Prevent, detect and treat acute malnutrition (including response to emergencies) through provision of appropriate services through the public health system.
- c. Prevent, detect, and treat Micronutrient Deficiency Disorders (MDDs) through a combination of supplementation, fortification, education, and food based approaches.
- d. Prevent obesity and lifestyle diseases through the promotion of optimal eating and physical exercise habits.

Strategy 1.a: Prevent, chronic malnutrition through improved dietary intake and reduced infant morbidity

- Promote improved dietary intake through education/behaviour change (linked to strategy 7).
- Promote improved household health practices in care of the sick child and particularly within reference to nutritional care, through education/behaviour change (linked to strategy 7)
- Promote improved health seeking behaviour through education/behaviour change (linked to strategy 7)
- Advocate for increased availability of, and access to, child health services (linked to strategy 4a)

Strategy 1.b: Prevent, detect and treat acute malnutrition (including response to emergencies) through provision of appropriate services through the public health system

- Ensure adequate services are established to prevent and treat moderate and severe acute malnutrition where needed, within the public health system, based on evidence and prevalence of malnutrition in the catchment area and using an integrated approach.
- Expand / scale up Community Management of Acute Malnutrition across Sudan using a phased approach.
- Strengthen the system of screening and referral within the public health system.
- Ensure that the procurement of therapeutic products and equipment are incorporated into the Essential Drugs List and minimum equipment standards for facilities, where acute malnutrition is treated.
- Ensure FMoH capacity to respond to emergencies through developing appropriate emergency preparedness plans at state and Federal levels. This includes development of systems to ensure adequate supply of human resources, supplies, and supervisory support.
- Increase community capacity to respond in emergencies through facilitating community involvement in emergency preparedness and response planning, as well as through education.
- Develop appropriate refresher training / capacity building / standards for emergency health & nutrition staff (government and non government).
- Develop emergency response guidelines (including assessment techniques and specifications for needs of all age groups and special cases) in consultation with relevant agencies. These guidelines would outline initial situation assessment procedures, criteria for response, individual targeting criteria, and minimum standards to ensure quality programming.
- Ensure supplementation of vitamin A and iron/folate, in emergencies, as appropriate.
- Where there is significant nutritional risk or a demonstrated increase in the prevalence of acute malnutrition, ensure timely and appropriate implementation of emergency supplementary feeding programmes as a short term intervention.
- Ensure food aid, which aims to meet nutritional needs, is safe, is adequate in quality (including fortification levels) and quantity and is effectively targeted to the most vulnerable groups.

Strategy 1.c: Prevent, detect, and treat Micronutrient Deficiency Disorders (MDDs)

Prevent, reduce, detect and treat Iodine Deficiency Disorders (IDD), Vitamin A Deficiencies (VAD), Iron Deficiency Anaemia (IDA), and other micronutrient deficiencies; through an integrated strategy of supplementation, treatment, fortification, education and food based approaches.

1.c.1 Prevent, detect and treat iodine deficiency disorders

- Develop and implement the Universal Salt Iodization (USI) Programme, incorporating support to increased supply (increased, high quality production) as well as demand (social mobilization campaign).
- Develop and endorse appropriate legislation to support USI campaign.
- Detect and treat goitre according to National protocols.
- In goitre endemic areas, carry out iodine supplementation campaigns.
- In goitre endemic areas, promote limited intake of goitrogens such as millet cassava and cabbage, through education/behaviour change (linked to strategy 7).

1.c.2 Prevent, detect and treat vitamin A deficiencies

- Carry out vitamin A supplementation campaigns for children aged 6-59 months twice per year.
- Increase coverage of health services and utilise to increase coverage of routine vitamin A supplementation for post partum women (through routine RH services).
- Detect and treat vitamin A deficiencies according to National protocols.
- Promote increased dietary intake of vitamin A through education/behaviour change (linked to strategy 7).
- Explore vitamin A fortification options.

1.c.3 Prevent, detect and treat iron deficiency anaemia

- Increase coverage of health services and utilise to increase intake of iron and folic acid supplementation for pregnant and lactating women (through routine RH services).
- Address underlying causes of iron deficiencies in particular hookworm and malaria.
- Promote increased dietary intake of iron through education/behaviour change (linked to strategy 7).
- Pilot flour fortification and develop strategy for expansion as needed.

1.c.4 Prevent other micronutrient deficiencies

- Explore options to address vitamin B and vitamin C deficiencies.

1.c.5 Research and development of food based approaches

- Support development of food based approaches to MDDs through research and development of nutrition practice at community level (linked to strategy 3).

1.c.6 Conduct micronutrient deficiency survey

- Carry out a MDD survey to give up to date and comprehensive information on the MDD situation across the country. This will provide baseline information to monitor progress as MDD initiatives are established across the country (linked to strategy 10b).

Strategy 1.d: Prevent obesity and lifestyle diseases through the promotion of optimal eating and physical exercise habits.

- Pilot test and develop education materials including key points related to new foods (e.g. processed) to promote healthy living and optimal lifestyle choices.
- Encourage positive eating habits and promote awareness of the role of exercise in weight management and health.
- Promote physical activity for health for all ages through development of appropriate facilities
- Target families with family histories of diabetes and heart disease for health promotion activities.

2. Addressing the intergenerational cycle of malnutrition

It is critical that the intergenerational cycle of malnutrition (see Figure 2) is addressed through timely application of nutrition and nutrition related interventions. Nutrition needs change throughout the life cycle, and individuals may be more or less able to meet those needs, depending on conditions of the underlying causes of malnutrition. People may become nutritionally at risk due to illness and weaker immune systems - which makes them more susceptible to nutrition-related diseases and necessitates increased caloric and micronutrient intake. Specific efforts will be made to target the population at critical times, including tailoring nutrition education efforts to meet their needs. This is also linked to capacity building and raising awareness within staff in all relevant sectors. Breaking the intergenerational cycle of malnutrition requires concerted action across the various institutions that interact with individuals through their life cycle.

An Essential Nutrition Package to prevent malnutrition has been developed; specifically to address the issue of maternal and infant malnutrition. The ENP encompasses women's nutrition and child spacing; infant and young child feeding (optimal breastfeeding, optimal complimentary feeding); nutritional care of the sick child; micronutrient supplementation (vitamin A, iron and iodine) and diversification of diet; growth monitoring and promotion with referral to services; immunisation and promotion of improved hygiene and sanitation. These priority interventions or practices are proven to have high public health and nutritional impact.

The essential actions to prevent malnutrition will be delivered by public health and nutrition staff at facility and community level, through all relevant MCH/PHC component programs.

Objective 2: Reduce nutritional risk for individuals throughout their life-cycle through implementation of integrated health, nutrition, and food security interventions.

Strategies

- a. Improve maternal nutrition status
- b. Improve infant and young child nutrition status
- c. Address the nutritional needs of school age children and adolescents
- d. Address the nutritional needs of adults and older persons

Strategy 2.a Improve maternal nutrition status

- Pilot and roll out/scale up essential nutrition package to prevent malnutrition (see strategy 2 b).
- Define national guidelines for assessment of maternal nutrition status.
- Work with Reproductive Health Section of FMoH and other partners to increase availability and access to existing antenatal and postnatal care, including iron/folate and vitamin A supplementation.
- Promote increased utilisation of maternal health and reproductive health services through community level awareness raising activities.
- Promote optimal nutrition during pregnancy and lactation through community and facility based nutrition education addressing food taboos
- Develop educational materials to promote maternal nutrition (linked to Objective 7.2).

Strategy 2.b: Improve infant and young child nutrition status

- Pilot and roll out / scale up essential nutrition package to prevent malnutrition (see Strategy 2 a).
- Establish Baby Friendly Hospitals and ensure their acceptability to mothers and ensure that appropriate monitoring and supervisory capacity is in place.
- Protect, promote and support optimal infant feeding at facility and community level i.e. promotion of exclusive breastfeeding to 6 months, appropriate and timely complementary feeding (including use of locally produced fortified complementary foods), and continuation of breastfeeding for the first two years of life.
- Support local production of fortified complementary feeding foods.
- Strengthen growth monitoring and promotion activities in health facilities, in particular through reviewing and adapting the health promotion aspect.
- Develop community educational materials to promote infant and young child feeding
- Incorporate messages related to optimal IYCF in the case of HIV/AIDS into community education materials (linked to Objectives 5 and 7).
- Continue to improve availability, access and utilisation of EPI services for young children.
- Continue to improve availability, access, and utilisation of GMP/IMCI services, and strengthen the links between them through reinforcing the health promotion activities related to GMP/IMCI.
- Develop appropriate legislation and monitoring structures to ensure that the marketing of breast milk substitutes is in line with international guidelines through adaptation and adoption of the International Code on the Marketing of Breast Milk Substitutes.
- Develop monitoring structures to ensure that women in the workforce have adequate access to maternity leave and entitlements to enable them to practice optimal infant feeding in line with national legislation.

Strategy 2.c: Address the nutritional needs of school age children and adolescents

- Review and update School Health and Nutrition guidelines with relevant stakeholders.
- Incorporate basic nutrition concepts into primary and secondary curricula.

- Establish school gardens linked to nutrition education.
- Define the approach and guidelines for school feeding to ensure that where school feeding takes place, this process supports local capacity and does not undermine educational goals.
- Ensure mobilization of resources in order to fulfil the nutritional objectives of the school health programme.
- Explore efficacy and effectiveness of iron/folate supplementation for school age girls to address maternal mortality and improve birth outcomes.
- Work with other organisations within the framework of the FMoH's Reproductive Health policy to address awareness of reproductive health issues and implications of nutrition status.
- Develop educational materials to promote nutrition of school age children and adolescents.
- Promote supportive environment for and community awareness on adequate nutrition for schools age and adolescents

Strategy 2.d: Address the nutritional needs of adults and older persons

- Develop appropriate educational materials to promote nutritional needs of adults and older persons.
- Support community structures to increase awareness & provide guidance on adequate nutrition of older persons
- Advocate for appropriate services to support livelihoods, nutrition status and health of older persons.
- Develop guidelines on screening tools and nutrition interventions to support malnourished older persons (including in emergencies).

3. Food Utilization

Optimal food utilization involves maximizing the nutritional value of available foods (mainly related to preparation) and in some cases filling in the gaps by devising ways to ensure that locally available food is nutritionally adequate, for example through fortification efforts.

Sound traditional knowledge about the healthy use of Sudan's foods and other resources is largely unwritten and is being lost as older generations die. Efforts will have to be made to save this heritage, and build on it for nutritional benefit, including through bringing it up-to-date using modern technology and modern means of communication.

Objective 3: Increased optimal use of available food and micro level resources to maximize nutritional benefit.

Strategy 3: Support optimal use of available food and micro level resources to maximise nutritional benefit

- Carry out research into feasible community level approaches (e.g. home gardens, small animals and poultry, fish) to prevent malnutrition based on consumption patterns.

- Support local production of fortified foods, including complementary foods, through appropriate research (including market research), pilot testing, standard setting and monitoring.
- Support engagement of the private sector in terms of increasing intake of micronutrient rich foods at community level.
- Explore ways to increase local production through promotion of small scale food processing techniques.
- Explore and document Sudan's traditional knowledge about and healthy use of foods.
- Work with food security and agricultural development bodies to ensure increased availability and access (financial and geographic) to food commodities at the community and household level.

4. Using an integrated approach to address malnutrition and morbidity

There are very close links between nutrition and health, both in terms of direct causes and the prevention and treatment of malnutrition.

Inadequate dietary intake and illness are the direct causes of malnutrition, and have a reciprocal relationship with each other. Poor health reduces the ability to absorb nutrients and decreases appetite, while inadequate intake weakens the body's ability to fight off disease. Availability of and accessibility to quality child health care services will reduce nutrition risk caused by excess morbidity.

In order to address prevention and treatment of malnutrition comprehensively, there is a need for the coordinated involvement of a range of health providers across the public health system. There is need to clarify respective roles and responsibilities of the various health providers in relation to nutrition, to strengthen linkages between facility and community based nutrition related activities; and to strengthen relationships and improve communication /coordination between the NND and the wider PHC department at Federal and State levels.

Objective 4: To reduce nutrition risk and improve malnutrition prevention and treatment programming.

Strategies

- a. Reduce nutrition risk caused by excess morbidity through increased coverage and accessibility of quality of basic child health care services (IMCI).
- b. Improve nutrition related programming through coordinated engagement of a wide range of health providers in nutrition related activities and the establishment of strong linkages between facility and community based nutrition activities.

Strategy 4.a: Reduce nutrition risk caused by excess morbidity through increased coverage and accessibility of quality of basic child health care services (IMCI)

- Expand and improve quality of accessible child health care services (IMCI)
- Ensure appropriate linkages with community level health and nutrition extension works and that referral mechanisms are established
- Develop nutrition education materials related to nutritional support in the case of illness, including HIV/AIDS & post surgery; to be shared at community level as well as incorporated into various health provider curricula.

- Provide nutrition support through feeding programmes for inpatients in hospitals.
- Provide nutrition support for optimal nutrition practice for patients on discharge and for outpatients.
- Promote understanding of integration of nutrition (into routine maternal and child health services), within PHC/MoH and with support of partners.

Strategy 4.b: Improve nutrition related programming through coordinated engagement of a wide range of health providers in nutrition related activities and the establishment of strong linkages between facility and community based nutrition activities

- Promote understanding of integration of nutrition (into routine maternal and child health care/services) within PHC and MoH with support by partners.
- Strengthen working relationships and communication channels between PHC and Nutrition Directorate at Federal and State levels
- Clarify respective roles and responsibilities (in relation to nutrition) of the various health and nutrition staff at facility and community level
- Clarify and support collaboration/co-ordination mechanisms at facility and community level and between the two levels.
- Document examples of good practice of implementation of integrated programming and facilitate learning exposure visits and replication of best practice.

5. HIV/AIDS

A low, but significant and rising prevalence of HIV and AIDS cases adds to the threats to health, productivity and wealth in Sudan. HIV and AIDS-related nutrition disorders affect both adults and children. Typically, malnutrition lowers immunity by about a third, and this hastens the progression of HIV into AIDS, and AIDS into early death. HIV and AIDS can result in loss of appetite and even anorexia. At the same time, HIV and AIDS can interfere with the body's ability to adequately uptake and process necessary nutrients - calories, proteins and fats.

On the other hand, HIV and AIDS increases the need for a diverse and nutritious diet: people living with HIV and AIDS need increased amounts of protein to make up for the wasting of muscles, increased amounts of calories to address general wasting and increased amounts of vitamins and minerals to provide support to an immune system that is constantly under attack from the virus.

Objective 5: Ensure that the nutritional needs of people living with HIV & AIDS and their families are adequately addressed

Strategy 5: Develop systems and guidelines to support the nutritional needs of people living with HIV & AIDS and their families

- Promote health eating habits for people living with HIV/AIDS and their families at facility and community level.
- Develop community nutrition education materials related to healthy eating habits for people living with HIV/AIDS and their families (linked to Objective 7).

- Incorporate messages related to optimal infant and young child feeding in the case of HIV/AIDS into community education materials (linked to Objective 2 and 7).
- Develop appropriate nutritional guidelines for patients with HIV on drug treatment regimes, in collaboration with medical staff.
- Establish appropriate mechanisms to facilitate referral across sectors, to ensure that livelihood support programmes and social welfare programmes target families of persons living with HIV/AIDS to enable them to access adequate resources required in addressing their health and nutrition needs.

6. Food safety and quality

Poor quality food poses a threat in Sudan. Many nutrition-related disorders result from consuming food that is spoiled or contaminated. National legislation regulating the quality of food must be reviewed and enforced and systems must be developed to ensure that foods are processed in accordance with high standards of sanitation. Additional research must be conducted to determine which foods pose the greatest threat, and production and consumption of these foods at household and institutional levels must be regulated accordingly.

Objective 6: Ensure quality food production that meets food safety standards.

Strategy 6: Develop systems and guidelines to safeguard quality food production that meets food security standards

- Ensure that emergency food aid meets food safety standards.
- Review and strengthen food safety framework in terms of human resources, technical support, communication networks, and supervisory ability.
- Review existing food safety and food quality procedures, identifying roles for nutritionists and others involved in the food safety chain, and priority commodities for monitoring.
- Define minimum nutritional and food safety standards for meals in institutions (universities, prisons, hospitals).
- Develop and implement appropriate food safety standards for restaurants, including developing human capacity to do so.
- Ensure that the food quality/food safety testing facilities have the necessary resources and capacity to carry out timely testing of commodities; and guidelines for the destruction of spoiled or unsafe food are developed.

7. Nutrition education/ behaviour change communication

Many people suffer from malnutrition not simply because of household food insecurity, but because of suboptimal choices made with respect to available resources. Nutrition education is therefore critical in the fight against malnutrition. In addition to nutrition education at health facility level, diverse channels for information dissemination will be pursued at community level in order to maximize access to those most in need.

Objective 7: Increased knowledge & awareness & improved nutrition practice at community level

Strategy 7: Utilise social mobilization, nutrition education/behaviour change communication and advocacy strategies to promote improved knowledge and nutritional practices through all health facilities, at community level and through the general media

- Ensure that appropriate nutritional education /BCC is conducted at facility level; linked to the services the individual is attending.
- Develop and support appropriate structures to promote nutritional education /BCC interventions at community level.
- Develop appropriate materials related to each of the core areas to support nutritional education /BCC at facility and community levels. The core areas include the Essential Nutrition Package components which encompasses women's nutrition and child spacing; infant and young child feeding (optimal breastfeeding, optimal complimentary feeding); nutritional care of the sick child; micronutrient supplementation (vitamin A, iron and iodine) and diversification of diet; growth monitoring and promotion with referral to services; immunisation and promotion of improved hygiene and sanitation. Other core areas are nutritional needs for school age children and adolescents, nutritional needs for adults and older persons; nutritional needs for people living with HIV & AIDS and their families and nutritional needs and lifestyle habits to address obesity.
- Develop mechanisms for training community leaders (including religious leaders) extension workers and other key community links/groups to share basic nutrition and health messages based on core areas and key messages.
- Develop and implement strategies for utilisation of media to promote improved nutritional status.
- Develop a comprehensive nutritional education /BCC strategy, outlining key focus areas/ topics and key messages, and channels of communication/ key contact points with the PHC system and within the community

8. Capacity Building

During the five years of this Strategy, nutritionists in the National Nutrition Directorate, FMoH will have a lead role in planning, implementing, monitoring, and evaluating nutrition related activities across the country, while State level nutritionists will be the focal persons to take the process forward at State level. These nutrition staff will need support, upgrading, and expansion of their numbers and skills.

The 2008-2010 Strategy is consequently built around developing the profile and reach of these nutritionists, with a view to their leading the multi-sectoral nutrition strategies of the future.

For nutrition interventions to be successful, various sectors of service provision must have the capacity for proper implementation. Leadership in several sectors is called for to support the professional and technical staff to engage in the wider issues involving nutrition.

Health staff will need to broaden the scope of nutritional action, keeping the whole population in mind, the changing nutritional needs throughout the lifecycle and the nutrition related programming interventions, as determined in the ENP and NNP.

Agricultural officers need to think more often of the consumers of food, and their access to food products and markets; while teachers at all levels need to keep in touch with the lives of their students, and to incorporate material which addresses student needs for knowledge about foods and nutrition.

This will require ensuring that relevant nutrition and nutrition related concepts are strengthened in pre-service and in-service training of health providers and staff from other related sectors; and within the broader context of advocacy, ensuring an enabling human resource policy environment for the application of this knowledge and skill.

Objective 8: Increase skills and capacity of nutrition staff and non nutrition staff working in areas related to the direct and underlying causes of malnutrition.

Strategies

- a. Support and develop technical and managerial/planning capacity in nutrition for nutritionists and dieticians
- b. Support and develop appropriate nutrition capacity of wider public health staff
- c. Support and develop appropriate nutrition knowledge/ capacity of technical staff in related sectors

Strategy 8.a: Support and develop technical and managerial capacity for nutrition educators, dieticians and nutritionists

- Identify key institutions and individuals to act as focal nutrition and food security resources in Sudan (in collaboration and under the guidance of FMoH), and develop appropriate information sharing and collaboration mechanisms.
- Define nutrition competencies for nutrition and dietician staff.
- Undertake a thorough review of capacity of existing secondary and tertiary training structures and courses for nutritionists, nutrition educators and dieticians and strengthen the capacity of these institutions to provide high quality training which addresses underlying causes of malnutrition, prevention and treatment of malnutrition and nutrition guidance through the life cycle.
- Review and amend the various training curriculum to ensure incorporation of recommended theoretical models (as above) and inclusion of key subject areas/ topics in line with ENP and NNP; recognising that curriculum will require periodic updating and amendment to incorporate new developments and innovations.
- Address certification issues within the context of training and competencies/skills.
- Define a clear career structure for nutritionists in order to address human resource issues related to recruitment, retention and promotion within the government system.
- Review the structure of the National Nutritionist Directorate to ensure division of labour by specialisation while ensuring adequate communication and collaboration between the various areas/ specialisations and continue recruitment of high quality nutritionists.
- Develop and implement a capacity building strategy to strengthen state and federal level MoH nutrition staff technical and managerial skills and to appropriately strengthen skills of sub-state supervisory and operational level staff.

Strategy 8.b: Support and develop appropriate nutrition capacity of wider public health staff

- Undertake review of nutrition related activity carried out by the various health providers at facility and community level and define desired nutrition related skills and competencies of the various health staff: Doctors, Medical Assistants, Nurses, Nurse/Midwives, Health Visitors, Integrated PHC Cadre, Village Midwives, CHWs and CHVs.
- Review breadth and depth of nutritional content currently included in training curriculum of various public health staff and amend as appropriate: to incorporate basic nutrition concepts, and inclusion of key subjects/topics; underlying causes of malnutrition, prevention and treatment of malnutrition and nutrition guidance through the life cycle, inline with ENP and NNP. Depth and breadth of information and focus of subject area(s) will be variable depending on the level of staff and the required competency /skills.
- Develop appropriate mechanisms for carrying out nutrition related in-service and refresher training for health staff.
- Develop human resources policies to ensure the rationale distribution and movement of key medical staff to prevent disruption in services, as well as promote staff retention.

Strategy 8.c: Support and appropriately develop nutrition knowledge/capacity of technical staff in related sectors

- Identify key institutions and individuals to act as focal nutrition and food security resources in Sudan (in collaboration and under the guidance of FMoH), and develop appropriate information sharing, collaboration mechanisms (linked to Strategy 9).
- Define nutrition competencies and skills for relevant staff in other sectors and incorporate into human resources policies.
- Incorporate basic nutrition concepts into training curriculum for key professionals in other sectors, e.g. teachers, agricultural workers, food technologists, lab technicians, according to a review of existing curricula and defined nutrition competencies for various staff from each sector.
- FMoH to provide support to UN and NGOs in efforts to raise awareness of nutrition concepts and use in policy and programming through workshops
- FMoH to engage in activities to raise awareness of nutrition issue and concepts with media institutions and reporters.

9. Multi-sectoral engagement in nutrition related activity

Currently, the contribution of other sectors in addressing malnutrition in Sudan is not linked to health sector interventions and there is no mechanism to coordinate the planning or implementation of nutrition related interventions across the various sectors. Thus, in both developmental and emergency situations the ability to implement effective, high quality nutrition interventions in a resource efficient manner is limited.

To address malnutrition comprehensively requires the sustained and coordinated involvement of a number of sectors: with each sector explicitly incorporating consideration of nutrition related factors in policy development and programme

planning (includes specific nutrition related interventions and the linkages with other sectors).

There is need for a process/ mechanism to facilitate joint planning monitoring and evaluation of multi-sectoral activities to address malnutrition.

The FMoH will take the lead in fostering strong and active partnerships with other sectors around key issues of nutrition, and will develop appropriate mechanisms for information sharing, coordination and collaboration between sectors.

Objective 9: Multi-sectoral coordination and collaboration to address malnutrition comprehensively and effectively, to bring about sustained change in population nutrition status (linked to Objective 3).

Strategy 9: To promote and facilitate multi sectoral coordination and collaboration to address malnutrition at Federal and State levels

- FMoH advocacy at senior level across sectors to raise awareness of the requirement for multi-sectoral interventions and engagement to address malnutrition comprehensively
- Establish multi-sectoral coordination mechanism at Federal and State levels.
- Advocate for additional resources to address improvement of availability, access and use of safe water supplies and adequate sanitation for rural and urban communities and peri-urban IDP settlements (linked to Objective 10).
- Advocate for additional resources to improve availability and access to adequate shelter in urban and peri-urban IDP settlements (linked to Objective 10).
- Improve methods of identification of vulnerable groups for services through registration at health centres.
- With the Department of Water and Irrigation define priority areas for expansion of water and sanitation efforts at the community and institutional level (e.g. schools, hospitals) that takes into account areas of nutritional risk.
- With the food security and agricultural development bodies ensure increased availability and access (financial and geographic) to food commodities at the community and household level.
- Engage key bodies in the food industry in order to ensure high standards in food quality, nutritional content, and appropriate promotion to the consumers.
- Ensure that institutional feeding is carried out according to standards that promote healthy diets and maximizes use of local products to the extent possible.
- Ensure that the FMoH has the adequate resources and personnel to carry out its facilitation and coordination role in leading discussions and action to address malnutrition.
- Ensure that nutrition information is shared with partners in a timely manner through coordination meetings and other forum.

10. Nutrition information, research and advocacy

Policy and planning should be based on solid evidence; and thus there is a need to strengthen the existing information base to ensure that it is comprehensive, accurate, timely and accessible. Lessons learnt from implementation in the past should also be fed into the planning process and in some instances there is need for

further research to address gaps in the understanding of the dynamics of nutritional risk in Sudan.

The FMoH will undertake advocacy and lobbying campaigns where necessary. Recognizing that addressing malnutrition is a long term process the FMoH will advocate/lobby for funding and allocation of resources to ensure adequate financial resources for nutrition interventions in the short and longer term.

Objective 10: Strengthen nutrition information, research, and nutrition advocacy systems, to feed into national and local planning, analysis, monitoring and evaluation.

Strategies

- a. Strengthen and further develop timely & accurate nutrition information systems for action.
- b. Carry out research in areas that will improve the understanding of nutritional risk in Sudan.
- c. Utilisation of nutrition information in advocacy efforts across a range of nutrition related issues.

Strategy 10.a: Strengthen and further develop timely and accurate nutrition information systems for action.

- Support the continued development of nutrition information database and analysis systems for monitoring and evaluation of nutrition programming and nutritional status of the population.
- Define the nutrition information framework to link to other nutrition related information systems (e.g. baselines, clinic based surveillance systems, sentinel site surveillance systems, early warning systems, monitoring and evaluation) as well as define the appropriate institutional home for this system.
- Support the continued development of nutrition surveillance systems in line with the evolution of other nutrition related information systems, including the Sudan Food Security Information for Action initiative.
- Review stakeholder needs for nutrition information (type, timeliness) to feed into the development of national budgets for programme implementation.
- Ensure that nutritional surveys are conducted using the National Nutrition Survey Guidelines, in order to enable comparison between locations and across time.
- Develop an appropriate framework of indicators to monitor reduction in malnutrition, using the intergenerational cycle of malnutrition and building off existing information sources.
- Promote evidence based decision making and monitoring of programmes across sectors through ensuring the availability of information, technical support for its interpretation, and developing working relationships and capacity in nutrition in other institutions as needed.

Strategy 10.b: Carry out research in areas that will improve the understanding of nutritional risk in Sudan.

- Define appropriate collaboration mechanisms and focal institutions to prioritise nutrition research agenda.
- Carry out a National Nutrition Survey once during this policy lifetime in order to gather information on micronutrient and nutrition status of the population.
- Carry out operational research to identify appropriate mechanisms and methods for nutrition education at community level.

- Carry out research into local processing and food preparation techniques that preserve micronutrient levels.
- Document case studies illustrating links between household production and good nutrition, and use as the basis for defining implications for policy and programming between relevant actors (e.g. Agriculture, Finance and Planning).
- Compile lessons learned for nutrition and nutrition related efforts to form a foundation for further investigations and interventions.
- Commission research into differences in diet, living conditions, cooking methods and water/sanitation between IDP areas of origin and current settlement, in order to develop appropriate community education materials and guide programme planning to increase access to services.
- Commission research into appropriate methods to identify persons at nutritional risk (in references to all age groups) at health level.
- Commission research into consumption data to define food composition tables.
- In collaboration with other directorates within the MCH department, commission research into social determinants of health in order to guide programme planning and community education materials.

Strategy 10.c Utilisation of nutrition information in advocacy efforts across a range of nutrition related issues.

- National Nutrition Directorate to develop expertise in information and communication through recruitment and training of staff who would liaise with nutrition database focal persons in the development of information campaigns and other forms of communication.
- Develop a standard glossary of Arabic and English nutrition terminology to facilitate translation for communication and advocacy efforts among a wide variety of actors.
- Advocate for additional resources to address improvement in availability, access and use of safe water supplies and adequate sanitation, in rural and urban communities and peri-urban IDP settlements (linked to Objective 9).
- Advocate for additional resources to improve availability and access to adequate shelter in urban and peri-urban IDP settlements (linked to Objective 9).
- Advocate for incorporation of financial resources to support nutrition programming into Federal and State level development and planning budgets, prioritising health, water and sanitation and agriculture sectors in areas of collaboration.
- Define a strategy and framework for more effective use of nutrition information within government, non government, and media structures as the basis for resources mobilization, programme monitoring and evaluation.

Collaboration

The objectives in the policy outline the priority strategies for action over a five year period. Action will be required from many levels and many actors in order to fulfil the objectives of the nutrition policy. This section describes the mechanisms for collaboration and integration at Federal level: within the FMOH, with other Ministries and with other national and international partners; and then goes on to outline collaboration mechanisms at State and Community level.

Federal level collaboration

Within FMOH

While pursuing and monitoring the core nutrition activity, the FMOH's Nutrition Directorate (NND) will liaise with other Directorates and Departments and initiatives within the FMOH; in order to provide services, set standards, and strengthen the links between efforts to address morbidity and malnutrition. Table 1 outlines general areas of collaboration between the Nutrition Directorate and the various directorates/departments within the FMOH. This coordination will build off of existing communication mechanisms within the FMOH.

Table 1: Nutrition Directorate collaboration within the FMOH

Institution	Areas of collaboration
Ministry of Health Child and Adolescent Health Directorate	<ul style="list-style-type: none"> • Pilot and scale up of essential actions to address malnutrition • Growth monitoring and promotion • Vitamin A supplementation • Deworming • Prevention & treatment of major childhood diseases (e.g. diarrhoea, ARI, malaria) • Nutritional counselling and education at facility and community level • Screening, referral and treatment of Acute Malnutrition • Emergency nutrition response/preparedness • Nutrition information systems for planning / M&E • School health and nutrition (including school feeding) • Institutional feeding • Adolescent nutrition • Capacity building of health staff in nutrition • Collaboration between health and nutrition staff • Research • Advocacy • Food safety
Ministry of Health- EPI Directorate	<ul style="list-style-type: none"> • Growth monitoring and Promotion • Vitamin A supplementation • Deworming • Social mobilisation • Research • Advocacy
Ministry of Health- Reproductive Health Directorate	<ul style="list-style-type: none"> • Pilot and scale up of essential actions to prevent malnutrition • Nutritional counselling and education at facility and

	community level <ul style="list-style-type: none"> • Ante-natal and post natal care (iron/folate supplementation) • Postpartum vitamin A supplementation • BFHI • Deworming • Malaria prevention and treatment
Ministry of Health-Curative Department	<ul style="list-style-type: none"> • Procurement of quality materials for prevention and treatment of acute malnutrition and MDDs • Food quality monitoring systems
Ministry of Health-Communication Department	<ul style="list-style-type: none"> • Nutrition education • Social mobilization
Ministry of Health Training Department	<ul style="list-style-type: none"> • Capacity development of staff pre-service and in-service
Sudan National AIDS Programme	<ul style="list-style-type: none"> • IYCF • Nutrition support in the case of people living with HIV/AIDS • Community nutrition education
MoH food control & lab testing	<ul style="list-style-type: none"> • Food safety (including food aid and nutrition commodities) • Food quality monitoring systems
Ministry of Health-International Health	<ul style="list-style-type: none"> • Procurement of quality materials for prevention and treatment of acute malnutrition and MDDs • Emergency nutrition response/preparedness • Nutrition information systems for planning/M&E
Ministry of Health General Planning	<ul style="list-style-type: none"> • Definition of malnutrition problems • Coordinating nutrition measures • Planning, monitoring & evaluation of nutrition programmes

Collaboration between ministries

The FMoH will take the lead in lobbying and advocacy between ministries; in order to ensure coordinated action, and the inclusion of nutrition related programming in other ministry budgets where appropriate. A multi-sector coordination mechanism will be established to facilitate cross sector information sharing, coordination and collaboration on nutrition related activities.

Table 2: Areas of collaboration between FMoH and other ministries

Institution	Areas of collaboration
Ministry of Social Welfare and Women and Children Affairs	<ul style="list-style-type: none"> • Maternity support • Income generation activities • Support nutrition programmes related to maternal & child nutrition
Ministry of Industry	<ul style="list-style-type: none"> • USI • Code for the Marketing of Breast Milk Substitutes • Fortified complementary foods • Food control & standard • Food quality monitoring & control systems
Ministry of Agriculture and Forestry	<ul style="list-style-type: none"> • Training of agricultural extension staff. • Research • Food production

	<ul style="list-style-type: none"> • Early warning system • School gardens • Nutrition information systems for planning / M&E • Small scale food processing • Food safety
Ministry of Justice	<ul style="list-style-type: none"> • USI • Legislation for all fortified foods • Code for the Marketing of Breast Milk Substitutes
Ministry of Education Including School Gardening and Nutrition Education Department	<ul style="list-style-type: none"> • Incorporation of nutrition education in curriculum for primary, secondary schools • Teacher training in nutrition concepts • Curriculum for nutritionists • School health and nutrition • School gardens
Ministry of Higher Education and Scientific Research	<ul style="list-style-type: none"> • Incorporation of nutrition education in curriculum for university students • Curriculum for non nutrition (but nutrition related) sectors, e.g. Agriculture and Health
Ministry of Irrigation and Water Resources National State Water Corporation	<ul style="list-style-type: none"> • Improve safe water and sanitation (resources and practice) (defining areas or priorities, and give services in particular urban and peri-urban IDP settlements) • Emergency nutrition response/preparedness • Nutrition information systems for planning/M&E
Ministry of Environment and Physical Development	<ul style="list-style-type: none"> • Improved shelter (availability and access) • Food safety, e.g. genetically modified foods
HAC	<ul style="list-style-type: none"> • Emergency nutrition response/preparedness • Nutrition information systems for planning/M&E • Coordination of the NGOs working in the area of nutrition (according to the National policies & guidelines)
SSMO	<ul style="list-style-type: none"> • Food quality monitoring systems • Code for the Marketing of Breast Milk Substitute
Ministry of Finance	<ul style="list-style-type: none"> • Food subsidies • Poverty reduction • Support nutrition programmes
Ministry of trade	<ul style="list-style-type: none"> • Control of imported food, mainly iodized salt and BMS
Ministry of Information & Culture.	<ul style="list-style-type: none"> • Nutrition awareness through mass media
Ministry of Labour	<ul style="list-style-type: none"> • Support maternity leave

International community

The Nutrition Directorate will also liaise with UN agencies, NGOs, and donors in order to define the technical direction of work in nutrition, as well as mobilization of adequate human and financial resources to support this work.

Table 3: Areas of collaboration between Nutrition Directorate & International organizations

Institution	Areas of collaboration
WHO	<ul style="list-style-type: none"> • ENA/MNP • Community nutrition education • IMCI • GMP • Development of training manuals & modules • Planning • Technical support • Nutrition information systems for planning/M&E • Emergency nutrition response/preparedness • Capacity building • Research • Food safety • Food quality monitoring systems.
UNICEF	<ul style="list-style-type: none"> • ENA/MNP • BFHI • Community nutrition education • Nutrition information systems for planning/M&E • Emergency nutrition response/preparedness • Capacity building • Research • Food safety
WFP	<ul style="list-style-type: none"> • USI • Nutrition information systems for planning/M&E • Emergency nutrition response/preparedness • School health and nutrition (including school feeding) • Deworming
FAO	<ul style="list-style-type: none"> • Food based strategies to prevent malnutrition (including MDDs) • Small scale food processing • Curriculum for nutritionists • Research • Nutrition information systems for planning/M&E • Food safety
NGOs	<ul style="list-style-type: none"> • Community nutrition education • Emergency nutrition response/preparedness • Nutrition information systems for planning/M&E

Private sector

The Nutrition Directorate will engage with the private sector in efforts to develop services and products which promote the nutritional health of the population and where appropriate formal partnerships will be developed.

Table 4: Areas of collaboration between FMOH and the private sector

Institution	Areas of collaboration
Iodized salt producers and traders	<ul style="list-style-type: none">• Community nutrition education• USI• Food safety• Food quality monitoring systems
Millers	<ul style="list-style-type: none">• Flour fortification food safety• Food quality monitoring systems
Schools	<ul style="list-style-type: none">• Incorporation of nutrition education in curriculum for primary secondary and university students
Universities	<ul style="list-style-type: none">• Teacher training in nutrition concepts• Curriculum for nutritionists• Curriculum for health staff• Curriculum for other nutrition related sectors e.g. water, agriculture

Federal to State collaboration and responsibility

National level Nutrition Directorate will be expected to advise on, coordinate, monitor and evaluate nutrition and nutrition related efforts at State level under the direction and support of the MCH Director.

At State level the Nutrition Director, within the SMOH is the official responsible for overall nutrition programming in the State. Within the context of decentralization and reform, roles and responsibilities of State level Nutrition Directors, will be further defined; as will Federal/State level communication channels.

The state Nutrition Director under the SMOH is also responsible for multi-sector coordination at State level; and establishment of a multi-sector committee /coordination mechanism at State level is encouraged.

Nutrition educators will be expected to raise awareness of positive nutrition practice as well as encourage behaviour change to promote optimal use of available resources for individuals and communities in caring for their own health and well being.

In addition, nutrition related activities, counselling and nutrition education will be carried out by nutrition and health workers at all levels of health facilities (see Table 2).

Table 5: Nutrition and nutrition related interventions according to health facility level

INTERVENTIONS AND SERVICES PROVIDED	HEALTH FACILITY LEVEL			
	Basic Health Unit	Health Centre	Rural/Community Hospital	General/Specialised Hospital
Assessment of Malnutrition (population level)				
Nutritional status	Estimate prevalence of malnutrition (z-score using indices of weight for height (wasting) , weight for age (underweight), and height for age (stunting) as well as the underlying causes. Surveys conducted at district or provincial level for purposes of baseline, monitoring and evaluation or in case of obvious deterioration in nutritional situation (when applicable)			
Prevention of Malnutrition				
Vitamin A supplementation to all children 6 to 59 months	√	√	√	√
Promotion of iodized salt	√	√	√	√
Promotion of consumption of micronutrient-rich foods	√	√	√	√
Support and promote exclusive breastfeeding:	√	√	√	√
Promotion of appropriate Complementary feeding for young children with behaviour changes	√	√	√	√
Growth monitoring and promotion for less than 5years Where applicable) and linked with IMCI.	√	√	√	√
Iron/folic supplementation for pregnant lactating women	√	√	√	√
	√	√	√	√
Promotion Maternal Nutritional status	√	√	√	√
Control and prevent common childhood illnesses	√	√	√	√
Treatment of malnutrition				
Micronutrient Deficiency Diseases Diagnosis and treatment		√	√	√
Treatment of Severe Malnutrition clinic based and outpatient therapeutic care		√ OPT when CMAM established	√	√
Treatment of Moderate Malnutrition	Under discussion	√	√	√
Surveillance and referral				
Clinic-based Surveillance:	√	√	√	√
Screening: Screening and referral of at risk using MUAC (), or weight height (), or clinical signs of Micronutrient Deficiency Diseases (MDDs)	√	√	√	

Community level

Nutrition educators will be vital in ensuring that nutrition education and social mobilisation efforts take place building on existing community structures. This will require support from health facilities and SMOH staff and community level actors.

Table 6: Areas of collaboration between MoH and community level actors

Institution	Areas of collaboration
Religious leaders	<ul style="list-style-type: none">• Community nutrition education
Community leaders	<ul style="list-style-type: none">• Community nutrition education• Improved access to services (including water, sanitation, shelter)• Emergency nutrition response/preparedness• Nutrition information systems for planning/M&E
Local administration	<ul style="list-style-type: none">• Improved access to services (including water, sanitation, shelter)• Emergency nutrition response/preparedness• Nutrition information systems for planning/M&E

Implementation Monitoring and Evaluation

The National Nutrition policy involves work between a wide variety of institutions and sectors, and as such planning, implementation, monitoring and evaluation will require the participation of many stakeholders.

The FMOH will lead the process of development of an implementation plan to roll out the National Nutrition Policy over a five year period. This will encompass Federal and State level activity.

Monitoring is an ongoing process and should assess the proportion of recommended actions that have been or are being pursued (process), as well as impact/achievement towards objectives (progress). Monitoring information will form the basis for further adaptation and implementation of the policy guidance. A mid-term review of the policy will be carried out half way through the implementation phase.

Evaluation of the policy should have two components, the first; impact /progress against each of the objectives/strategies and the second; the utility of the policy as a guiding document.

Table 7: Overview of monitoring of the policy implementation

Group	Participants	Frequency
National level		
Activity monitoring	FMoH NND and relevant partners	Ongoing and twice per year as part of mid year and end year review of programmes
State level		
Activity and impact monitoring	SMoH and relevant partners	Ongoing through reporting system and supervisory visits and periodic through periodic coordination meetings
Mid-term review of policy (date TBC)	FMoH NND and relevant partners	Once

A few selected indicators for population level impact are presented below, with the caveat that evaluation based on indicators requires rigorous contextual analysis to allow us to draw conclusions about causality of improvements.

Table 8: Indicators for evaluating the policy

Indicator	Baseline (2006) ¹¹	Target (2010)*	Target (2015)
Prevalence of moderate and severe underweight (children 6-59 months)	31.0%	26.5%	21.7%**
Prevalence of moderate and severe stunting (children 6-59 months)	32.7%	27.8%	22.9%**
Prevalence of moderate and severe wasting (children 6-59 months)	14.7%	12.5%	10.3%**
Use of iodised salt at household level	11.5%	55.7%	100%***
Vitamin A supplementation (6-59 months) within the last 6 months	76.2%	83.1%	90%
Vitamin A supplementation of postpartum women	18.3%	29.2%	40%****

* Half way between 2006 figures and 2015 targets.

** Reduce malnutrition among under-five children by at least 30% of 2006 level.¹²

*** Universal Salt Iodization campaign

**** Increase postnatal care to 40%.¹³

A comprehensive framework for Monitoring and Evaluation and indicators for each objective of the NNP will be selected as the implementation plan is developed.

¹¹ Figures based on Sudan Household Health Survey, 2006

¹² Health Sector Strategy: Investing in Health and Achieving the MDGs, FMOH Draft 2, 2007

¹³ Ibid

Annex 1: Nutrition Policy Task Force

No	Name	Position/Department
1	Dr.Mohammed Ali Yahia AlAbassi	PHC Director General
2	Dr. .Mohammed Osman Hamid	NND Director 2006
3	Dr Amani Abdelmoneim	NND director 2007 to present
4	Dr.Mustafa Salih	Planning Department Director, FMOH
5	Dr. Hanan Mukhtar	IMCI Director
6	Dr. A/Latif Agimy	Ministry of Agriculture
7	Ms. Bakhita Mahgoub	Ministry of Agriculture
8	Ms. Widad Ebrahim Khalil	Ministry of Social Welfare & Child Affairs
9	Dr. Nourelhuda A/ Algalil	Food Research Centre
10	Dr. Baha Eldin Magboul	Food Research Centre
11	Ms. Sara Awad dakam	Humanitarian Aid Commission
12	Ms. Esmail Ahmed Alkamish	Food Control Department, FMOH
13	Ms. Awatif Mohamed Babiker	Ministry of Education
14	Ms. Egbal Hassan Elyamani	Ministry of industry
15	Prof. Mabyou Mustafa	Dean of University of Africa
16	Dr. Sumaia FIfadil	WHO
17	Ms .Amal A Ali	WFP
18	Wafaa Mustafa Osman	NND
19	Dr.Siham Ahmed Balla	Reproductive Health, PHC
20	Ms. Waffa Shigidi	Gezeira State. Nutrition Director
21	Dr. Sidiga Washi	Ahfad University. Dean of School of Family Sciences
22	Dr. Ali A/Aziz	University of Khartoum, Department of Agriculture Economics
23	Dr. Yousif Babiker	Ahfad University
24	Josephine Ippe	UNICEF
25	Rukia Yaccoub	WFP
26	Dr.Rogia Abu Algasim	UNFPA
27	Mr. Mohamed Hussein	FAO
28	Mohamed Abd Elgadir Hassan	Ministry Of Industry
29	Dr. Alamin Osman	Medical Corps
31	Fatima Elsheikh	UNFPA
32	Sally Ahmed	UNFPA
33	Dina Sami	UNFPA