REPUBLIC OF SOUTH SUDAN

MINISTRY OF HEALTH

HEALTH SECTOR DEVELOPMENT PLAN 2012-2016

One maternal death is one too many

January 2012

Vision

A healthy and productive population fully exercising its human potentials

Mission

To improve the health status of the population and provide quality health care to all the people of South Sudan, especially the most vulnerable women and children

Values

Right to health, equity, pro-poor, community ownership and good governance

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AHSPR	Annual Health Sector Performance Review
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
BeG	Bahar el Ghazal
BPHS	Basic Package of Health Services
CBO	Community-based Organisation
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CH	County Hospital
CHD	County Health Department
CHW	Community Health Worker
CIDA	Canadian International Development Association
CMW	Community Midwife
CPA	Comprehensive Peace Agreement
CPHC	Comprehensive Primary Health Care
DAH	Development Assistance for Health
DFID	Department for International Development
CSO	Civil Society Organisation
DHIS	District Health Information Software
DOTS	Direct Observed Treatment Short Course
DPT	Diphtheria, Pertussis, Tetanus
EPI	Expanded Programme on Immunissation
EU	European Union
FBO	Faith Based Organisation
GAM	Global Acute Malnutrition
GAVI	Global Alliance for Vaccine and Immunissation
GFATM	Global Fund against AIDS, Tuberculosis and Malaria
GoSS	Government of Southern Sudan
GoSSHA	Government of Southern Sudan Health Assembly
HFM	Health Facility Mapping
HHP	Home Health Promoter
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HRH	Human Resources for Health
HRHMIS	Human Resources for Health Management Information System
HSDP	Health Sector Development Plan 2012-2016
HTC	HIV Testing & Counselling
HTI	Health Training Institute
IDSR	Integrated Disease Surveillance Response
IMA	Inter-church Medical Assistance
IMR	Infant Mortality Rate
INGO	International Non Government Organisation
IT	Information Technology
JTH	Juba Teaching Hospital
LATH	Liverpool Associates for Tropical Health

LMIS	Logistic Management Information System
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MCHW	Maternal Child Health Worker
MDG	Millennium Development Goals
MDTF	Multi Donor Trust Fund
MMR	Maternal Mortality Ratio
MoFEP	Ministry of Finance and Economic Planning
MoH	Ministry of Health
NA	Not Available
NCD	Non-Communicable Disease
NGO	Non-Government Organisation
NHIF	National Health Insurance Fund
NPA	Norwegian People's Aid
NTD	Neglected Tropical Disease
NTLBP	National Tuberculosis, Leprosy, and Buruli Programme
PHC	Primary Health Care
PHCC	Primary Health Care Centre
PHCU	Primary Health Care Unit
PMIS	Pharmaceutical Management information System
PMTCT	Prevention Mother to Child Transmission
PPP	Public Private Partnership
QSC	Quantified Supervision Checklist
RSS	Republic of South Sudan
SDG	Sudanese Gine (Pounds)
SH	State Hospital
SHHS	Sudan Household Health Survey
SMoH	State Ministry of Health
SSCCSE	Southern Sudan Centre for Census, Statistics & Evaluation
SSDP	South Sudan Development Plan
SSMIS	South Sudan Malaria Indicator Survey
TB	Tuberculosis
TBD	To Be Determined
TH	Teaching Hospital
U5s	Under-Fives
U5MR	Under-Five Mortality Rate
UN	United Nations
UNFPA	United Nations Populations Fund
UNICEF	United Nations Children's Fund
UPHTI	Upper Nile Health Training Institute
USAID	United States Agency for International Development
USD	United States Dollars
WHO	World Health Organisation

FOREWORD

This Health Sector Development Plan is the first phase of the strategic direction towards health systems development in the Republic of South Sudan. It serves as an organisational guide for the provision of health care in the young and newly independent sovereign state. It offers a road map for improving the health of the people and their quality of life so as to be more economically productive. Above all, the plan addresses the commitment of the government to make basic and lifesaving health care accessible to all, particularly women and children; *"One maternal death is one too many"*. By simultaneously addressing three key challenges; public health, the delivery of quality health services, and institutional functioning, the plan kills two birds with one stone. It consolidates an operational base and responds to needs. We strongly believe that good health is a pre-requisite for a productive economy, which in turn is the gateway to eradication of poverty and embracing prosperity.

We need to significantly increase human resources and retain those categories of health personnel who can make a difference in meeting the health needs of the people of South Sudan. It has been relatively easy to identify 'what' needs to be done over the next five years. However, we also know that what is more important is 'how' people go about their work, the quality they bring to service delivery, and the management skills they put into practice that can make or break implementation. We need far greater numbers of health personnel who will have a sound approach to strengthening health systems and delivering quality health care. Corollary to competent and motivated human resources is the accessibility of responsive service delivery facilities to the population.

In the current festive climate of independence and sovereignty we have four outstanding opportunities. First is that the Republic of South Sudan will increasingly allocate resources to the health sector and ensure their transparent and accountable utilisation. Second is that the government will be committed to investing in cooperative partnership with the private sector and mutual collaboration with the international community. In this way, the support rendered in relief and humanitarian assistance can be transformed into development assistance for the mammoth task of building our country and society. Thirdly, there is commitment among health sector stakeholders, both national and international, to synergize efforts for optimum delivery and outcomes. We owe much appreciation to these stakeholders, present and future, for their efforts and support. Last but most importantly, we can count on the enthusiasm, strengths, and resilience of our communities to participate fully in providing for the health and welfare of our nation.

From now onward we must advance with confidence, energy and transparency to achieve and maintain a state of good health for our people and country by promoting health, preventing disease and providing care.

I commend this plan to our health care personnel, on whose shoulders the greatest burden of implementation falls.

H.E Dr. Michael Milli Hissein
Minister of Health, Republic of South Sudan

ACKNOWLEDGEMENTS

Without the concerted efforts of several individuals and organisations, the Health Sector Development Plan for South Sudan (HSDP 2012-2016), would not have been possible. The HSDP has been developed through a highly participatory process. In addition to the active participation of working groups, ably co-chaired by the leadership of the Ministry of Health, a number of consultations were conducted with relevant departments and organisations within and outside the Ministry on an on-going basis. While some facilitated access to very useful information and data, others provided incisive contributions to the discussions that ensured the high quality of the document.

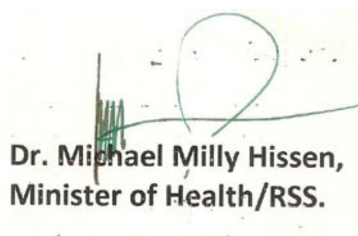
Input was provided and consensus built at a national validation workshop held in Juba in March 2011. The workshop gave us the opportunity to further discuss the HSDP with Central and State Ministers and their key technical staff, who contributed significantly to enrich the HSDP in order to ensure it appropriately responds to the needs of the people of South Sudan

I would like to acknowledge the efforts of all of the dedicated staff of the Ministry of Health and partners and the support that was provided by all stakeholders, including but not limited to CIDA, DFID, EU, LATH, UNFPA, UNICEF, USAID, WHO regional and headquarters offices, the World Bank, and health sector NGOs.

My profound thanks go to State Ministries of Health for their commitment and the diverse ways that they demonstrated their interest and support for the development agenda of the Republic of South Sudan. Furthermore, my sincere thanks go to all the consultants and experts that have facilitated the process of making this document a reality.

There are times when by sheer omission one can forget to include those who contributed greatly to this effort. For those whom I may have inadvertently missed out, I sincerely ask for their forgiveness.

It is also a message of congratulations for all of us. I wish that we will effectively manage a coordinated and collaborative implementation of this Health Sector Development Plan and will be able to reduce significantly the high burden of health problems, which are mainly of preventable causes.



Dr. Samson Paul Baba
Director General of Planning & Coordination
Ministry of Health, Republic of South Sudan

EXECUTIVE SUMMARY

The protracted liberation war in Southern Sudan (1955-2005) caused the destruction of the country's physical and social infrastructure and led to the death and displacement of over four million people. The Comprehensive Peace Agreement (CPA), signed in 2005, brought the war to an end. South Sudan then began a significant political, economic and social transition. Part of this transition included a referendum in January 2011 whose outcome resulted in the historic birth of a new nation, the Republic of South Sudan (RSS), on the 9th July 2011.

The Health Sector Development Plan, 2012–2016 (HSDP) reflects the political will and commitment of the independent and sovereign government of South Sudan to streamline and transform the currently weak health system and the poor quality health services. This is essential if the government is to ensure that the health sector meets the needs of our people.

The aim of the HSDP is to provide the strategic direction and scope of work for the health sector from 2012 to 2016. The plan builds upon some of the aspirations expressed in the Southern Sudan Health Policy, 2007-2011(SSHP) as well as the key achievements and lessons learned since 2005. It is a belated attempt at implementing the health policy that will have to be revised. The HSDP objectives are:

1. To increase the utilisation and quality of health services, with emphasis on maternal and child health
2. To scale up health promotion and protection interventions so as to empower communities take charge of their health
3. To strengthen institutional functioning including governance and health system effectiveness, efficiency and equity

The two factors that will be critical for achievement of all the HSDP objectives are; adequate human resources for health and improved accessibility of health services by the population. We can have the right policies, strategies, systems, evidence based interventions, equipment and norms and standards in place but without spending much more time and money on the greatest asset of a health system, health personnel and the corollary of appropriate, acceptable and accessible service delivery facilities, we will fall short of our targets. A sustained focus over the next five years will be placed on training, recruitment and motivation of adequate numbers of the right skill mix of health personnel to work with the right support in service delivery facilities within reasonable reach of the population, particularly women and children in rural and peri-urban communities.

Work planned under the three objectives will be undertaken concurrently and each objective will be given equal emphasis, underlining their importantance. If adequate attention is not given for example, to strengthening health system functioning, then it will be difficult to increase the delivery of quality health services. Service delivery is reliant on effective and efficient health systems operations under an accountable leadership. If more focus is placed on medical care relative to health protection and health promotion, then we will have a disease system rather than a health system. Poor quality of care leads to loss of faith in the health system.

Strategic priorities to foster the attainment of the goal and objectives of the HSDP have been identified. These priorities are the deliverables of the HSDP and the actions that underlie each priority will need sufficient resources as well as commitment.

To increase coverage, efficiency, effectiveness, quality and sustainability of public health interventions and clinical services, importance will be placed on strengthening institutional and health systems management. This includes legislation, regulations, norms and standards, accountability, transparency, informed decision making and human resource management. In addition, the development and implementation of strategies and operating systems, such as an essential medicines supply chain as defined in the Basic Package of Health Services (BPHS), will be critical.

For some years now, a major challenge to achieving any planned outcomes has been the very low health sector budget. The health sector budget as a proportion of the national budget has declined from 7.9% in 2006 to 4.2% in 2011. Similarly, development assistance to the health sector has dropped from US$214.8 million in 2009 to US$169 million in 2010. It is envisaged that with the new dispensation of independence and sovereign responsibility in the management of national resources, both government and parliament, as well as development partners, will advocate for increased resource allocations to the health sector.

The projected total cost of the HSDP is estimated at SSP 628 million in year one (2012) rising to SSP 1.3 billion in year five (2016). This translates into SSP 77 per capita in year one and SSP 137 per capita in year five. The costing is preliminary and may change. When compared to the current funding levels (2011 budget is SSP 236 million) there is a large funding gap. The Ministry of Health hopes that the health budget will increase past the 10% mark of the national budget during this first phase of the HSDP.

The key risks to successful HSDP implementation include poor macro-economic growth and/or economic management that may constrain increments in the government allocation to the health sector; continuance of low private sector investment in health; interruption or reduction of support from international partners as a result of changes in their policies or political instability; insufficient increase in numbers and quality of health personnel; and stakeholders not working within the framework of this development plan.

Assumptions underlying implementation of the plan are political stability and strong political leadership; effective public and private sector commitment to health; economic growth and continuity of international financial assistance; commitment to

good governance; civil society and stakeholders' engagement in health especially at the community level; effective partnerships among stakeholders. Last but not least, that we train and retain sufficient numbers of competent health workers and provide accessible, suitably-equipped and responsive health service delivery facilities.

Finally, the HSDP is based on national and international best practice and cost effective interventions and will address the most pressing needs of the country. The MOH is committed to effectively lead this process, in partnership with all stake holders, to improve the health of citizens in the Republic of South Sudan.

CHAPTER ONE: INTRODUCTION

1.1 Context and rationale

The South Sudan Health Sector Development Plan, 2012-2016(HSDP) provides the strategic direction for all health sector work in the country. It is a shared vision of health development between the Ministry of Health (MOH) and sector stakeholders. It builds upon the Health Policy, 2007-2011, and on the achievements since the formation of the Interim Government, in 2005. The HSDP has been formulated during the preparation of the South Sudan Development Plan (SSDP, 2011-2013), and outlines the overarching framework for the South Sudan Poverty Reduction Strategy (SSPRS). Both plans are interlinked to maximize collaboration and synergy.

1.2 Review of the SSDP

The SSDP sets out the strategic framework for the holistic development of South Sudan through investment in the following four priority programme areas: Governance; Economic Development; Social and Human Development; Conflict Prevention and Security. Expanding access to basic health services is among the major tenets of the Social and Human Development priority area. The SSDP recognises that besides education, improvement in health is critical for increased productivity and overall economic development. The SSDP, recognizing the prevailing poor health status of the population, underscores the need for the equitable expansion of access to quality basic health services throughout South Sudan as a means of attaining its core health sector objectives to rapidly reduce the maternal and infant mortality rates. Key activities to address the SSDP health sector core objectives include rehabilitation and equipping health facilities at all levels of the health system; strengthening human resources for health and improving the pharmaceutical and medical equipment supply chain. The SSDP health sector core objectives have helped inform the HSDP goal. The HSDP provides a comprehensive, sector wide framework that will allow the SSDP aspirations to be realised.

1.3 Relevance to mission and values

Since 2005, the Ministry of Health (MOH) realised the importance of articulating its core function and mission as the lead institution for health in the country. The MOH places a premium on expressing and implementing its moral and ethical code and the values that guide decision making to achieve success. As part of its governance, the MOH acknowledges its responsibility towards state building and accountability to the people of South Sudan by improving and maintaining good standards of health.

1.4 State building

State building in the health sector started with the establishment of MOH following the signing of the Comprehensive Peace Agreement in 2005. Prior to that, the Secretariat of Health Office (SHO) in Nairobi, Kenya, performed the functions of the MOH. Therefore, the transition to a fully functional MOH Headquarters in Juba met minimal challenges. However, progress in state building was slow during the period when Southern Sudan was an interim state that relied on Khartoum for financial government allocations and disbursement. Besides taking over control of its resources following Independence Day, on 9th July 2011, the Republic of South Sudan (RSS)

can now take maximum advantage of the willingness of the international community to help with state building. The existing political will, combined with commitment from other stakeholders, should foster the attainment of results in the health sector.

1.5 Health policy

The health services delivery protocol of South Sudan is stipulated in the existing 2007-2011 Health Policy document[1], which is undergoing revision in light of the recent independence. The 2005 Interim Constitution of Southern Sudan provision on health policy states that "all levels of government in Southern Sudan shall promote public health, establish, rehabilitate and develop basic medical and diagnostic institutions as well as provide free primary health care and emergency services for all citizens." The Health Policy is aligned to the Republic of South Sudan Transitional Constitution, which came into effect July 9th 2011.

The policy on basic health service delivery is outlined in the 2009 Basic Package of Health Services (BPHS)[2], which is undergoing review. Among other things, the BPHS advocates a decentralized model of service delivery and management. As a first step towards ensuring service delivery, the MOH took a policy decision in 2005 to allow NGOs to continue with provision of basic health services while it assumed responsibility for hospital services in the main towns. The revised versions of the Health Policy and the BPHS may both indicate a change of direction, through incremental steps, on how health services are organized, funded and delivered.

1.6 Development and structure of HSDP

The HSDP was developed through a consultative and participatory process. A steering committee provided oversight and guidance, while a secretariat coordinated the process. The steering committee, secretariat and senior MoH management were critical in questioning the relevance, affordability and feasibility of the suggested work and how it relates to SSDP.

An important and useful mechanism was the establishment of technical working groups that included a wide variety of stakeholders to oversee key technical areas: service delivery; human resources for health; health infrastructure development and maintenance; pharmaceuticals, medical supplies and equipment; supervision, monitoring and evaluation; and finance, leadership and governance. The stakeholders that constituted the working groups were drawn from CSOs, NGOs, INGOs, multilateral and bilateral agencies, which included but were not limited to CIDA, DFID, EU, LATH, UNFPA, UNICEF, USAID, WHO regional and headquarters offices, and the World Bank. Each working group, assisted by a consultant, then assessed the needs in their technical areas, identified the key challenges, drafted priority strategic actions and helped set the overall objectives, indicators, targets and planned outcomes.

Input was provided and consensus built at a national validation workshop, held in Juba in March 2011. The workshop gave us the opportunity to further discuss the HSDP with Central and State Ministers and their key technical staff, who contributed

[1] Health Policy, Government of Southern Sudan, 2007-2011
[2] Basic Package of Health Services of Southern Sudan, 2009

significantly to enrich the HSDP and ensured it responds to the needs of the people of South Sudan.

The document consists of five chapters. Chapter one introduces the Development Plan. Chapter two provides the situation analysis. Chapter three describes the goal, objectives, planned outcomes, priorities and strategic actions for the next five years. Chapter four summarizes the arrangements for implementation, monitoring and evaluation and also addresses key risks and assumptions. Chapter five sets out the costing and financing of the Plan.

CHAPTER TWO: SITUATION ANALYSIS

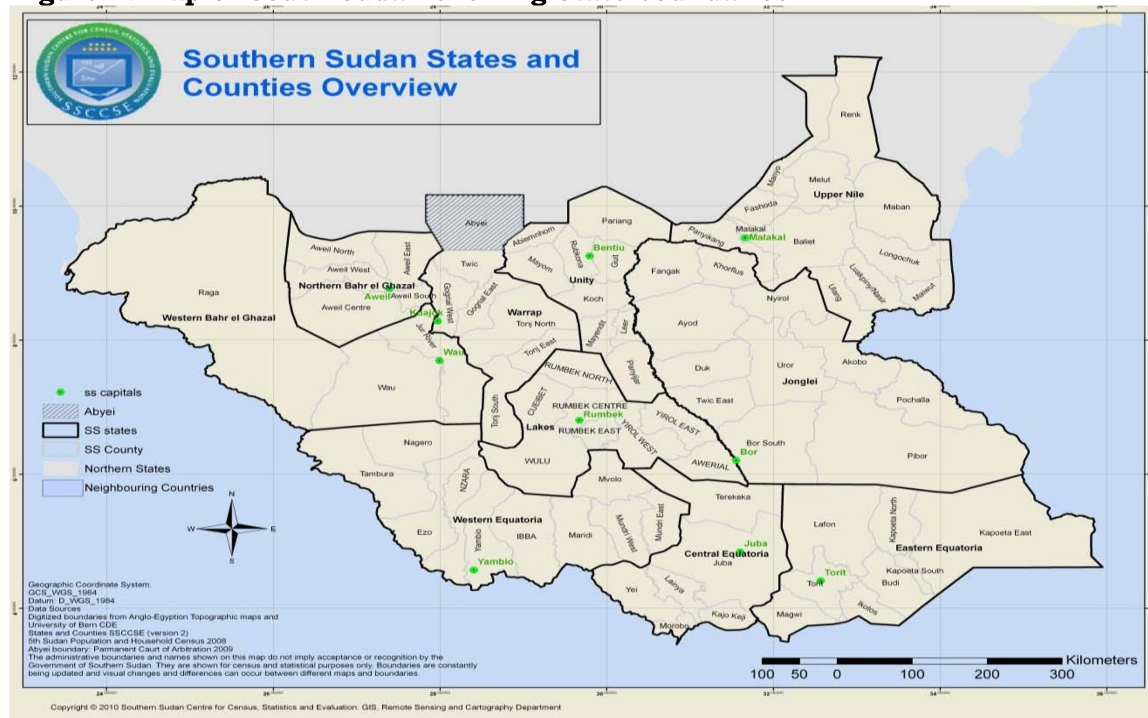
2.1 Political Context

South Sudan has witnessed perhaps the longest liberation war in modern Africa. The war, which began just after independence in August 1955, ended with the signing of the Comprehensive Peace Agreement (CPA) in January 2005. The war destroyed physical infrastructure and social structures. Over 2.5 million people died while close to 4 million were displaced. Consequently, the health system collapsed. During the last phase of the war (1983-2005), international non-governmental organisations (INGOs) and faith based organisations (FBOs) assumed responsibility for basic health service delivery in liberated areas. However, due to insecurity and the vast geographical extent of the country, effective health service coverage has remained low at under 25 %.

Following the signing of the CPA, which stipulated an interim period of six years, the Government of Southern Sudan (GoSS) was established. This status quo continued until January 2011, when the Southern Sudan Referendum on Self-determination was conducted and over 98 % of Southern Sudanese voted in favour of secession. On July 9, 2011, South Sudan's independence was proclaimed thus ending more than 190 years of foreign occupation and the beginning of a transitional period led by H.E Salva Kiir Mayardit, the first President of the Republic of South Sudan.

The country is administratively divided into ten states (Figure 1), which are further sub-divided into seventy nine counties. The counties are partitioned into 514 smaller administrative units, referred to as Payams.

Figure 1: Map of South Sudan showing State boundaries



<u>Source:</u> South Sudan Centre for Census, Statistics & Evaluation (SSCCSE, 2010)

2.2 Demographic and socio-economic situation

The Republic of South Sudan covers a geographical area of approximately 640,000 square kilometres. The population is estimated at 8,260,490 million[3] with a density of 15 people per square kilometre. More than 90% of the population lives in rural areas. The average annual population growth rate is 2.2%. The population is projected to increase to 12 million by 2015, due to both the annual growth rate and the return of South Sudanese from the diaspora, following the historic independence of the Republic of South Sudan. Females constitute 52% of the population while males account for 48%. The total fertility rate is estimated at 6.7, while the average life expectancy at birth for both sexes is 42 years.

South Sudan is endowed with vast natural resources, which include arable agricultural land, fresh water, minerals and oil. On the contrary, income per capita is extremely low, with about half of the population (50.6%) living on less than 1 US$ per day. In addition to high levels of poverty, South Sudan has a high disease burden and low levels of education, thus ranking as one of the poorest countries in the world. The vast majority of the population is engaged in rural subsistence farming and cattle herding. Living conditions are associated with poor access to potable drinking water (less than 50%), poor access to proper sanitation (less than 7%) and high illiteracy rates among the adult population (88% among women and 63% among men).

2.3 Health status and disease burden

South Sudanese people have experienced poor health care provision due to the protracted resource and politically motivated conflicts that disrupted the health system. Inevitably, this resulted in the country having the worst key health indicators globally.

2.3.1 Reproductive Health

South Sudan has one of the highest Maternal Mortality Rates (MMR) in the World, estimated at 2054/100,000 live births[4]. Although close to 46.7%[5] of pregnant women attend at least one ANC visit, only 14.7% of deliveries are attended by skilled health professionals. Institutional deliveries account for just 12.3% of births, while the contraceptive prevalence rate is 4.7%. The caesarean section rate, a good indicator of access to Comprehensive Emergency Obstetric & Neonatal Care (CEmONC), is only 0.5%[6] of the population served in the three teaching hospitals (Juba, Malakal and Wau).

2.3.2 Child Health

Infant Mortality Rate (IMR) and Under-five Mortality Rate (UMR) are very high at 102 per 1000 live births and 135 per 1000 live births, respectively. The EPI programme performance is suboptimal with only 13.8% of children under 12 months having received DPT3[7] and just 1.8% children under-five years of age fully immunised. Other major causes of infant and under-five morbidity and mortality are malaria,

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3 2008 Census, Southern Sudan Centre for Statistics & Evaluation (SSCSE)
4 2006 Sudan Household Health Survey
5 2010 Sudan Household Health Survey
6 Report of Strengthening of Hospital Management in South Sudan, caesarian section rate in the 3 Teaching Hospitals was 0.5%. SHHS 2010 also confirms the same figure of 0.5%.
7 UNICEF 2009 and SHHS 2010

pneumonia, diarrhoeal diseases, and malnutrition. 22.7%[8] of children with diarrhoea received oral rehydration therapy and only 35.1% of children with suspected pneumonia are taken to an appropriate healthcare provider or health facility.

2.3.3 Malaria

Malaria accounts for almost a quarter (24.7%)[9] of all diagnoses reported by health facilities in South Sudan. According to the 2009 South Sudan Malaria Indicator Survey (SSMIS), up to 35% of children below 5 years had suffered from a fever within the two weeks preceding the survey. Only 12% of children with fever were treated with an appropriate anti-malarial medicine within 24 hours of the onset of fever. Although 60%[10] of households have one or more insecticide-treated nets, information on appropriate, consistent and correct use of bed nets is lacking. The Malaria Control Programme's main interventions are case management and distribution of bed nets through community mobilisation. Challenges include early diagnosis and treatment as well as insufficient vector control.

2.3.4 Tuberculosis

Tuberculosis (TB) is among the major causes of morbidity and mortality in South Sudan. The annual incidence of all forms of TB is estimated at 140 per 100,000 population (79/100,000 are smear positive cases), while TB specific mortality is estimated at 65 per 100,000 population. The treatment success rate for smear positive pulmonary TB was 79% in 2008. There are 41 TB diagnostic and treatment centres which successfully treated 9,894 patients from 2005 through 2010. Directly Observed Treatment (DOTs) coverage is currently 48%. The challenges facing the National Tuberculosis Programme are low case detection, TB-HIV co-infection and low recording and reporting.

2.3.5 HIV/AIDS Prevalence

The prevalence of HIV/AIDS in South Sudan is estimated at 3%[11], with the epidemic considered to be generalized, albeit some areas are described as hot spots. The prevalence is expected to increase, mainly due to the low levels of knowledge on HIV/AIDS and the prevailing high risk behaviours. There are 17 HIV treatment centres in South Sudan taking care of about 8,000 clients (about 5% are children) with close to 2,500 on Antiretroviral Therapy (ART). The HIV programme has established 55 Prevention of Mother to Child Transmission (PMTCT) and over 105 HIV Testing and Counselling (HTC) sites that are integrated into existing health care structures. Main challenges include low levels of knowledge about HIV/AIDS, multiple concurrent sexual partners, poverty, low school enrolment and a huge gap in strategic information (the extent of the epidemic and key populations affected). The over dependence of the programme on the Global Fund and MDTF for implementation is a critical challenge for sustainability.

2.3.6 Neglected Tropical Diseases

Neglected Tropical Diseases (NTDs) are endemic in South Sudan and account for a considerable proportion of the disease burden. The major NTDs include leishmaniasis,

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8 SHHS 2010

9 UNICEF 2009

10 SSMIS 2009

11 2009 Antenatal Care Surveillance Report

trypanosomaisis, onchocerciasis and schistosomiasis. While all age groups are afflicted by these conditions, children and women are the most affected. The major challenge in control and management of the NTDs is the vertical programming approach as well as the lack of a vector control unit in the MOH.

2.3.7 Communicable Diseases
Besides Malaria, TB and HIV/AIDS, epidemic prone communicable diseases contribute to the burden of diseases in the country. This poses a great challenge to the nascent Emergency Preparedness and Response Department, which has to frequently respond to outbreaks of diseases, such as measles, Kala-azar, meningitis, cholera, cutaneous anthrax and hepatitis E. The weak disease surveillance and response system, coupled with inadequate funding, compromises their capacity to promptly control epidemics.

2.3.8 Non-Communicable Diseases (NCDs)
Anecdotal evidence indicates that the burden of non-communicable diseases (NCDs) is on the rise, especially injuries related to road traffic accidents, cardiovascular diseases (hypertension, stroke) and diabetes. NCDs control has never been prioritised in the MoH budget since 2005. The main challenge for NCDs control is the lack of strategic information on their prevalence and associated risk factors.

2.3.9 Ophthalmic Conditions
While the burden of ophthalmic conditions in South Sudan is significantly high, eye care services to respond to this burden are insufficient. The overall active trachoma prevalence rate is 64% among children aged 1-9 years, whilst blindness due to trachoma is estimated to be 1.6%. 50% of areas surveyed in South Sudan are considered meso endemic for onchocerciasis, while 38% are hyper endemic. Mass drug administration along with health education is currently being implemented in a few selected Counties. The challenges to the control of ophthalmic conditions include insufficient funds, lack of trained human resources and poor infrastructure (unpaved roads, lack of clean water, lack of basic education).

2.3.10 Childhood Malnutrition
South Susan experiences recurrent cycles of acute and chronic childhood malnutrition in line with seasonal and geographical variations. The overall prevalence of global acute malnutrition (GAM) and severe acute malnutrition (SAM) amongst children under five is 21% and 7.63% respectively. The prevalence of stunting among under-fives stands at 25%. While several fragmented programmes exist to address the problem of malnutrition, a more comprehensive and robust strategy that addresses the root causes of malnutrition is required to decisively control the issue.

2.3.11 Health Education & Promotion
Health education and promotion communication in the technical areas of child health, reproductive health, nutrition, NTDs and hygiene and sanitation have been limited to targeted campaigns during, for instance, Vitamin A supplementation and response to disease outbreaks. A strategy to institutionalize the programme is required so as to increase health service utilisation, as well as address health protection and promotion issues that do not necessarily require seeking care in health facilities.

Poor coordination among the multiple partners (notably UNICEF and NGOs) that support the sector in development of communication materials and activity implementation has resulted in the provision of fragmented and disjointed messages. Inadequate prioritisation of the department by the MOH has made it less conspicuous.

2.3.12 Environmental Health

Environmental health concerns in South Sudan are widespread, including poor liquid and solid waste management, water pollution and poor excreta disposal. Consequently the prevalence of environment related diseases, such as malaria, typhoid and diarrheal diseases is high. The widespread water contamination, due to poor sanitation as a result of inappropriate solid & liquid waste disposal systems[12], is a major risk factor for these diseases. Revision and enforcement of some acts and legislations related to environmental health will be required to alleviate this problem.

2.4 Health System

The decades of war in South Sudan virtually led to the collapse of the entire health system, as evidenced by the poor health outcome indicators of the country that are among the worst globally. The Maternal Mortality Rate (MMR) is estimated at 2,054 deaths per 100,000 live births, while the Infant Mortality Rate (IMR) is estimated at 102 deaths per 1,000 live births. Stunting in children under five is estimated at 25%. Neglected Tropical Diseases that have been virtually eliminated in most parts of the world are still endemic in South Sudan.

2.4.1 Service Delivery

2.4.1.1 Structure

Health services delivery in South Sudan is structured along the following four tiers; Primary Health Care Units (PHCUs), Primary Health Care Centres (PHCCs), County Hospitals (CH) and State Hospitals (SH) / Teaching Hospitals (THs). These facilities are to a large extent aligned to the administrative subdivisions of the Country in both rural and urban areas.

PHCUs, which are the first level of primary care, provide basic, preventive, promotive and curative services and are expected to serve a population of 15,000. PHCUs are located in Bomas.

PHCCs are the immediate level of referral for the PHCUs. In addition to services provided at the PHCU, PHCCs deliver diagnostic laboratory services, maternity and in-patient care. They are expected to serve a population of up to 50,000. PHCCs are usually situated at Payam headquarters. However, in urban areas, due to the size of the population, PHCCs are located at Bomas and Payams as well. Besides offering facility based services, outreaches are organised from PHCCs to Bomas and Villages if the PHCC is situated at Payam headquarters or from Boma to villages if the PHCC is situated in a Boma.

The CHs are located at county administrative headquarters of local government. The CHs serve as the referral level for PHCCs. Besides the services provided by the latter, CHs provide emergency surgical operations. County Hospitals are expected to serve a

[12] Environmental Health Assessment and future strategic approaches for the Republic of South Sudan, July 2011

population of 300,000, whilst State Hospitals serve a population of approximately 500,000. County and State hospitals represent the secondary health care level, where general medical specialists such as surgeons, obstetricians, physicians and paediatricians provide care, training and mentoring of interns.

Teaching hospitals provide tertiary care. Currently they are performing basic functions due to lack of equipment, structures and qualified human resources. In addition they provide training to a diverse mix of health professionals and conduct research. It is worth noting that training of some mid-level health professionals, such as nurses, midwives and laboratory technicians, takes place at State hospitals also.

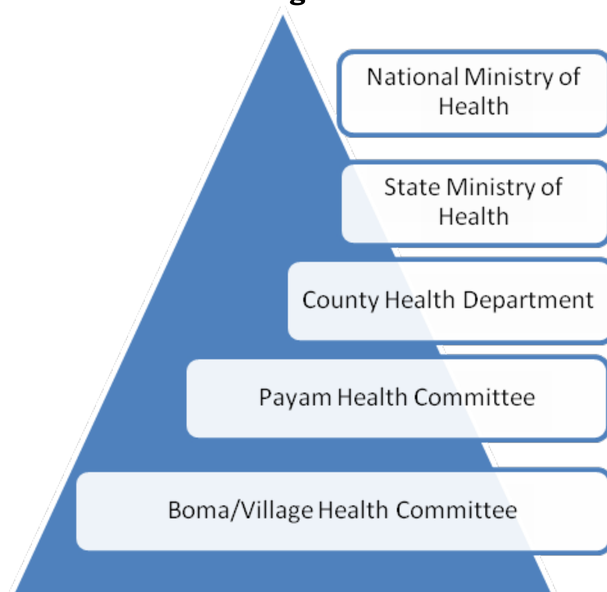
2.4.1.2 Management

Figure 2 depicts the organisational and management structure of the MOH. At the national level, the Ministry provides overall leadership; develops policies, guidelines and standards; engages in advocacy and resource mobilisation and supervises the overall health care service delivery in the country. However, due to the current capacity inadequacies at State Ministries of Health (SMOH), MOH continues to perform some service delivery functions, which are a core function of the former. In addition, MOH directly manages the three Teaching Hospitals.

The SMOH provides leadership for health service delivery and management in their respective states. SMOH and County Health Departments (CHDs) are responsible for delivery of secondary and primary health care (PHC) services respectively. The CHDs manage the delivery of PHC services at Payam and Boma/Village level. Health Committees at Payam and Boma/Village level participate in the management of health care facilities in their locations. The responsibility for funding most government provided health services resides with the States and Counties.

In addition to the government funded facilities, there are close to 800 PHCUs and PHCCs that are run and managed by NGOs [national and international] and FBOs. These organisations currently manage and support these facilities to deliver health services, working in close collaboration with SMOHs and CHDs.

Figure 2: The organisational and management structure of MOH



2.4.1.3 Coverage and Utilisation

There are in total 1,487 health facilities in the 10 States. Of these 1,147 are functional, while 340 are non-functional. Of the functional ones, 3 are Teaching Hospitals, 7 State Hospitals, 27 County Hospitals, 284 Primary Health Care Centres, 792 Primary Health Care Units, 10 Private facilities, 14 specialised hospitals/clinics and 10 police and military health facilities.

The non-functional health facilities include 2 State Hospitals, 1 County Hospital, 30 PHCCs, 302 PHCUs, 4 Private facilities and 1 Specialised Hospital/Clinic.

Regarding the state of infrastructure in these health facilities, 376 (26%) are in good condition, 347 (23%) require minor renovation, 274 (18%) require major renovation and 490 (33%) need complete replacement. Furthermore, these facilities lack medical equipment, transport and communication, water and power supplies.

It is estimated that 44% of the population are settled within a 5 kilometre radius of a functional health facility (HFM 2011)[13]. The per capita Out Patient Department utilisation rate is estimated at 0.2 visits per annum. A combination of factors lead to the low utilisation rates: lack of qualified staff; inadequate equipment and supplies in County and State hospitals; long distances to health facilities; poor roads and transport; limited/no ambulance service; dysfunctional referral system; cultural and financial barriers. Access to known, cost-effective, life-saving maternal and child health interventions, for instance bed nets, water-guard and immunisation, is still low in South Sudan.

2.4.2 Human Resources for Health

The Republic of South Sudan has a critical shortage of all professional health cadres. Only about 10% of the civil service posts are filled by qualified health workers, which

[13] Coverage estimates for 10 States that have been surveyed by the Health Facility Mapping (HFM) 2011.

translates to about 1.5 physicians and 2 Nurses/Midwifes for every 100,000 citizens. These cadres are disproportionately based in urban areas. Consequently, health services are provided by less skilled health workers, known as Community Health Workers (CHWs). Mid-level health cadres, such as CHWs, community midwives (CM), maternal and child health workers (MCHWs) and home health promoters (HHPs), provide health services in the community. They facilitate health promotion and disease prevention through community participation for effective access and utilisation of health services. They also support programmes such as mass immunisation and malaria campaigns. CHWs are mainly employed by the NGOs that provide health services in the country. The predominant use of this cadre of health staff has compromised the quality of health care services for the community.

HRH management systems are weak and characterized by lack of job descriptions and targets; insufficient and irregularly paid compensation; lack of support supervision and quality control mechanisms at all levels; lack of basic information about the number, composition and geographical distribution of health providers in the private sector; insufficient coordination of human resource development across different parts of the health system; limited continuing educational opportunities and professional development; and poor recruitment and weak retention capacity of states and counties.

The lack of a clear retention policy and plan, coupled with poor HRH management systems and poor working environment has led to high staff turnover and staff absenteeism, all of which compromise productivity.

The current capacity and intake of health training institutions limits the potential for a rapid scale up in critical cadres. Mid-level health workers, such as nurses, mid-wives, laboratory technicians and CHWs, are trained in the state hospitals, which is not the case for other professionals. In spite of the recent relocation of the Colleges of Medicine from Khartoum to their original locations at the three Universities of Juba, Bahr-el Ghazal and Upper Nile, they are still severely constrained by lack of equipment, lecturers, instructional materials and accommodation due to insufficient financing.

2.4.3 Health Management Information System

At present, routine HMIS is largely not operational. The MoH prepared the M&E Framework, which identifies 104 indicators to be collected at various levels of the health care system. Data is currently obtained by means of assessment, mapping exercises and surveys. Data from vertical programmes are channelled directly from health facilities to MoH, often bypassing the SMOH and CHD.

Although the MoH developed a total of 74 tools for data collection, no standardized reporting form exists for tracking data between health facilities, NGOs or vertical programmes. There is very limited capacity for data collection and analysis, as well as insufficient M&E knowledge in the counties. About 50% of counties lack CHD officers, whilst the existent ones have inadequate M&E knowledge. In non operational CHDs, routine HMIS data management doesn't follow the usual channels of reporting within the health care system.

The main challenges of the HMIS include inadequate human resource; insufficient Information Technology (IT) equipment for data processing in the states; limited power sources; poor communication and transportation. The MoH is in the process of introducing the District/County Health Information (DHIS) software for routine HMIS. DHIS allows for standardisation of data records, aggregation and analysis of data to obtain indicators and reports.

2.4.4 Pharmaceutical Products, Vaccines and Technologies

The MOH currently uses the World Bank procurement procedures and is guided by WHO information on prices. It has developed national policies, standards, guidelines and regulations to streamline the pharmaceutical sector. However, enforcement is still weak and compounded by a shortage of qualified staff in both public and private sectors. There is no local pharmaceutical production. The national quality control laboratory in South Sudan is inadequate. The routine Minilab® testing at Kaya point of entry indicates up to 20% of the essential medicines imported are substandard or counterfeit[14]

Procurement and provision of essential medicines and supplies still rely on irregularly distributed pre-packed kits supplied in a push-based supply system. The need for medical and diagnostic equipment is not sufficiently addressed. The pharmaceutical storage capacity and network across the country is inadequate. Stores at all levels are not adequately equipped or lack qualified technical personnel. Other weaknesses include the lack of a national Logistics Management Information System (LMIS); uncoordinated donations and parallel supply chains; lack of transportation means; and poor pharmaceutical waste disposal practices.

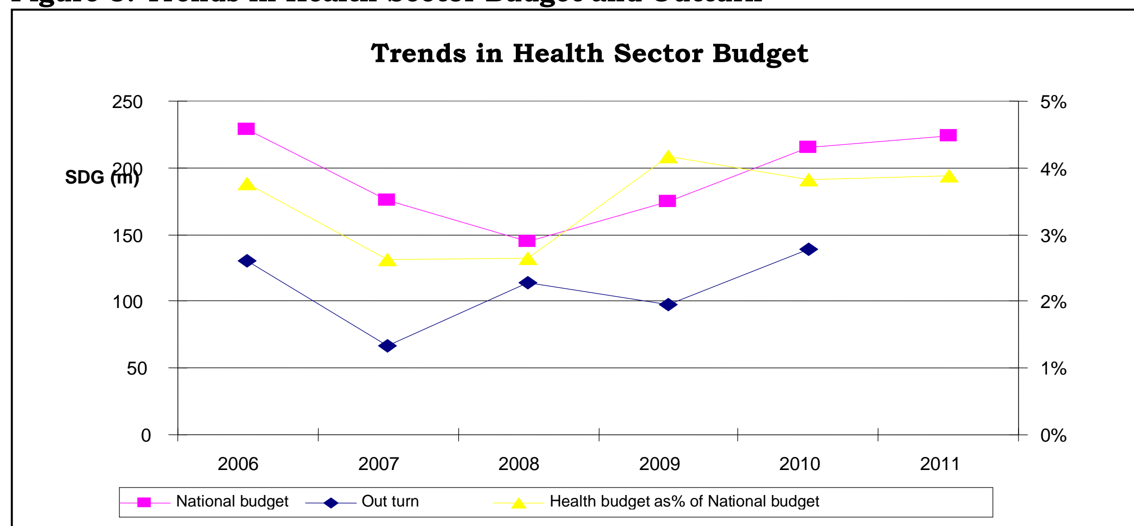
Although MOH has developed treatment guidelines and a manual on rational medicines use to assure adherence and reduce resistance, irrational use of medicines continues to be a challenge in facilities and communities.

2.4.5 Health Financing

The MoH recognises Primary Health Care (PHC) as essential for health sector development and offers it free of charge to the entire population[15]. Oil sales and general taxation constitute the main sources of revenue for public (government) expenditure in the health sector. However, this only represented a small a portion of the total health expenditure in 2010/2011. Development Assistance for Health (DAH) continues to be a significant source of support to funding the health sector. In addition, anecdotal evidence seems to suggest that out of pocket expenditure [especially among urban populations] also provides a significant contribution to the total health expenditure. All these sources of funding have been declining since 2006 to the extent that they are grossly insufficient to fund the HSDP. The nascent national health insurance system in South Sudan is only accessible to a small proportion of government civil servants.

[14] Routine quality control testing report, February 2011
[15] The Interim Constitution of Southern Sudan 2005

Figure 3: Trends in Health Sector Budget and Outturn



The Government's allocation to health as a proportion of the national budget has been under 4% over the last five fiscal years, far short of the 15% target pledged by African governments under the Abuja declaration, as showed in Figure 3. The exception was noted in 2009, when the health sector budget as a proportion of national budget marginally exceeded 4%.

Budget execution, as shown in Figure 3, has been unsatisfactory, impacting negatively on capital expenditures, like delays in procuring infrastructure, equipment and logistics. Just over 50% of government expenditure goes towards the procurement of drugs and the payment of wages and allowances in the public sector, leaving crucial health interventions, like Reproductive health, HIV/AIDS, Malaria and Tuberculosis, heavily reliant on DAH funding. Most of the DAH is through off budget support as the public financial management and accounting systems are being developed. This greatly impacts on efficiency within the health sector.

2.4.6 Leadership and Governance

To date, the positions in the MOH and SMOH have not been completely filled. Often the Ministry provides direct services to the civil population as opposed to its mandate and role as policy developer. Although the MOH has developed key policies and strategies for several technical areas, the roles and relationships between the public, private, and civil society have not been clearly articulated. In addition most regulatory laws (for example International Health Regulations, Occupational Health, Workforce and other Public Health Acts) are yet to be developed or enacted.

The line of responsibility between the MOH and SMOH is still blurred. For instance, while the SMoH are responsible for programme implementation, they are not necessarily accountable to MoH. Poor coordination between MOH, SMOH and NGOs involved in health care delivery remains a key challenge.

2.5 The Health Policy

The Southern Sudan Health Policy (2007-2011)[16] was contextually developed to meet the level of health services in the post war Southern Sudan, thus focusing on Primary Health Care. The policy underscores massive investment in health systems to enhance the efficiency, coverage, quality and equity of essential health services. Furthermore, the provision of primary health care services free at the point of service is emphasized. The package of services to be provided free includes appropriate interventions to combat 24 priority diseases that are endemic in the country.

Community empowerment through health education and awareness is another policy directive. This should enable communities take charge of improving their health and integrate effective health interventions into existing community structures.

Although the Southern Sudan Interim Health Strategy (2006-2008) and the Health Policy of the Government of Southern Sudan (2007-2011) outlined 24 strategic actions to address the poor health situation in the country, the HSDP will prioritise 6. These strategic programmatic areas also reflect the six building blocks of the health system as defined by WHO;

a) Improve health services delivery, with emphasis on maternal & child health services (MCH), by ensuring relevant services are accessible and acceptable; reducing inequalities to care; extending coverage through mobilising communities; developing effective partnerships; implementing the BPHS; capacity building and integrating disease prevention and control programmes.
b) Strengthen human resources development & management throughout the MOH by strengthening HRH health policy making, planning and evaluation.
c) Develop an evidence based (HMIS) culture within MOH by strengthening health policy making, planning and monitoring and evaluation.
d) Develop a pharmaceutical and medical supplies system through capacity building, effective planning and efficient financing mechanisms.
e) Develop a health financing & resources mobilisation system that is fair, efficient and provides financial risk protection. Improve the financial management system to ensure transparent tracking of the flow of funds in the health sector and align spending with priorities in an integrated budget.
f) Enhance the institutional development of MoH to provide good leadership & governance and have effective management through capacity development; improving accountability and transparency; and delegation and decentralisation.

2.6 Major challenges of the health systems

The major bottlenecks of the health system in South Sudan are outlined below;

- Inaccessibility of medical care and health services due to geographical, institutional, socio-cultural and financial barriers
- Ineffective referral mechanism between all levels of service delivery due to inadequate communication and transport and weak linkages between the different levels of service delivery

[16] Health Policy of the Government of Southern Sudan 2007-2011

- Poor quality of health services, including the processes of delivery, like lack of privacy, confidentiality and poor patient-provider interactions
- Lack of health communication and promotion strategy
- High prevalence of GAM, SAM and stunting amongst under-fives, estimated at 21%, 7.63%, and 25% respectively
- Critical shortage of HRH, limited competence and insufficient skill mix of the available ones, which compromises provision of quality, basic and lifesaving health services
- High staff turnover and no clear retention plan
- Limited capacity of health training institutions (training only nurses, midwives, lab tech and CHWs)
- Inadequate number of and dilapidated health infrastructure at primary (Payam, County), secondary (State) & tertiary levels (National) levels
- Weak health management information system
- No standardized reporting form for tracking data between health facilities, NGOs or vertical programmes
- Poor health commodities security (pharmaceuticals and equipment)
- Irregularly distributed pre-packed kits supplied in a "pushed-based" supply system
- Inadequate and poorly managed pharmaceutical storage capacity and network across the country
- Uncoordinated drug donations and parallel supply chain system
- Inadequate national quality control and reference laboratory services
- Very low and progressively declining public sector health budget and difficulties in accessing the approved budget
- Insufficient health insurance system
- Over reliance on oil as the main source of revenue for the government health financing.
- Limited legislative and regulatory capacity (international and national health acts not developed or adopted)
- Limitations in articulating the roles of public, private and civil society in delivery of health care, resulting in limited engagement of all these sectors
- Lack of statutory norms and standards for service delivery
- Unstructured coordination mechanisms among health sector partners
- Insufficient planning and organisational capacity
- Lack of accountability and transparency between stakeholders

CHAPTER THREE: GOAL, OBJECTIVES, STRATEGIC RESPONSE AND EXPECTED RESULTS

This chapter outlines the strategic programmatic approach that will address the major issues identified in the situational analysis. This approach is essential to maximize achievements using the limited health sector resources.

3.1 Goal

Contribute to the reduction of maternal and infant mortality and improve the overall health status as well as the quality of life of the South Sudanese population.

3.2 Objectives

- To increase the utilisation and quality of health services, with emphasis on maternal and child health
- To scale up health promotion and protection interventions so as to empower communities to take charge of their health
- To strengthen institutional functioning including governance and health system effectiveness, efficiency and equity

3.3 Priority Programme Areas and Strategic Responses

Without massive and effective investment in health systems and services, it is impossible to realise national and international goals, including the Millennium Development Goals (MDGs)[17]. Emphasis on strengthening the leadership and management capacity at all levels of the health system will be critical for optimal utilisation of the resources available to the sector. In order to achieve the HSDP goal and objectives, as well as guide decision making for its implementation and resource allocation, the strategic response will focus on addressing the following six programme areas, prioritised in the Southern Sudan Health Policy (2007-2011) and the Southern Sudan Interim Health Strategy (2006-2008). These six priority programme areas are aligned to the six elements of the health system. Strategic actions are outlined under each priority area. Detailed activities for implementation of the strategies will be outlined in the annual operational plans.

1. Health Services Delivery
2. Human Resources for Health (HRH)
3. Health Information System(M & E)
4. Pharmaceutical and Medical products
5. Health Financing
6. Governance, Leadership and Management

[17] Strengthening Health Systems to Improve Health Outcomes, WHO, 2007

Table 1: Priority Programme Areas and Strategic Response planning Matrix

Objective one: To increase the utilisation and quality of health services, with emphasis on maternal and child health			
Strategies	**Outputs**	**Indicators of achievements (planned expected outcomes)**	**Strategic Actions**
1. Improve on Health services delivery & access a) Reduce inequalities in access to health care and extend coverage of basic services through mobilising the communities, developing effective partnership, implementing basic package of health care, capacity building and resources mobilisation; b) Review and continue implementing the Basic Package of Health services (BPHS) through evidence based decision making, effective partnerships, capacity building and resource mobilisation c) Improve delivery of maternal and child health interventions through making relevant services accessible and acceptable, especially obstetric services and integrated disease prevention and control programmes d) Develop policies & guidelines to address the issues of neglected tropical diseases (NTDs), communicable (CDs) & non-communicable diseases (NCDs), and environmental health	Relevant policies, guidelines, protocols in place Evidence of greater number of effective partnership Improved coverage of delivery of full package of BPHS Routine availability of all relevant services in BPHS, including EPI services and 24 hour coverage of comprehensive emergency obstetric & neonatal care (CEmONC) Improved health & nutrition promotion activities Effective prevention and control of CDs, NCDs and NTDs	Policies & guidelines to support the six building blocks of the health system strengthening developed & rolled out to all states by 2015 NGOs accreditation process developed & functioning and more than 80% of NGOs implementing Basic Package of Health Services (BPHS) Outpatient attendance increased by 80% from 0.2 in 2010 to 1 by 2015 Full package of BPHS being delivered in at least 50% of the existing health facilities by 2015 Number of women delivering in HFs increased by 13% (from 12.3% to 25%) by 2015 % of fully immunised children (only with card) increased by 45% (from 25% to 70%) by 2015 % of Under-fives sleeping under an ITN the previous night increased by 45% (from 25% to 70%) by 2015 MMR reduced by 20% (from 2054/ 1000,000 live births to 1643/1000, 000) by 2015 IMR reduced by 30% (from 84/1,000 live births to 59/ 1,000) by 2015 U5MR reduced by 30% (from 106/1,000 live births to 76/1,000)	Develop relevant policies, guidelines and protocols to support health system strengthening Develop an accreditation process to incorporate health facilities owned by private sectors (NGOs/ CBOs/FBOs) in the RSS health system Establish effective coordination & communication mechanisms at all levels of health system Adequately stock up health facilities (HFs) with skilled personnel and essential equipment/ supplies Roll out implementation of the BPHS to all States and rationalize outreach activities to focus on high impact, cost effective interventions (e.g. EPI, IECHC, .etc.) Scale up routine immunisation of children and women of child bearing age (14-49 yrs), including introduction of new vaccines Collaborate closely with relevant departments e.g.: a) infrastructure development to ensure functioning, utilities and equipment of HFs ; b) IECHC to ensure better child survival; c) IEC/BCC to change attitudes about health seeking practices Ensure skilled care during pregnancy and child birth, and 24 hours CEmONC Develop health promotion/education communication strategies, scale up advocacy and mass media interventions, and implement user friendly sensitisation programmes Provide user-friendly guidelines, adequate drugs, diagnostic equipment & supplies to all HFs providing HIV/AIDS services & scale up prevention, treatment, care and support of individuals and families affected by the disease

		by 2015 % of pregnant women attending at least 4 ANC visits increased by 30% (from 10% to 40%) by 2015 % households using sanitary means excreta disposal increased by 25% (from 15% to 40%) by 2015 Prevalence of underweight among U5s reduced by 10% (from 30% to 20%) by 2015 % of children with diarrhoea treated with ORS increased by 40% (from 40% to 80%) by 2015 HIV prevalence among 15-24 years old female population remains stable at 3% by 2015 Tuberculosis notification rate, new smear positive cases (per 100/000 pop) increased by 52 (from 27 to 79) by 2015 Guinea worm incidence reduced from 1,698 cases to 0 case by 2015	Increase & sustain coverage & usage of LLTNs and ensure early diagnosis and treatment of malaria at community level Expand TB DOTS and community TB prevention, early diagnosis and treatment, and strengthen routine monitoring and reporting Review, update and strengthen standard IDSR operating procedures, technical tools, guidelines and protocols Improve prevention, detection and treatment of under nutrition, and scale up maternal, IYCF, and micro-nutrient interventions Develop comprehensive policy & guidelines for prevention, control and reduction of risk factor of NCDs and scale up interventions for prevention, control and elimination of NTDs Develop environmental health policy & strategic plan, and increase awareness & capacity to respond Establish more effective & efficiently functioning laboratory, radiology, imaging and blood transfusion services
2. Enhance Human Resources for Health (HRH) production, performance and productivity a) Strengthen human resource for health through developing and implementing a human resource for health development policy and strategy b) Adopt innovative approaches to training of HRH by using Morden Distance Learning programme approaches that staff can do online and "on-the –job" as part of Continuous Professional Development (CPD) – a more efficient method of learning without depleting further the already limited health work force	Human resource for health development, management and training policies, information and strategy available & being implemented Tools available to accurately quantify existing gaps in health workforce Appropriate curricula developed and being used for training all different categories	Existing HRH policy & strategy reviewed and approved by mid 2012 HRH information system (HRIS) reviewed, updated and rolled out to states and counties by end of 2012 Availability of tool to accurately determine gaps in health workforce Continuing education and Online Distance Leaning training courses systematically planned at different levels as strategy for staff retention	Develop the policies & associated documents through a needs/functional analysis; review who is where and with what skills, and consider other factors such as morale and cost limit. Design/establish accurate inventory of health workers to quantify the existing gaps, and review, update, roll out the existing HRHIS for South Sudan at all levels and to all states Renovate/construct infrastructures for training institutions, provide teaching equipment/materials and recruit tutors/instructors Ensure more deployment of existing qualified health personnel and recruit locally, regionally and internally to meet gaps

	of health personnel Guideline for staff recruitment, motivation, and retention available Accreditation of training institutions Quantitative & qualitative improvement in capacity & physical infrastructure of training institutions	At least 50% of the existing curricula reviewed and endorsed by end 2012 At least 50% (8,569) of the total staffing norm recommended for 2015 (17,138) met by mid 2012 Number of medical officers (doctors) per 10,000 population by state increased from 0.15 to 0.3 by 2015 Number of Nurse/Midwives per 10,000 population increased from 0.2 to 1 by 2015 At least 7 training institutions have been constructed/renovated and equipped by 2015 Health training institutions accreditation system established and at least 15 institutions accredited by 2015 % of health facilities staffed with frontline PHC personnel increased by 40% (from 20% to 60%) by 2015 By 2015, at least 50% of the personnel working in health facilities are recruited	Prioritise training of midlevel cadres (clinical officer, nurses, midwives, etc.) and establish national examination board to uphold standards of examination and to ensure harmonisation of service delivery skills Establish system for continuous professional development (CPD) including Distance Learning for all cadres and prepare integrated capacity development plans that address clinical & management skills at each level of the health system Review and standardise curricula and qualification for trainers, pre-service & post graduate programmes & develop continuing education programmes Enhance institutional capacity and accredit health training schools/colleges (establish accreditation authorities, standards and procedures) Rationalize training schools/colleges according to geographical distribution, cadre requirement, and availability of funds Develop guideline for staff recruitment and a package for staff motivation and retention Develop system to map internal/external flow of health personnel to inform necessary evidence based actions Work towards having right personnel in the right place at the right time and with the right skills to deliver quality services
3.Ensure equitable access to quality Pharmaceuticals & Medical Products Pharmaceuticals and medical supplies systems developed through capacity building, effective planning and effective mechanism for financing the systems (Pharmaceuticals).	Essential drug list, treatment manuals, and Pharmaceutical Information Management System (PIMS) available & being used at all levels Evidence of efficiently and effectively	Essential drug list & treatment guidelines, disseminated at all levels PMIS established & functional at all levels At least 2 additional general medical stores/warehouses renovated & functional by 2015	Develop policy, guidelines, tools, and legal plus regulatory frameworks for management and streamlining pharmaceutical sector Review and finalize the existing Pharmaceutical management information system and roll out to all states and counties Plan collaborative approach with central government to develop common procurement & supplies systems

	functioning supply systems National quality control system established Health facilities at national, state and county level adequately stocked with vital diagnostic and therapeutic equipment	Training on supplies management conducted in all states by 2013 At least 1 quality control laboratory set up & functioning at national level & in each state by 2015 % of pharmaceutical products sampled that failed quality control test reduced by 12% (from 17% to 5%) by 2015 % of health facilities without any stock outs of 4 tracer drugs increased by 60% (from 40% to 100%) by 2015 % of procured drugs that get expired at health facility level reduced to 5% by 2015	Develop rational plan for medical stores buildings & renovate and/or build new medical stores Establish national quality control laboratory and strengthen quality assurance mechanism Promote rational use of medicines and contain antimicrobial resistance Ensure availability of affordable, safe, efficacious and high quality essential medicines and medical supplies Procure, distribute and maintain vital diagnostic and therapeutic equipment
Objective two: To scale up health promotion and protection interventions so as to empower communities to take charge of their health			
Strategies	**Outputs**	**Indicators of achievements (planned expected outcomes)**	**Strategic Actions**
1. Establish and Scale up community based health initiatives a. Encourage Individual, family and community responsibility for health b. Improve community involvement in health services delivery c. Strengthen linkages between facility based health services and communities	Improved personnel hygiene and waste disposal Improved community ownership and engagement in health services delivery	Proportion of Bomas/Payams with IEC materials adapted to the local communities Proportion of Bomas/Payams with leaders engaged in community based services	Strengthen and adapt Information, Education and communication initiatives as well as broader behaviour change campaigns Engage and empower the local leaders at boma and payam in community based health service delivery Engage communities in advocacy for health promotion and protection initiatives
Objective three: To strengthen institutional functioning including governance and health system effectiveness, efficiency and equity			
Strategies	**Outputs**	**Indicators of achievements (planned expected outcomes)**	**Strategic Actions**
1. Strengthen Health Information System, Monitoring and Evaluation of the health sector. Develop evidence based culture throughout the Ministry by strengthening health policy making, planning, monitoring & evaluation	Evidence of development of policy making skills Evidence of effective & efficient approach	M & E and HMIS frameworks produced and reviewed by end of 2012 M&E/HMIS functional in all	Decide additional aspects of policies and M&E to be developed in order of priority . Review options for planning M&E/HMIS based on international experience.

(HMIS).	to sector wide development through joint planning and M&E Evidence of effective & efficient supportive supervision Accurate and timely submission of monthly health (HMIS, DHIS & IDSR) reports at all levels (county, state and national) Evidence of integrating vertical programmes into comprehensive Primary Health Care (CPHC)	states and counties by early 2013 Annual Health sector performance review reports produced Number of National, State, County level M&E and surveillance officers trained and providing supportive supervision Number (%) of states and counties implementing DHIS Number of state, counties, HFs submitting complete IDSR reports At least 60% of monthly DHIS & IDSR reports submitted timely to national, state and county health authorities At least 80% of the vertical programmes integrated with HMIS and DHIS	Develop an effective mechanism for joint planning and M&E with states & development partners Review, disseminate M&E framework and roll out M&E activities to states and counties Develop and maintain national, state, and county level databases Disseminate research and other information following assessment/ planning missions Institutionalize District Health Information System (DHIS) in all states and counties Strengthen the country's capacity to conduct effective supportive supervision Strengthen country's capacity to conduct effective integrated disease surveillance (IDSR) including early warning & response targeting priority diseases Coordinate production of high quality data from DHIS, surveys and surveillance Develop and implement procedures for monitoring and evaluating providers' communication skills and practices Integrate vertical programmes with comprehensive primary health care programmes
2. Strengthen Health Financing Develop health financing options through: increasing the flow of funds to the health sector especially for basic health services; ensuring spending is in line with priorities; monitoring different mechanisms to finance the delivery of health services; and developing an integrated budgeting and planning system	Improved flow of funds from internal & external sources to health sector Integrated planning & budgeting Evidence of cost-effectiveness & cost-efficiency of health service delivery Improved accountability and transparency in	Health Financing strategy developed by end 2012 Development of the health sector budget and an annual updated budgeting system Per capita total public health expenditure increased by 3 US$ (from 6 US$ to9 US$) by 2015 % of government budget allocated to the health sector increased by 6% (from 4% to 10%) by 2015 MoH budget execution rate increased by 16% (from 84% to	Design a health financing framework through rigorous examination of financing options/alternatives Work collaboratively with national government on exploring & developing common, transparent, effective & efficient budgeting, accounting & audit systems Develop the budget sector plan as the main budgeting tool to ensure coordination between state and national government Mobilise financial and other resources and liaise with human resource department on capacity building , especially on training of state and county level MoH officials in preparing annual work plans

	management of donor funds	100%) by 2015 Guidelines developed to effectively manage donor funds (pooled & direct funding) All donor/NGOs funded projects aligned to health sector development priorities PPP scheme established and rolled out to states by 2013 % of SMoHs producing annual plan & budget increased by 30% (from 70% to 100%	and costed budgets Lobby RSS to increase allocation to MoH to 15% of RSS budget Manage donor funding through "pooled" and "direct" funding regulated by direct contract between implementing agency and MoH Align donor funding to government priorities and explore cost-sharing (user fees) opportunities for secondary and tertiary services where appropriate Explore opportunities for Public Private Partnership Design system to monitor mechanism to finance delivery of health services for their cost-efficiency, acceptability and quality.
3. Improve the Health Sector Governance, Leadership and Management a) Enhance the institutional development of the ministry to provide leadership, ensure good governance and have effective management through capacity development, improving accountability and transparency, and delegation and decentralisation at all levels b) Continue strengthening coordination sector wide and on an inter-ministerial basis through developing coordination mechanisms at all levels of the health system and ensuring their effective and efficient functioning	Evidence of national level health systems functioning effectively and efficiently Strengthened functioning of the health systems at state and county levels Evidence of effectively/efficiently functioning coordination mechanism at all levels of the health system	Fully functioning communication systems at central & state levels by end 2012 Existence of functional coordination mechanism evidenced by minutes of meetings at different levels of services delivery No. of hospital administrators trained in hospital management increased by 47 (from 13 to 60) by 2015 % of counties conducting at least 2 quarterly supervisions increased by 60% (from 20% to 80%) Number of health facilities that have operational ambulances increased by 110 (from 40 to 150) by 2015	Ensure clarity of roles, functions and responsibilities of the MoH as an institution & of staff at different levels of the health system Review MoH management structures, job descriptions, and develop guidelines for performance review in collaboration with the Ministry of Labour & Public Service . Set priorities & outputs and allocate resources and responsibilities in annual plans at each level of the health system Develop management system and practices that enables professionals to effectively and efficiently manage health delivery In collaboration with development partners, set up coordination and management systems at all levels of service delivery to support planning, budgeting,implementation, monitoring and evaluation of health programmes Review legislations currently governing the health sector (nationally & internationally) and develop legal frameworks & relevant professional councils (e.g. Medical Council)

CHAPTER FOUR: IMPLEMENTATION AND RESULTS

4.1 Annual operational plans

Operationalisation of the HSDP will require the MoH, SMoHs and key stakeholders to develop detailed, costed annual operational plans. At state level, annual implementation plans will be prepared with technical guidance from the State Budget Planning Committees with inputs from the CHDs, payams and health facilities. The annual work-plans will form the basis for budget allocations and disbursements of funds to all levels. They will be aligned with the government budget cycle so as to inform the national budget for the subsequent year.

4.2 Mechanisms for health service delivery

After the signing of the CPA in 2005, MoH engaged in formal agreements with a number of NGOs to provide health services in some states. This involved contracting out or contracting in, as well as a hybrid between the two arrangements for the management and delivery of health services. Whilst the MoH will build on this arrangement during the HSDP period 2012-2016, an element of performance-based contracting will be implemented in the two States' of Jonglei and Upper Nile. The Ministry of Health at the national level will focus on regulation, policy, planning and M&E and capacity building. The NGOs, in collaboration with the SMOH and CHDs, will continue to manage and provide health services at PHCCs and PHCUs while building the capacity of the latter to ultimately take full responsibility for service provision.

The MOH and partners will establish and strengthen public private partnerships (PPP) in health service delivery, as part of the process of expanding coverage and quality of health service provision to the population. Both public and private sector health professionals will be registered with and regulated by the Medical Council.

4.3 Roles of stakeholders

Multisectoral and intersectoral collaboration will be essential in fostering the achievement of the HSDP objectives. The MoH and SMOH will therefore engage with stakeholders, including other government departments, agencies, development partners, NGOs and private sector to build sustainable partnerships for implementation of the HSDP. Such collaboration and coordination will be vital to ensure expansion of the geographic coverage of programmes and services as well as curtailing duplication and fragmentation. The MOH will provide strong leadership and advocacy to ensure all partners programmes and resources are aligned with and contribute to the implementation of the HSDP.

4.4 Monitoring and Evaluation

The expected results of the HSDP are outlined in chapter three. The outcomes will be measured through routine information systems (IDSR and HMIS) and periodic household and health surveys. Other methods of measuring sector performance include sentinel surveillance, specialised surveys such as the South Sudan Malaria Indicator Survey (SSMIS), health facility assessments and mapping.

Implementation of the HSDP will be evaluated internally and externally at the mid-term point (mid 2013). A final external evaluation is planned for the last half of 2015, the results of which should inform the planning process for the next HSDP (HSDP II). The next South Sudan Household Survey is planned for 2015 and expected to capture the results of the HSDP implementation. Efforts will be made to capture data from all sectors including private, for- profit and NGOs. Tracking the HSDP results will be done within the framework of assessing progress towards attaining the MDGs (see Annex B for indicator framework).

The M&E Department of the MOH will be responsible for production of quarterly and annual reports using data from the HMIS. Under the leadership of the MOH, representatives of stakeholders will conduct joint annual health sector performance review (AHSPR). The AHSPR results will be basis for dialogue during annual health assemblies that draws participants from the entire health sector stakeholders. The AHSPR report will highlight progress made and challenges experienced in the health sector for the period under review.

Following the joint annual review missions and health assembly, a report of the key issues discussed and recommendations made shall be prepared and circulated to all stakeholders at all levels of the health sector. The M&E Department of MoH will monitor the implementation of the recommendations of the annual reviews and report on progress during the next annual review meeting.

4.5 Risks and Assumptions in implementation of HSDP

4.5.1 Risks to successful implementation

- Poor macroeconomic growth and/or economic management that would compromise government allocation to the health sector
- Interruption of inflows from development assistance for health due to policy shifts, macroeconomic or political instability
- Insufficient increase in the number and limited competence of health personnel
- Non alignment of stakeholders' actions with the framework of the HSDP

4.5.2 Assumptions underlying implementation

- Government commitment to allocate at least 10% of the national budget to the health sector
- Political stability, leadership, will and commitment to the health sector
- Economic growth
- Good governance
- Sufficient numbers of skilled health personnel trained, equitably deployed and retained
- DAH aligned to government health priorities
- Civil society engagement in health, especially at the community level
- Effective partnerships among stakeholders

CHAPTER FIVE: COSTING AND FINANCING OF THE HSDP

5.1 Financing the HSDP

Securing adequate resources to fund the HSDP will necessitate sustainable financing mechanisms to mobilise substantial revenue over the medium and long term, as currently some priority areas of the health sector are underfunded. The Health sector budget as a proportion of the national budget has been at 4% over the last couple of fiscal years, far short of the 15% target pledged by African governments under Abuja declaration. Although funding for the HSDP is expected to come from an increased government allocation, Development Assistance for Health (DAH) will continue to be a significant source of revenue. The following financing mechanisms are envisaged for the HSDP 2012-2016 period:

5.1.1 Government Budget

The government budget will continue to be the preferred source of funding for the health sector. Government shall continue to use the sector budget as a key fiscal planning tool. The health sector budget will outline resource needs, using cost projections for planned activities against the sector allocations. To realise government commitment to universal access to health care, with emphasis on maternal and infant mortality reduction, progressive increments in allocations for the health sector budget, from the current 4.2% to 10% of the government budget, are envisaged by 2015. However, this is contingent upon confirmation by the Ministry of Finance & Economic Planning. This budgetary allocation increase is critical to allow necessary rehabilitation and establishment of health facilities and training institutions.

5.1.2 Development Assistance for Health

Development Assistance for Health [DAH] will continue to be a significant source of revenue for financing of the HSDP. Whilst most development partners aspire to channel funding through budget support mechanisms, this is dependent on strengthening the public financial management system.

To provide support for health service delivery, as outlined in the HSDP, a consensus was reached between the MOH and development partners in 2011. This agreed that there will be three main mechanisms, geographically split by state, that will support the delivery of basic health services, led by the following partners; WB; USAID and DFID.

- World Bank Funding Mechanism:
  World Bank resources will fund HSDP interventions in Jonglei and Upper Nile states using a performance based financing approach.
- USAID Funding Mechanism:
  USAID resources will fund HSDP interventions in Central and Western Equatorial States through contracting with NGOs.
- Health Pooled Funds Mechanism:
  Five development partners led by DFID will use the Health Pooled Fund mechanism to support implementation of the HSDP in the following 6 states:Unity, Eastern Equatorial, North Bahr el Ghazal, West Bahr el Ghazal, Lakes and Warrap.

Although these three mechanisms have functional differences they are all aligned and will fund a common set of interventions that will support progress towards achieving HSDP goals and objectives. In addition to funding through the three main mechanisms other partners outside these three mechanisms will continue to fund programmes through bilateral agreements with the MOH.

The aforementioned funding mechanisms for the HSDP constitute a fairly coordinated and harmonized approach. However, to realise the aspirations of aid effectiveness as outlined in the Paris declaration and the Accra Agenda for Action it's envisaged that progressively, during the implementation of the HSDP, a sector wide approach to funding the health sector will be achieved.

5.1.3 Funding Mechanism Through Contractual Basis

A financial agreement for funding the HSDP shall be signed between the RSS, represented by MOFEP, and the Funding Agency. While contracts for the delivery of the agreed package of health services will be signed between the NGOs and MOH/SMOH. Payments will then be made to NGOs, based on modalities agreed upon between the MOFEP and the specific Funding Agency.

5.1.4 Other Sources of Funding the Health Sector

Government will continue to mobilise resources from global health initiatives e.g. the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Global Alliance for Vaccines and Immunisations (GAVI), etc. These funds will be aligned to funding HSDP priorities and reflected in the MOH annual plans and budgets to foster tracking of the overall funding for health sector.

5.2 Cost Recovery

The Health Policy (2007-2011) and the Interim Constitution (2005) of the Republic of South Sudan states that Primary Health Care services shall be provided free at the point of consumption. However, once the economic situation in the country substantially improves, the government will gradually introduce user fees for secondary, tertiary and specialised health services. The revenue generated from such fees will be used to improve the quality of services provided to the people of South Sudan. The updated Health Policy (2012-2016) will include the provision for exploration of the feasibility of the gradual introduction of user fees when and where appropriate. Guidelines for the introduction and management of the fees will be developed and disseminated to all levels of the health system.

5.3 Health insurance

A National Health Insurance Fund (NHIF), based on a mandatory payroll contribution exists in South Sudan for a small proportion of government civil servants. The Government will undertake a feasibility study on the expansion of the current scheme and introduction of other forms of health insurance as a source of financing health care in South Sudan.

As part of the process of establishing a sustainable financing framework for the health sector, a health financing strategy for South Sudan that comprehensively outlines the potential financing options for the sector shall be developed. Furthermore, a resource

mobilisation strategy, articulating the funding gaps and justification for increased investment and resources for the health sector will be developed and used by MoH and its partners to secure additional resources for the health sector.

5.4 Budget process and resource allocation

The MOH, in collaboration with MoFEP, will establish strong linkages in the budgetary processes between central and state ministries of health to ensure preparation of a comprehensive budget for the HSDP. Such mechanisms will ensure that sector priorities are budgeted and coordinated at all levels of the health system.

The MOH will develop a resource allocation criterion that ensures efficient and equitable allocation of the health budget at all levels, especially to and within states. It will increase budgetary allocations to the states so as to expand and improve health service delivery.

5.5 Financial Management

Government is keen for development partners to channel funding through budget support mechanisms. However, this is dependent on strengthening financial management systems.

The MoFEP has introduced guidelines for public financial management that are applicable to the health sector at all levels. This involves use of the Local Support Services Aid Instrument [LSSAI]. Training will be done for all staff members engaged in public financial management at State and County levels. When appropriate public financial mechanisms are in place, partners may discuss the changes in financing modalities with MoFEP and consider the use of these mechanisms.

5.6 Costing of the HSDP

The HSDP costing model is outlined in Annex A. It is a flexible model which can be manipulated over the next 5 years according to the government's evolving needs, priorities and resources. The costing is for the entire health sector. It takes into consideration services currently provided by government and non-state actors and the aspirations of the MOH set out in the HSDP. It is based on the norms set out in the BPHS and the framework for Hospital Services. In the Governments' plan for expansion of health services, as outlined in the HSDP, the major costs include the development of infrastructure, human resources and strengthening of health services management systems. The marginal costs for expanding services once the basic infrastructure and human resource needs are met will be minimal. This costing illustrates efficiency gains attained with expansion of health services as the production possibilities frontier is attained. For instance, as demand for services increases without the need to increase resource allocations, a health care facility will take care of the optimal number of patients.

5.6.1 Summary of Costing

Three cost categories are outlined below;

a. Operating costs of facilities are categorised into medical supplies, other operating costs and salaries.

b. Capital costs of facilities include the construction or rehabilitation, equipment and transport.
c. Cost of Strengthening Health Systems (improved management & service delivery) is a major component of the HSDP, and comprises six programmes:
    1. Leadership ,Governance and Finance
    2. Human Resources
    3. Infrastructure
    4. Supplies
    5. Procurement
    6. Monitoring and Evaluation

5.6.2 Assumptions

The costing assumes that the budget allocation to the health sector will increase over the next five years in line with its needs and to foster gradual government assumption of responsibility for service delivery from development partners. It is assumed that each State and County will prioritise their activities, based on their specific needs. However, for planning purposes, the unit costs for key services are assumed to be the same throughout the country.

5.6.3 Health Facilities

Currently a total of 1,487 health facilities are designated, of which 1,147 are functional, while 340 are non-functional. There are 51 hospitals (3 Teaching Hospitals, 7 State Hospitals, 14 Specialised Hospitals, and 27 County Hospitals). Our plan is to increase health coverage from the current state of less than 40% to 60% in 2015. Therefore, an increase in the existing number of health facilities to provide the 60% coverage is necessary.

5.6.4 Service Delivery and Training Facilities

Following the restructuring and harmonisation of the service delivery network, this model costs the target of up to 500 PHCU, 240 PHCC, 40 CH, 10 SH and 3 TH. Two new residential colleges of health sciences will be established in Kwajok and Bor for the training of middle level health personnel. The present college at Maridi will be expanded to increase intake of various categories and numbers of trainees. Each of the 10 SH shall have a school of nursing and midwifery. The John Garang University Hospital is the Medical Centre for Juba University College of Medicine. The Universities of Bahr el Ghazal and Upper Nile Colleges of Medicine will each have Medical Centres in Wau and Malakal respectively. Four specialised facilities will be built, namely: Casualty & Diagnostic Medical Centre, a Maternity and Neonatal Centre in Juba; a Maternity Hospital and a Children Centre in Malakal.

5.6.5 Staffing

The computation for staffing levels covers all training and recruitment plans that the Government intends to implement over the next five years, both within South Sudan and externally. It is envisaged that upon implementation of the training, recruitment, deployment and retention, sufficient staffing levels necessary to deliver the package of services stipulated in the HSDP shall be realised.

Partners will be responsible for the compensation of all staff they recruit for the duration of their contract. Upon expiry of the partner's contract, Government shall explore recruitment of their staff, based on need and in line with the Ministry of Labour and Public Service regulations and procedures.

ANNEXES

Annex A: HSDP Proposed Budget and Budget Notes

Table 2: Proposed HSDP Budget

	2012	2013	2014	2015	2016	Total
Operational Costs						
Primary Care	184,545,792	245,916,863	260,672,363	283,579,182	354,313,809	1,329,028,009
Secondary Care	168,784,316	220,893,078	285,308,009	367,320,762	474,498,399	1,516,804,565
Teaching & Specialist Hospitals	67,736,488	75,198,180	85,148,760	98,658,451	117,257,668	443,999,547
Management & Training	34,167,941	36,512,315	38,856,689	41,201,063	43,545,437	194,283,444
Total Operational Cost	455,234,536	578,520,436	669,985,822	790,759,457	989,615,314	3,484,115,565
Capital Costs						
Primary Care	31,343,852	163,108,638	163,108,638	50,167,392	31,343,852	439,072,371
Secondary Care	41,188,084	109,550,808	109,550,808	109,550,808	109,550,808	479,391,316
Teaching & Specialist Hospitals	28,712,750	52,032,750	52,032,750	52,032,750	52,032,750	236,843,750
Management & Training	17,774,583	17,774,583	17,774,583	13,669,583	13,669,583	80,662,917
Total Capital Cost	119,019,269	342,466,779	342,466,779	225,420,534	206,596,993	1,235,970,353
Leadership Governance & Finance	6,830,529	8,679,819	10,051,800	11,863,406	14,846,245	52,271,798
Human Resources	29,728,590	38,827,189	47,284,846	51,190,333	54,314,828	221,345,787
Health Infrastructure	2,798,958	260,696	260,697	260,698	260,699	3,841,749
Pharmaceuticals and medical supplies	8,233,609	11,412,348	14,208,415	18,329,330	25,228,161	77,411,864
Procurement	597,107	1,714,346	1,714,347	1,129,117	1,035,000	6,189,917
Monitoring and Evaluation Systems	6,268,731	6,268,732	6,268,733	6,268,734	6,268,735	31,343,665
Total Governance and Management Cost	54,457,525	67,163,130	79,788,839	89,041,618	101,953,669	392,404,781
TOTAL	628,711,330	988,150,345	1,092,241,440	1,105,221,609	1,298,165,975	5,112,490,699
Cost per Capita	24	37	41	42	50	-

Budget Notes (next page) sets out the parameters used for calculating the total cost of the HSDP (Table A-1). The costing covers the entire health sector. It provides an estimate of costs to all providers involved in delivering service. The costing does not determine the relative contribution to service delivery by Government, international partners, NGO, FBO or other private providers. The costing is not therefore a budget of any particular service provider or stakeholder. Such budgets depend on decisions by each organisation in relation to its activities and costs. In some areas where detailed activities and costs are not yet available, provisions have been applied. The costing model can be adapted in the light of emerging information and decisions in relation to the HSDP. Key variables and unit costs can be amended (Excel).

Budget Notes

1. Number of Facilities

The number of facilities is a major determinant of both the cost and feasibility of the HSDP. The costing provided is based on the number of PHCUs and PHCCs required for implementation of the BPHS. This number can be varied within the costing model. The number of hospitals has a major impact on the cost and feasibility of staffing the service, resulting in an overall shortage of approximately 750 qualified midwives, and 600 qualified nurses. A smaller number of County Hospitals would reduce these numbers substantially.

The costing model allows different scenarios to be tested. For instance, 474 PHCUs and 204 PHCCs are required to achieve the norms stated in the BPHS. If, however, these numbers are doubled, the cost of the HSDP rises by over SSP 200m a year. The model also shows that this increases the shortage of registered and certified midwives by approximately 1,100.

2. Operating Costs

Table: 2 outlines cost summary in millions of SSPs. Operational costs of health centres are divided into its main components such as salaries, supplies and pharmaceuticals, and other operating cost – maintenance, fuel, communication. Capital costs of facilities include the construction or renewal of facilities, the provision of medical equipment, means of communication and transportation. Health systems Strengthening comprises a budget for six important elements to be improved in the HSDP period in order to ensure critical services provision: (i) Governance, Management and Finances; (ii) Human Resources for Health; (iii) Infrastructure Development Plans; (iv) Supplies Systems and Logistics; (v) Procurement and; (vi) Monitoring and Evaluation.

Table 3: Cost Summary SSP in million

COST SUMMARY SDG million	2011	2012	2013	2014	2015	Total
Operating Cost	455	579	670	791	990	3,484
Health System Strengthening	54	67	80	89	102	392
Capital Cost	119	342	342	225	207	1,236
Gross Cost	629	988	1,092	1,105	1,298	5,112
Cost per capita in US dollars	$26	$40	$43	$42	$48	
SOURCES OF FINANCE SDG million						
GOSS: 2011	216					216
DP health commitments	346	197				543
Financing Gap	66	791	1,092	1,105	1,298	4,353
Total sources required	629	988	1,092	1,105	1,298	5,112

Operating Costs (Table: 3) comprise the annual cost of delivering service, as well as support and administration to service delivery. The requirement for a hospital in every county weights expenditure towards hospital services. 58% of operating expenditure will be in hospitals, and 36% of expenditure in the community and primary care. The distribution of operating costs between medical supplies, other operating costs and salaries is well balanced. The high cost of medical supplies reflects the planned growth in productivity, particularly in hospital services.

Table 4: Operating costs

OPERATING COST BY FACILITY	Total	%	By Function	Total	%
Community	528	15%	Medical Supplies	1,548	44%
PHCU	217	6%	Other Operating Cost	711	20%
PHCC	584	17%	Salaries	1,225	35%
County Hospital	1,184	34%			
State Hospital	333	10%			
Teaching Hospital	444	13%			
County Health Department	83	2%			
SMoH	28	1%			
MoH	84	2%			
Operating Cost	**3,484**	**100%**	**Operating Cost**	**3,484**	**100%**

3. Medical Supplies

A significant provision is made for medical and other supplies, in order to achieve the HSDP objective of ending stock-outs of essential drugs. Supply cost rises with the volume of service delivery. By 2015, it reaches 51% of total operating cost.

4. Other Operating Costs

Discussions with providers have emphasised the importance of adequate provision for other operating costs at facility level. SSP 160 m a year (2015) is provided for utilities, consumables, maintenance, vehicle running costs and supervision.

5. Salaries

The health sector staffing costs rise from an estimated baseline of SSP 152m in 2012 to 215m in 2016. This reflects the plan to increase qualified staffing, while reducing the number of unqualified staff. Overall, staffing costs are within the typical range of salary costs in the health sector. Although staffing numbers will not therefore increase greatly, the HSDP envisages a major leap in productivity as outlined in Table: 5. The model shows that a PHCC in 2015 may have three times the number of attendances in 2015, compared with a baseline taken in 2008.

Table 5: Changes in productivity

CHANGES IN PRODUCTIVITY		
Monthly Caesarean Sections	**Baseline (2008)**	**2015 Projection**
County Hospital	Approx. 4 per Hospital	**9**
State Hospital	Approx. 4 per Hospital	**19**
Teaching Hospital	Approx. 4 per Hospital	**28**
Daily Outpatient Attendances	**Baseline**	**2015 Projection**
PHCU	**199**	**572**
PHCC	**509**	**1,525**

Staffing costs are based on current public service grades. Provision is made for re-grading certified community midwives to reflect their qualification. Furthermore, provision for closing a perceived gap between the basic salaries of public service and their counterparts in NGOs is made.

6. Health System Strengthening

Health Systems Strengthening is essential for the development of capacity to foster improvements in service delivery envisaged by the HSDP. Table: 6 shows the 6 elements of the health system which reflects the essential areas identified within the HSDP. The financial allocation for health system strengthening is equivalent to 11% of the operating cost.

Table 6: The six pillars of health systems strengthening

HEALTH SYSTEM STRENGTHENING	Total
Leadership Governance & Finance	52
Human Resources	221
Health Infrastructure	4
Pharmaceuticals and medical supplies	77
Procurement	6
Monitoring and Evaluation Systems	31
Total Health Systems Strengthening	392

Of all the areas, HRH development is critical. The availability of sufficient, adequately qualified staffing is essential for quality service delivery as well as a key determinant of cost. HRH is therefore the largest component of health systems strengthening. The costs include a SSP 12m for rehabilitation of training facilities in South Sudan. In addition provision for additional external recruitment, necessary for the attainment of the minimal staffing targets is made. SSP 50m is therefore provided for external recruitment, to bridge the staffing gap in medical, nursing, midwifery and other roles. The establishment of in-service training and development of a robust human resource management system brings the total cost of HRH strengthening to SSP 113m over the period.

As showed in table:7 below, health systems strengthening provides for the development of leadership, governance and finance capacity, along with monitoring and evaluation, as essential components of effective service delivery. Finally, health system strengthening makes provision for improved management of capital development, including referral systems, construction, and procurement of equipment and vehicles.

Table 7: Capital costs

CAPITAL COSTS	Facilities	Equipment	Vehicles	TOTAL
PHCU	67	10	0	78
PHCC	309	46	6	361
County Hospital	204	115	20	339
State Hospital	69	67	4	140
Teaching Hospital	93	140	4	237
County Health Department	2	0	8	11
SMoH	24	0	11	35
MoH	9	1	12	23
Training Institutions	12	0	0	0
Total	**791**	**380**	**65**	**1,236**

The facilities mapping exercise revealed the extent of dilapidation and the high proportion of temporary accommodation. The BPHS outlines the specification of facilities and equipment, necessary for provision of basic & comprehensive emergency obstetric services, particularly at PHCC and County Hospital levels.

The costing provides for renovation or construction, and equipping of all PHCU (SSP 78m) and PHCC (SSP 194m). Furthermore, a provision of SSP340 million for the first five years as part of a 10 year programme to rehabilitate all hospitals is made.

There is a provision for the renovation of County Health Departments and State MOHs, which are essential for effective management and supervision as well as effective community and public health programmes. Finally, capital costs include the regular replacement of vehicles and equipment, over their lifespan.

Annex B: The Health Sector Indicator Framework

Table 8: Health Sector Indicator Matrix

Indicator	*Baseline (Data Source)*	*Latest Estimate (Data source)*	*Target 2015*	*Type*	*Frequency*
HEALTH STATUS					
Mortality, fertility and Malnutrition					
Maternal mortality ratio (MMR per 100,000 live births)	2054 (SHHS 2006)	2054 (SHHS 2006)	1643	Impact	DHS Interval
Infant mortality rate (IMR per 1,000 live births)	102 (SHHS 2006)	84 (SHHS 2010)	72	Impact	DHS Interval
Under-five (U5) mortality rate (per 1,000 live births)	135 (SHHS 2006)	106 (SHHS 2010)	95	Impact	DHS Interval
% of children under five years of age underweight for age	32.9% (SHHS 2006)	30% (SHHS 2010)	20%	Impact	DHS Interval
% of children under five years of age stunted for age	34.4% (SHHS 2006)	25% (SHHS 2010)	22%	Impact	DHS Interval
Total fertility rate of women 15-49 years	6.7 (SHHS 2006)	7 (SHHS 2010)	5.7	Impact	DHS Interval
Service Delivery, Maternal & Child health, and Health seeking behaviour					
% of population within 5 kilometres radius of a functional health facility	44% (HFM 2011)	44% (HFM 2011)	70%	Output	Annual
Per capita OPD utilisation rate	0.2 (HMIS 2010)	0.4% (HFM 2011)	1%	Output	Annual
Proportion of counties with functional County Health Departments	0	0	50%	Output	Annual
Proportion of children 6-23 months with a minimum acceptable meal frequency and diet	7.7% (2010 SHHS)	7.7% (2010 SHHS)	50%	Impact	DHS
Children 0-5 months receiving exclusive breastfeeding	21.2% (SHHS 2006)	44.1% (SHHS 2010	50%	Impact	DHS Interval
% children under one year immunised with 3rd dose pentavalent vaccine	24.0% (SHHS 2006)	13.8% (SHHS 2020)	85% HHS	Output	Annual
% of children under 1 year fully immunised (card only)	NA	1.8% (SHHS 2010)	50%	Outcome	DHS Interval
% of children 6-59 months receiving Vitamin A supplementation twice per year	6.0% (SHHS 2010)	6.0% (SHHS 2010)	80%	Outcome	Annual DHS Interval
% of mothers knowledgeable about danger signs of ARI and seek care	24.5% (SHHS 2006)	47.2% (SHHS 2010)	60%	Outcome	DHS Interval
% of children U5s with diarrhoea receive ORT	63.3% (SHHS 2006)	22.7% (SHHS 2010)	80%	Outcome	DHS Interval
Proportion of children U5s with fever- malaria taken to health facility for treatment	46% (SHHS 2006)	32% (SHHS 2010)	70%	Outcome	DHS interval
% pregnant women attending 4 ANC sessions	9.5% (SHHS 2010)	9.5% (SHHS 2010)	40%	Outcome	Annual DHS Interval
% of births attended by skilled health personnel	10% (SHHS 2006)	14.7% (SHHS 2010)	30%	Outcome	Annual DHS Interval
Proportion of births attended in	11.7%	12.3%	25%	Outcome	DHS Interval

health facility	(SHHS 2006)	(SHHS 2020)			
% of pregnant women receiving at least 2nd dose of TT vaccination	30% (SHHS 2006)	37% (SHHS 2010)	80%	Outcome	Annual
% of Births by Caesarean Section	2.3% (SHHS 2006)	0.5% (SHHS 2010)	5%	Outcome	Annual
Contraceptive prevalence rate	1.7% (SHHS 2006)	1.7% (SHHS 2010)	20%	Outcome	DHS Interval
% of PHCCs & Hospitals that provide CEmONC	<0.5%		30%	HMIS	Annual
Communicable Diseases					
HIV Prevalence Among 15-24 year old female population	3% (ANC 2009)	3% (ANC 2009)	3%	Impact	DHS Interval
HIV Prevalence Among adults (15-49 year)					
%age of HIV positive women receiving ARVs to PMTCT	4.66 (ANC 2009)	4.66% (ANC 2009)	10%	Output	Annual
% eligible persons receiving ARV therapy					
% pregnant women who have completed IPT2	<5% (2006 Estimate)	22.7% (SHHS 2010)	40%	Outcome	Annual
% of under 5-yrs of age sleeping under an ITN	<5% (2006 Estimate)	25% (SSMIS 2009)	70%	Outcome	Annual
% of pregnant women 15-49 yrs of age sleeping under an ITN ,	36% (SSMIS 2009)	36% (SSMIS 2009)	60%	Outcome	Annual
Proportion of women having knowledge on the causes of malaria	58% (SSMIS 2009)	58% (SSMIS 2009)	80%	Outcome	Annual
Tuberculosis, Leprosy and NTDs					
Tuberculosis notification rate new sputum smear positive cases (per 100,000 population)	25 (NTLBP-Database 2006	27 (NTLBP Database 2010)	79	Outcome	Annual
Tuberculosis Detection rates, under DOTS	58 (NTLBP-Database 2006)	72 (NTLBP-Database 2010)	140	Outcome	Annual
Tuberculosis treatment success rate under DOTS	78% (NTBP Database 2006)	80% (NTLBP Database 2010)	85%	Outcome	Annual
Leprosy Prevalence (per 10,000 population)	2.4 (NTLBP Database 2006)	5.1 (NTLBP Database 2010)	<1	Impact	Annual
Guinea Worm Incidence	20,581 cases (Guinea Worm Annual Report 2006)	1,698 cases (Guinea Worm Annual Report 2010)	(0)	Outcome	DHS interval

Indicator	***Baseline (Data Source)***	***Latest Estimate (Data Source)***	***Target 2015***	***Type***	***Frequency***
HEALTH SYSTEMS					
Financial					
Per capital total health expenditure (public)	6 USD or 18 SDG	6 USD or 18 SDG	9 USD or 27 SDG	Outcome	DHS interval
General government expenditure on health as a %age of total government expenditure	4.2% (SSCCSE & MoFEP 2010)	4.2% (SSCCSE & MoFEP 2010)	10%	Input	Annual
MoH Budget execution Rate	56% (2009)	84% (without pending claims, MoFEP 2011)	100% (if financial system decentralized) MoFEP 2011	Input	Annual
% of SMoHs producing an annual plan and budget	50% (annual plan 2006)	70% (annual plan 2009)	100%	Input	Annual
Human resources					
% of Payams with trained community health workers	TBD (HRHMIS 2010)	TBD (HRHMIS 2010)	50%	Input	Annual
Number of Medical Officers (Doctors) per 10,000 population (by State)	0.15 (HRHMIS 2010)	0.15 (HRHMIS 2010)	0.3	Input	Annual
Number of Nurse-Midwives per 10,000 population (by region)	0.2 (HRHMIS 2010)	0.2 (HRHMIS 2010)	1	Input	Annual
Number of training institutions with accreditation	0	0 (Routine reports)	11	Process	Annual
% of HFs providing regularly HMIS reports	TBD (HRHMIS 2010)	TBD (HRHMIS 2010)	70%	Process	Annual
Pharmaceutical and supply chain management					
% of public health facilities without any stock outs of 4 tracer drugs and vaccines	0% (PMIS 2010)	40% (PMIS 2011	100%	Input	Annual
% of pharmaceuticals products sampled that fail quality control tests	17% (PMIS 2010)	17% (PMIS 2010)	5%	Output	Annual
% of procured drugs that get expired at facility level	No data (PMIS 2010)	No data (PMIS 2010)	5%	Output	Annual

Annex C: Results Framework for the HSDP 2012-2016

Table 9: Results Framework for HSDP

Impact	Impact indicators	Baselines & source	Results, planned & achieved	Mile-stone 2012	Mile-stone 2013	Mile-stone 2014	Mile-stone 2015	Target 2016
	1.	1.	Planned					
			Achieved					
	2.	2.	Planned					
			Achieved					
Outcome	**Outcome indicators**	**Baselines & source**						
	1.	1.	Planned					
			Achieved					
	2.	2.	Planned					
			Achieved					
Outputs*	**Output indicators+**	**Baselines & source**						
1.	1.1	1.1	Planned					
			Achieved					
2.	2.1	2.1	Planned					
			Achieved					
3.	3.1	3.1	Planned					
			Achieved					
4.	4.1	4.1	Planned					
			Achieved					
5.	5.1	5.1	Planned					
			Achieved					

* It is generally recommended not to state more than 5 planned outputs so they need to be strategic
+ An output can have 1-2 indicators, so if 2 just add a line and give a number e.g. 1.2

Annex D: Outline for Annual Operational Plans

Table 10: Outline for Annual Operational Plans

				Year:	Location:				
Planned impact	**Indicators**	**Activity**	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	**Cost**	**Lead organisation**	**Implementers**
Planned outcomes									
1.									
2.									
Planned outputs									
1.									
2.									
3.									
4.									
5.									

Annex E: Indicative Minimum HRH Gaps, Projections & Recruitment Needs

Table 11: HRH Gaps and Projections

Priority Human resources for health	2012 Estimated Baseline	2016 (MOH recommended staffing norms)	Number HRH to recruit (gaps based on basic needs)
Consultant/Specialist/Registers	18	96	78
Medical Officers	86	472	386
Registered Nurse	83	1,024	941
Enrolled Nurse	1110	4,984	3,874
Registered Midwife	19	512	493
Enrolled midwife	132	3,656	3,524
Clinical Officers	224	1,490	1,266
Laboratory Technologist	38	230	192
Laboratory Technician	75	690	615
Pharmacists	18	137	115
Pharmacy Technician	32	822	790
Nutritionist	35	144	109
Dentist	20	81	61
Dental Technician	14	162	148
Medical Imaging Technologist	14	81	67
Radiologist	0	13	13
Physiotherapist	0	26	26
Disease Surveillance Officer	35	160	125
Monitoring & Evaluation Officer	35	318	283
Public Health Officer	37	1,845	1,770
Psychiatrist	0	11	11
Psychiatric Technician	0	112	112
Statistician	0	72	72
Total	**2,025**	**17,138**	**15,071**

Source: MOH Norms and Standards for HRD; And Health Facility Mapping – (2010/2011 respectively)
Note: The health facility mapping does not provide an exact number of staff but gives a robust estimation

Table 12: HRH status and gaps in HTI

HTI for Diploma Course	Number of Category of Cadres	No. of current Tutors	Total Required number of the Tutors to be recruited			Tutor gaps based on basic needs (2012-2016) ***Note:** Numbers of tutors for 2015 and 2016 remain the same as in 2014 since the same tutors will be used*
			2012	2013	2014	
Juba	6	2	18	36	54	52
Maridi	6	5	18	36	54	49
Wau	6	0	18	36	54	54
Kwajok	6	0	18	36	54	54
Bor	6	0	18	36	54	54
Total Tutors for 5 Diploma HTIs		**7**	**90**	**180**	**270**	**263**
10 State HTIs	3 cadres in each school	0	90	180	270	270
Total Tutors for 10 Certificate HTIs			**90**	**180**	**270**	**270**
Grand Total Tutors needed						**533**

Annex F: Projection for Infrastructural Improvements

Table 13: Projected Infrastructural Investments in PHCU,PHCC & Hospitals

Type	Renovation, Reconstruction	2012	2013	2014	2015	2016	Total
PHCU	Major renovation: 6/7 per state per year	60	60	60	70	70	320
	Minor renovation: 4/-5 per State per year (316 total for PHCUs and PHCCs)	40	40	40	40	40	200
	Construction Staff Houses	40	40	40	40	40	200
PHCC (204)	Major renovation: 2 per State per year	20	20	20	20	20	100
	Minor renovation: 2-3 per State per year	20	20	20	25	31	116
	Construction Staff Houses	40	40	40	40	40	200
Construction	Construction (in 9 states needed 438. 200 to be constructed in 5 years remaining to be planed)	0	50	50	50	50	200
County Hospital (27)	Replacement / Repairs of all County Hospitals over 10 years period: 3 per year at least	3	3	3	3	3	15
State Hospital (7)	Repairs / Replacement all State Hospitals over 10 years (priority as from 2015)		0	0	0	1	1
Teaching Hospitals (3)	Repairs – 3 Teaching Hospitals over 10 years: Rebuilding of Malakal is priority		Malakal	Juba	Wau		
Specialised Hospitals	- Dr. J. Garang Memorial Hospital, - Maternal & Neonatal Centre, - Juba Diagnostic Health Care Centre, - Maternal Centre and Children's Hospital in Malakal.	1	1	1	1	1	5

Table 14: Infrastructural improvements for HTI

State	Construction	Estimated Budget in US$	Renovation/ Re-equipping	Estimated Budget in US$
Lakes	**Rumbek Health Training School - accommodation** Build fifteen 4-bed dormitories on Rumbek Nursing School site, and add 4 semi-detached houses for tutors and . (Existing prefabs in decay. Recent builds unsuitable).	500,000	*(Some furniture and Equipment needed)*	150,000
Jonglei	**Bor Health Training Institute (Diploma College):** Build 4-roomed classrooms, toilets, 120 bed accommodation for students, tuition-only facility and 6 semi-detached houses for tutors	1,500,000	New site. All furniture and equipment needed.	100,000
Eastern Eq	**Torit Health Training Institute** Build 4-roomed classroom, 2 tutors' offices, accommodation for 60 students, and 3 semi-detached houses for tutors. Existing two-roomed building in disrepair.	1,000,000	New infrastructure. Equip with 6 dental chairs	250,000
Central Eq	**Yei Health Training School Build skill Lab and Library, additional 30 bed dorms**	250,000	Equipment needed for skill Lab. Redecoration. Repair of boundary fence	100,000
	Juba Health Training Institute (College of Nursing and Midwifery) Expand, and Rehabilitate accommodation for additional 120 to accommodate more students, additional toilets, additional office & accommodation for Tutors	1,000,000	Equipment needed for skill lab,. Redecoration. Repair of boundary fence(old JTH Technical Nursing Secondary School) Redecorate, re-equip	450,000
Western Eq	**Maridi Health Training Institute (Diploma College for Clinical Officers, Nurses and Midwives)** Expand & Rehabilitate accommodation for additional 120 more students, additional toilets, additional office & accommodation for Tutors	1,000,000	More Equipment needed for skill lab, Redecoration. Repair of boundary fence (old JTH Technical Nursing Secondary School). Re-decorate, and Re-equip	450,000
Western BeG	**Wau Health Training Institute (College of Nursing and Midwifery)** Expand, and Rehabilitate accommodation for additional 120 more students, additional toilets, additional office & accommodation for Tutors	1,000,000	Equipment needed for skill lab,. Redecoration. Repair of boundary fence(old JTH Technical Nursing Secondary School)Redecorate, re-equip	450,000
Northern BeG	**Aweil Health Training School** (new build on new site). 4 semi-detached houses for tutors (including at least 4 large rooms), 60-bed dorms, 2 tutor office, skill lab and library	750,000	Aweil Health Training School: (old Aweil Nursing School). Redecorate, Equip skill lab and library	350,000
Warrap	**Kwojok Health Training Institute & Centre for Medical Education** (Diploma College). New construction	1,500,000	New facility to be fully furnished and equipped	750,000
Unity	**Bentiu Nursing and Midwifery** (new building on new site) 4 semi-detached houses for tutors including 4 large rooms, 60 bed dorms, tutor accommodation and 2 offices, skill lab and Library.	750,000	Old Bentiu - Nursing School). Redecorate, furnish and Equip	250,000
Upper Nile	**Upper Nile HTI: Malakal Health Training School** (new site & new building). 4 semi-detached houses including at least 4 large rooms, 60 bed dorms, tutor accommodation and 2 offices, skill Lab and Library.	1000,,000	All equipment and furniture needed.	250,000
MoH-RSS	**JTH Post-Graduate College** New -Specialisation College –2 Lecture Halls, Library, Lecturer's offices (3)	750,000	All equipment and furniture needed	450,000
TOTAL		**11, 000,000**		**4,000,000**

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