The Republic of Sudan
Ministry of Welfare & Social Security
National Population Council General Secretariat
(NPC/GS)

Sudan Millennium Development Goals Progress Report 2010

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Acronyms and Abbreviations

5th SPHC	5th Sudan Population and Housing Census
ACSI	Accelerated Child Survival initiative
ACSM	Accelerated Child Survival Methods
ACSM	Advocacy Communication Social Mobilization
ACTs	Artmisinin-based Combination Therapies
ACTs	Artemisinin-based Combination Therapy
AES	Alternative Education System
AIDS	Acquired Immune Deficiency Syndrome
AIDS	Acquired Immuno Deficiency Syndrome
ANC	Antenatal Care
ARI	Acute Respiratory Infection
ART	Antiretroviral Therapy
ARVs	Anti Retro Virals
BCC	Behaviour Change Communication
BPHN&W	Basic Package of Health, Nutrition and Wash Services
BPHS	Basic package of Health Services
C/GBV	Combating Gender-Based Violence
CDD	Community Drug Distributors
CPA	Comprehensive Peace Agreement
CPR	Contraceptive Prevalence Rate
CQ	Chloroquine
DOTS	Directly Observed Therapy Short Course
DPT	Dichloro-Diphenyl-Trichloethane
DST	Drugs Susceptibility Test
EFA	Education For All
EFAF	Education For All Framework
EmNOC	Emergency Obstetrics and Neonatal Care
EPI	Expanded Programme of Immunization
EPI	Expanded Immunization
FGM	Female Genetal Mutilation
FMOH	Federal Ministry of Health
FSWs	Female Sexual Workers
GER	Gross Enrolment Ratio
GF	Global Fund
GOSS	Government of Southern Sudan
GPI	Gender Parity Index
HIV	Human Immunodeficiency Virus
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HMM	Home Management of malaria
HTC	HIV Testing and Counseling
IDPs	Internally Displaced Persons
IMCI	Integrated Management of Children Illnesses
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Ratio
IMR	Infant Mortality Rate
IPT	Intermittent Preventive Treatment
IRS	Indoor Residual Spraying
IVM	Integrated Vector Management
LLINs	Long lasting Insecticide bed Nets
M & E	Monitoring and Evaluation
MARPs	Most At Risk Populations
MDG	Millennium Development Goal
MDR	Maternal Death Review
MDR-TB	Multidrug Resistant Tuberculosis
MDTF	Multi Donor Trust Fund

MICS	Multiple Indicator Cluster Survey
MMNT	Measles and Maternal Neonatal Tetanus
MMR	Maternal Mortality Ratio
MMR	Maternal Mortality Ratio
MNRH	Maternal Neonatal & Reproductive Health
MOH-GOSS	Ministry of Health-Government of Southern Sudan
MSMs	Male having Sex with Male
NBHS	National Baseline Household Survey
NER	Net Enrolment Ratio
NGO	Non-Governmental Organization
NMCP	National Malaria Control Program
PHC	Primary Health Care
PHCCs	Primary Health Care Centers
PHCUs	Primary Health Care Units
PLHIV	People Living with HIV
PMTCT	Prevention of Mother-to-Child Transmission
PMTCT	Prevention of Mother to Child Transmission
PPM	Public Private Mix
RDT	Rapid Diagnostic Test
SDG	Sudanese Gene
SDHS	Sudan Demographic and Health Survey
SHHS	Sudan Household Health Survey
SHHS	Sudan House-Hold Health Survey
SMS	Safe Motherhood Survey
SNAP	Sudan National AIDS Control Program
SNTP	Sudan National Tuberculosis Program
SP	Sulfadoxine Pyrimethamine
SSCCSE	Southern Sudan Centre for Census Statistics and Evaluation
SSLA	Southern Sudan Legislative Assembly
STI	Sexually Transmitted Infections
STR	Student Teacher ratio
SWAP	Sector Wide Approaches
TB	Tuberculosis
TBA	Traditional Birth Attendant
U5MR	Under 5 Mortality Rate
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children’s Fund
UNTAID	Public health financing mechanism for purchase of drugs for AIDS, malaria, TB and other diseases
USAID	United States Aid for International Development
VCT	Voluntary Counseling Testing
WHO	World Health Organization

Acknowledgement

This Report is a product of strong partnership initiated between the government of Sudan and the UN agencies, civil society and the academia. These stakeholders have actively participated in all stages of the report preparation process.

It is our pleasure to acknowledge and commend the level of commitment of the ministries and organizations involved in the thematic working Groups. To mention just a few our, gratitude should go to the Ministry of Welfare and Social Security, the Ministry of International Cooperation (MIC), Ministry of General Education, Ministry of Finance and National Economy, Ministry of Health, Higher Council for Environment, Ministry of Cabinet, Central Bureau of Statistics, National Council for Strategic Planning, and other institutions and civil society organizations that have been actively involved in preparing this report.

Special thanks also go to the Southern Sudan Centre for Census, Statistics and Evaluation (SSCCSE) in coordinating the thematic working groups and the reporting processes in southern Sudan.

We also would like to express our deepest gratitude to UNDP Sudan for providing the financial and technical support for producing the report through **its "Enhanced national Capacity to Plan, Implement and Monitor the Achieved MDGs"** Project which has been implemented in partnership with the National Population Council (NPC) and other pertinent partner institutions. We do appreciate the technical role of UNICEF, UNFPA, WHO, WFP, FAO and other UN agenesis; each in their respective sector MDGs. The role of UNDP Office in southern Sudan in coordination and technical facilitation is also appreciated.

The National Population Council (NPC/GS) also extends its gratitude to the UNDP Deputy Country Director(Program), the Head of HIV/AIDS, Poverty Reduction & MDGs Unit, the MDGs Project Manager, the UNDP Senior Economist, the MDGs Policy Advisor, MDGs Project Team, and the MDGs Project Coordinator of the NPC/GS and the whole staff for all the effort exerted in producing the report with in a relatively very short period of time.

Last but not least, we also would like to recognize the high level of commitment and leadership exhibited by H.E. the Minister of Welfare and Social Security, the Co-chair of the NPC in the course of the preparatory undertaking of such a benchmark document on the status and Progress of MDGs in Sudan. The efforts exerted by H.E. the Minister has facilitated the smooth process for producing the report and its final endorsement by the Council of Ministers (the Cabinet). The detail **list of Government Officials who spearheaded the MDGR Preparation Process and Contributors from Government and UNDP Sudan is relegated to the Annex of this Report.**

In closing, it is also important to emphasize the learning process that underpinned the report preparation process. We really acknowledge all the efforts excreted by the stakeholders and look forward to strengthening existing collaborative spirit for the ultimate benefit of the Sudanese People.

National Population Council/General Secretariat

Foreword by the National Population Council/General Secretariat

Sudan's 2010 Millennium Development Goals (MDGs) Progress Report is the product of a truly national leadership and national ownership and participatory process. Nearly fifty organizations, including the key relevant Ministries at federal level, community sector and non-governmental organizations and UN agencies, subject matter experts and academics were involved in the process and provided input towards enhancing the quality of the report as appropriate. The same process and mechanisms were adopted in northern as well as southern Sudan for compiling the material included in the report.

The MDGs Project received financial and technical support from UNDP Sudan, and the National Population Council/General Secretariat was the Governmental implementing and coordinating partner organization.

The 2010 MDGs Progress Report assumes critical importance for two reasons. Firstly, it is the first progress assessment report regarding the MDGs since the 2004 Interim Report for Sudan. Secondly, it provides an assessment and identifies the challenges and opportunities that would need to be addressed or capitalized upon, if Sudan is to achieve the MDGS targets fully by 2015.

The report includes MDGs goal–by goal comprehensive analysis and data, identifies challenges, assessment of progress between 2004 and 2010 and derives some performance expectations for 2015. The major conclusion that can be drawn from the report is that Sudan has made tangible and good progress on many of the eight MDGs, but some key challenges remain to be addressed effectively and efficiently in the coming five years if Sudan were to attain the MDGs identified targets by 2015.

The Sudan MDGs Progress Report 2010 has been endorsed officially by the Council of Ministers.

I hope the launching and dissemination of the report be seized upon as an invaluable opportunity to trigger nationwide advocacy and awareness raising efforts pertaining to the MDGs, as well as informing policy debates and dialogues regarding socio-economic development in Sudan .

Professor Sit Elnafar Mahgoub Badi
Secretary General
National Population Council

Foreword by Southern Sudan Centre for Census, Statistics and Evaluation (SSCCSE)

As a consequence of the conflict that lasted several decades up to the signing of the Comprehensive Peace Agreement (CPA) in January 2005, Southern Sudan lost some of the time allotted to meet the Millennium Development Goals (MDGs). After the signing of the CPA and the cessation of hostilities, Southern Sudan could, in theory, have proceeded speedily to take measures that were needed to provide for the welfare of its people and make some progress towards the attainment of MDGs. The reality is that even after the signing of the CPA, it took some time to constitute the Government and the structures and agencies that were needed for it to function.

Yet, it was anticipated that the real political litmus test would be how to meet the expectations of the Southern Sudan communities that had been deprived of basic services for decades. While this challenge may not have been met to-date, the GOSS has, in many ways, demonstrated the political will to a shared long-term objective of eradicating poverty and providing basic services.

This report details the current status and trends in providing basic services, improvement in human development outcomes and poverty reduction in Southern Sudan. It describes the policy and programming interventions that have been made by Government and development partners alike; and identifies key challenges before making recommendations for increased progress towards the attainment of the goals. By identifying how far Southern Sudan has come and how far it has to go to meet the MDGs, this report is a useful tool for accountability, awareness raising, advocacy and policy dialogue. The report portrays a worrisome state of affairs in a number of areas where the data exists for identifying progress or lack of it. Both the worrisome situations and the lack of adequate data are rooted in the protracted conflict; but there is clear evidence now that Southern Sudan has made progress on a number of fronts in the last few years of relative peace and stability.

It [the report] has been prepared consistent with the requirements of The Millennium Declaration of 2000, to which Sudan is a signatory. As on several other issues, it was agreed that Southern Sudan would prepare a Southern Sudan MDGs Report which would constitute the second and integral part of the Sudan MDGs Report. Subsequently, the National Population Council (NPC) requested the SSCCSE to take the lead in preparing the Southern Sudan part of the report. The choice of the SSCCSE to take the lead could not have been more appropriate. It is the core function of the Centre to provide statistical information and evaluate the social impact of public policies, projects and programmes: which function is critical for preparation of the 2010 Millennium Development Goals (MDGs) Report.

While the Centre took the lead and provided statistical information, the preparation of this report has been a truly collaborative effort, drawing on consultations among all relevant Government and UN agencies as well as Non-Governmental Organizations (NGOS) who provided the primary raw material and supplemented SSCCSE data with administrative records. They also provided the write-up on the policy and programming interventions, the identification of the various challenges in meeting the MDGs and made recommendations for increased progress towards the attainment of the eight goals. It is with this understanding that we constituted Thematic Working Groups (TWGs), composed of Government agencies and development partners, for preparation of the report. The TWGs also validated the report through bilateral consultations and discussions. Estimates of social indicators were provided from the Sudan Household Survey 1 (SHHS-2006), the 5th Sudan Population and Housing Census (5thSPHC), the National Baseline Household Survey (NBHS-2009) and administrative records of Government and UN agencies.

We duly acknowledge everyone's contributions. We would like to thank the NPC for entrusting the SSCCSE with the task of preparing this report. We would also like to extend our thanks, through the NPC, to the United Nations Development Programme (UNDP) for facilitating the preparation of the report. We thank, most sincerely, all the United Nations Agencies and Non-Governmental Organizations and Government agencies who joined hands in the preparation of this report.

We hope that Government, all development partners and the general public will find this report informative and useful.

Isaiah Chol Aruai
Chairperson
Southern Sudan Centre for Census, Statistics and Evaluation (SSCCSE)

I. Background

1.1. Introduction

With a land area of 2.5 million square kilometers, Sudan is the largest country in Africa and the ninth largest in the world. . It has international borders with 9 countries (Egypt, Eritrea, Ethiopia, Kenya, Uganda, Democratic Republic of Congo, Central African Republic, Chad and Libya) and has access to the Red Sea through Port Sudan with coastline of 500 miles along the Red Sea. According to the 2008 Population Census, Sudan's total population is estimated at approximately 39 million people (North: 30,894,000 or 78.9 percent; South: 8,260,490 or 21.1 percent), with a population growth rate of about 3% per annum during the period ending in the 2008 Population Census. The majority of the population resides in private households (88.0 percent), while 8 per cent live a nomadic lifestyle. Almost 2 per cent of the population is internally displaced while another 1.4 per cent resides in institutions and 0.6% lives in cattle camps.[1]

Sudan is endowed with rich natural resources, including oil, and has the potential to become a major agricultural producer. Sudan has a complex religious, ethnic and cultural and linguistic diversity. Since independence in 1956 Sudan has been experiencing conflict between the north and south which continued with the exception of the period 1972-1983 when Addis Ababa peace agreement was signed.

Sudan's 2005 comprehensive peace agreement (CPA) which was signed by the government of Sudan and Sudan People's Liberation Movement (SPLM) put an end to the civil war and opened unprecedented opportunities for peace, development and prosperity. The CPA addressed directly the key causes of the conflict. The main provisions of the CPA include: the establishment of a Government of National Unity (GoNU) for the country as a whole and a Government of Southern Sudan (GOSS); wealth sharing protocol, building on the emergence of oil as a major source of revenues; and other protocol for peaceful coexistence of the Sudanese communities in the north and south.

1.2. Overall Assessment of Recent Socio-economic Situation in Sudan

Sudan has launched a Five-Year Development Plan within a 25 years strategy (2007-2031). The Government of Sudan has stated in its Five-Year Development Plan (2007-2011) its intention to reduce poverty and achieve the Millennium Development Goals.

Following the advent of oil in 1999, Sudan has experienced its longest and strongest period of growth since independence in 1956. The size of Sudan's economy, in terms of its Gross National Product has grown fivefold – from USD10 billion in 1999 to USD 53 billion in 2008.[2] According to the World Bank's Country Economic Memorandum (CEM, 2009), real GDP growth rate averaged nearly 8 percent during the nine year period ending in 2008 and approximately 10 per cent in 2007[3].

[1] Central Bureau of Statistics, National Census Report 2009.
[2] World Bank Draft Country Economic Memorandum 2009, p. 2
[3] United Nations, Sudan Common Country Analysis 2007, November 2007, p.8

However, the pattern of growth has been unbalanced (growth being concentrated in certain areas at the detriment of the peripheries). The increase in Foreign Direct Investment (FDI) largely driven by the oil sector as well as the boom in the services sector (especially construction, transportation and communication) has stimulated the recent growth performance. The exploitation of oil reserves and "the peace dividend" were the main drivers of this economic success.

The Structure of the Sudanese Economy has shifted over time, from predominantly reliant on agriculture for growth and exports, to its current reliance on the oil sector. There has not been much real structural change in the Sudanese economy as the recent increase in the share of the industrial sector (from about 9 percent during the late 1990s to 21 percent during 2004 to 2007). The shift has been to a greater extent attributed to the advent of the oil sector (12% of GDP alone) since 2000. The emergence of the oil sector adds directly to GDP through increased share of industry compared to the pre-oil period (pre-1999 period). This has also induced growth in the service component of GDP as reflected in fast growth in the construction services which grew by about 10 percent per annum since 1999. The Service Sector has been the fastest growing sector in recent years, surpassing even the growth in the oil sector. Trade, hotels and restaurants have also flourished, mainly in the country's capital (Khartoum) and generated about one-fifth of the GDP during 1996-2006(World Bank DTIS, December 2008). Notwithstanding these structural shifts, agriculture still remains the main driver of employment especially outside of the country's top urban areas (World Bank DTIS, December 2008).

After successful stabilization in the mid-1990s, Sudan has built a strong track record for macroeconomic management best exemplified by high real GDP growth rate of about 8 percent on average, low and stable inflation rate (on average single digit inflation), a steady exchange rate, a sustainable external balance, and moderation of its business cycle. This has been the major achievement by the Government (World Bank Country Economic Memorandum, 2009). However, the increasing dominance of oil as export commodity presents new challenges to macroeconomic stability. Symptoms of "Dutch Disease" have been evident with the Sudanese Pound appreciating and traditionally strong agricultural export commodities, such as cotton and gum Arabic going into decline. This has been aggravated by the volatility of oil prices which affected fiscal capacity of the Government through reduction in oil revenues particularly following the aftermath of the financial and economic crisis.

Sudan has been also impacted by the financial and economic crisis and its aftermath. Sudan's net FDI registered a sharp drop by some USD 500 million by June 2008, partly due to the completion of several major infrastructure projects, as well as net private transfers (mainly remittances) falling by close to USD 800 million compared with 2006[4]. The economic slowdown in the aftermath of the global financial crisis is believed to be the major factor for the further decline in FDI and remittances by another 30-36 percent[5] compared to their respective levels in 2006. The decline in oil revenue in the aftermath of the financial and economic crisis has also impacted Sudan through a decline in oil prices and hence oil revenue. A recent IMF report ranked

[4] IMF First Review of performance Under the 2007-08 Staff-Monitored Program, June 2008, p.6

[5] IMF Report on the implications of the Global Financial Crisis for Low-Income Countries, March 2009, p.48, source: http://www.imf.org/external/pubs/ft/books/2009/globalfin/globalfin.pdf

Sudan as one of the most vulnerable low income countries to the global financial crisis due to its high vulnerability to shocks transmitted through trade (drop in oil prices), aid and remittances (IMF adjusted 2009 GDP growth projections for Sudan downwards by 6.7 percent, representing the fourth largest adjustment of the 71 low income countries assessed).

Notwithstanding these developments, past growth has not been sufficiently broad-based. Investments and services have been concentrated in and around Khartoum state and to a lesser extent in Juba, the capital of Southern Sudan. The significant development disparities between urban and rural areas and between regions contributed to growing inequalities and an increasing urban informal sector accounting for more than 60 percent of GDP (World Bank, 2009). This state of affairs has aggravated migration from rural to urban centers that is believed to have weakened agricultural productivity and deepen poverty in both urban and rural areas as indicated in Chapter II below.

Overall, per capita income of the Sudan increased from US$ 777 in 2004 to US$ 1,454 in 2009. However; the distribution of income reflects regional disparities and imbalance growth among the states due to conflict in areas such as Darfur. The Sudan has been pursuing tight and prudent monetary policies with an average exchange rate against the US Dollar that reached its peak of SDG 2.5 for one USD in 2004. Nonetheless; again the global financial crises had a dampening effect on this trend of progress in the last two years (Ministry of Finance & National Economy, 2009).

The achievement of macroeconomic stability is a reflection of sound macroeconomic policies pursued by the Government in containing inflation (single digit inflation during the period 2004-2007). Due to the inflationary effects that engulfed the world in 2008 and 2009, the inflation rate in Sudan reached double digits at 14.9% and 11.2% in 2008 and 2009 respectively (see Table 1.1. below). The drivers of inflation were the food and energy sectors. The Ministry of Finance and National Economy in collaboration with the Central Bank of Sudan tightened fiscal and monetary policies to combat the rising inflation rates. The current account recorded fluctuating deficits due to increased imports as a result of foreign investment expansion and the decline in oil prices brought about by the slowdown in the global economy following the aftermath of the financial and economic crisis which reached its peak towards the end of 2008 (Ministry of Finance & National Economy and CBS, 2009).

Table 1.1: The Economic Structure of Sudan, Values in Million SDGs Unless Otherwise Specified

Item/Year	2004	2005	2006	2007	2008	2009
Total Population in Million	34.4	35.3	36.2	37.1	39.15	40.02
Real GDP Growth Rate(%)	5.1%	5.6%	9.9%	8.1%	7.8%	6.1%
Sector Share(%)						
Agriculture	30.4%	29.3%	28.9%	31.6%	33.2%	34.0%
Industry	28.8%	29.2%	29.2%	23.7%	22.0%	21.4%
Services	40.9%	41.5%	41.9%	44.7%	44.8%	44.6%
General Price Inflation(%)	8.7%	8.3%	7.3%	8.1%	14.9%	11.2%
Exchange Rate(SDG/US$)	2.59	2.43	2.17	2.02	2.09	2.33
GDP current prices	68721.4	85707.1	98718.8	114017.5	127746.9	148137.0
GDP current prices (MUS$)	26533.4	35270.4	45492.5	56444.3	61122.9	63578.1
GDP current prices	68721	85707	98719	114018	127746.9	146174.1
Per capita GDP in US$	768.9	974.3	1224.3	1479.8	1561.1	1581.8
Total Consumption	57789.5	77912.2	89086.8	95415.6	102883.7	127302.2

Government Consumption	5862.3	7916.9	9606.5	9635.2	10810.8	12845.5
Private Consumption	53190.2	6999.5	79180.3	85780.5	92073.0	114456.7
Gross Domestic Saving	5591.6	478.1	170.6	10855.4	7977.2	5644.2
National Saving	8492.6	4000.4	2901.3	11626.0	8782.4	9087.6
Total investment	13069.6	16756.3	20793.5	23543.7	24496.6	26957.9
Government Investment	2217.0	2707.1	3050.9	3435.5	4128.2	4215.6
Private Investment	10852.6	14049.3	17742.6	20108.2	20368.4	22742.3

Source: Central Bureau of Statistics, 2009

Sudan's Gross Domestic Fixed investment as a ratio to GDP increased from 18.4% in 2004 to 19.3% in 2009. Sudan's foreign direct investment (FDI) increased to reach 10 billion US$ in 2009. This growth reflects the improvement in foreign direct investment largely driven by the oil, the telecom and the financial sectors and policies pursued to attract investors in the respective areas.

1.3. The Special Context of the Sudan in Assessing Progress towards the MDGs

The progress towards achieving the globally agreed development agenda is monitored and reported on, for countries, regions or globally, through regular reports. In countries that are experiencing conflict or just emerged from a conflict situation, such reporting and assessment would be truncated and inadequate if they do not take into account the development impeding impact of such conflicts on the performance and extent of progress made by such countries towards achieving their respective development agenda.

Sudan is an example of such post-conflict countries. Accordingly, any objective assessment of Sudan's progress towards achieving the globally agreed socio-economic development goals should not be oblivious to the detrimental effects of conflicts towards realizing these objectives. The detrimental impact of armed conflict on development and the associated humanitarian needs created manifest themselves in a number of ways including the following:

- Diversion of significant financial and human resources to support government authority to maintain law, order and the protection of citizens and private property;
- Providing humanitarian assistance, security and protection to the victims of armed conflicts, such as internally displaced persons (IDPs) and the injured individuals or families, groups or regions. Such assistance may extend for a long time and may involve millions of people;
- Reduction or suspension of expenditure increases on essential or basic services to people in the areas affected by conflict or cities in such regions. The services that could be negatively affected include education, health, clean drinking water, electricity supply, infrastructure, deteriorating environment and employment opportunities;
- Inability or difficulty in implementing development projects in the areas affected by armed conflict owing to lack of security, disintegration or severe weakening of the social and economic fabric of such communities as a result of massive exodus or receipt of IDPs. Even when an armed conflict ceases as result of a peace agreement, attaining and maintaining peace requires massive resources; e.g. new expenditure items associated with the peace agreement such as recourses transfers to state governments, financing the establishment and operation of newly created structures and institutions.

- Returnees and their families and the receiving local communities need assistance, e.g. food, clothing, local building materials, agricultural or pastoral production inputs and other job opportunities for those returning from urban areas;
- The host local communities may need assistance for drinking water, medical services, and education and de-mining activities.

The task of reconstruction and development in the Sudan is believed to be much more challenging and complicated compared to other post-conflict countries in Africa as the armed conflict in Darfur region which accounts for 18% of Sudan's total populations still continues to date.

Recovery from the consequences and impacts of armed conflict is a necessary phase where ordinary living conditions and basic services can be restored to the level prior to the conflict. Such phase is important for the development process to take-off in the medium and long-term. That is why the biggest challenge confronting Sudan now and in the foreseeable future is the need to continue to respond to the humanitarian needs for the millions who were affected by the armed conflicts that ended following the signing of the CPA and ESPA and currently being affected by the continuing armed conflict in Darfur.

Today, with the three peace agreements and the ongoing efforts to reach a lasting and comprehensive peace deal in Darfur, Sudan has its greatest opportunity in a generation to consolidate and sustain peace and improve the lives of all Sudanese and make progress towards achievement of the MDGs.

1.4. MDGs Reporting in Sudan

The first Millennium Development Goals Report for Sudan was the 2004 Interim Report which was prepared as a result of the joint effort, collaboration and partnership between the Government of Sudan, UN Agencies, and civil society under the leadership and guidance of the Ministry of International Cooperation. The Report presented an overview of the MDGs achievement in Sudan. However, at that time, the areas under SPLM control were presented in a separate section in the Report.

The MDGs are reflected in the CPA as well as Sudan's Interim Constitution as a prerequisite to achieving stability in Sudan. According to the Order of the President of the Republic in 2006, a Strategic Advisory Council was established to develop 15-year development strategy for Sudan. The National 25-Years Strategic Plan 2007-2031 includes strong references and commitments to the MDGs.

Reliable and comparable data on the current state of socio-economic development that are disaggregated by region, gender, income, over time and with other states and regions is patchy and hard to obtain in Sudan.. For instance, the Joint Assessment Mission (JAM) exercise gave some cost estimates for the period 2005-2011, but a proper costing for all MDGs needs to be undertaken. This will require comprehensive analysis of fiscal information both on the annual budget allocation and its performance. Moreover, it can only be done when agreed national targets are set. In conclusion, the integration of the MDGs in to the national development planning process in Sudan is in its infant stage. However, the inclusion of the MDGs in

Sudan's Interim National Constitution and in many strategic policy documents is by itself very encouraging.

1.5. The Processes for Preparing Sudan MDGs Report, 2010

An evolving partnership between the governments and the UN agencies and the civil societies is driven by a strong strategy to raise peoples' awareness regarding the Millennium Development Goals in Sudan.

In the process of preparing Sudan 2010 Millennium Development Goals Report, several advocacy and awareness-raising events have been carried out. Different media and mass communication outlets have been used for disseminating the messages regarding the importance of the report. The media outlets included radio and TV programmes and newspapers. Indeed; radio in particular represents the main source of information for the majority of the population in Sudan, especially in rural areas. These advocacy efforts have been, and shall continue both in North and South Sudan. In a nutshell, advocacy is considered an integral element of the process in achieving MDGs interventions. The countdown towards 2015 is strategically meant to be advocacy oriented for MDGs achievement in Sudan.

The initiative for preparing this report is part of a project agreed between the UNDP and the government of Sudan, given the fact that UNDP is mandated to enhance national capacities for development planning and management, including the capacity for policy analysis, monitoring and evaluation, and coordination.

The key national counterparts to the UNDP are the National Population Council (NPC) and the Ministry of International Cooperation (MIC). Other important actors are the Ministry of Finance and National Economy (MFNE), Ministry of Education (MOE), Ministry of Welfare and Social Security, the Central Bureau of Statistics (CBS), Ministry of Health (MOH) and the National Council for Strategic Planning (NCSP).

In regard to South Sudan, key relevant institutions such as Southern Sudan Centre for Census, Statistics and Evaluation, Ministry of Presidential Affairs, Ministry of Finance and Economic Planning, Ministry of Gender, Social Welfare and Religious Affairs, Ministry of Education, Science and Technology and Ministry of Health in addition to relevant state ministries were involved in the process. UNDP Office in south Sudan played a crucial facilitating role at various stages of preparing the report.

Academia, research centers and civil society organizations have also been engaged in the process of preparing this report. The partnership also included relevant UN agencies such as UNICEF, UNFPA, WFP, WHO, etc.

Having multiple partners involved in preparing the Sudan MDGR, effective coordination and cooperation mechanisms were established amongst the different stakeholders. The data and information gathering was undertaken by Thematic Working Groups that represent the different line ministries and institutions across the eight goals in both north and south Sudan. The Thematic Working Groups managed to ensure consistency, timeliness and accuracy of data collection and analysis for the

MDGR. The quality and accuracy of the data used in the report have been validated by the Central Bureau of Statistics (CBS).

This report utilizes data from the most recent national census (2008), national baseline Household surveys (2009) as well as the SHHS 2006 and assesses the progress made in Sudan since 2004 towards achieving the MDGs.

The report is comprised of three chapters and sections under each Chapter and is structured as follows. This Chapter, Chapter I, provides the background and sets the stage by outlining the overall socioeconomic situation, performance of the macro economy during the last decade as well as the circumstances and factors that impact on performance and progress towards achieving the MDGs; the process and key participating partners involved in the preparation of the report; the advocacy strategy and activities that had been and will be undertaken for promoting the MDGs and the process in the preparation of this Report(MDGR 2010). The Core Chapter, Chapter II, is devoted to Goal by Goal Assessment of the eight MDGs. The various sections under Chapter II are dedicated to information/ data and analysis in respect of each of the eight MDGs. The information on each goal is structured sequentially according to the targets related to the goal, and is presented first for all Sudan, followed by information on northern Sudan and then for southern Sudan as far as data availability allows. The material included in each of the eight sections (one for each MDGs goal) is consistent and covers, for each goal: current status and trends; overview of interventions implemented to improve progress and performance; the key challenges encountered and assessment of performance and prospects for 2015. The last Chapter, Chapter III, is devoted to conclusions and recommendations. All references are relegated towards the end of the Report.

1.6. Sudan MDGs Status at a Glance

Table 1.2 below depicts the goals, targets and overall progress of indicators for all Sudan across the eight goals. . It is important to note also that targets and indicators for which no data/information exists at the time of reporting have been excluded from the table.

Table 1.2: Sudan MDGs Status at a Glance

Goals	Targets	Indicators	Status 2004	Achievement		2015 Target
				Current Level	Reference Year	
Eradicate extreme poverty and hunger	Reduce by half the proportion of people living 0n less than a dollar-a-day	The proportion of the population below one dollar per day	90%	N.A	N.A	**45%**
		Employment-rate		84%	2008	
		Proportion of own-account in total employment		34%	2008	
		Proportion of family workers in total employment		31%	2008	
	Reduce by half, between 1990 and 2015, the proportion of people who suffer from hunger	Prevalence of underweight children under five years of age		31% (medium 9.4% (severe)	2006	
Achieve Universal primary education	Ensure that all boys and girls complete a full course of primary schooling	Net enrolment in Basic education		GER (68%), NER (49%)	2008	100%
		Proportion of pupils who reach last grade of basic education		70%	2008	100%
		Literacy rates of 15-24 year olds, (total women and men)		63%	2008	100%
Promote gender equality and empower women	Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015	Ratio of girls to boys in Basic education		81%	2008	100%
		Share of women in wage employment in the non-agricultural sectors		51%	2008	
		Proportion of seats held by women in parliaments		25%	2010 (elections)	
Reduce child mortality	Reduce by two-thirds, between 1990 and 2015, the mortality rate among children under five	Under five mortality rate per(000) live birth	112 (2006)	113	2008	
		Infant mortality rate per(000) live birth	81	92	2008	
Improve maternal health	Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	Maternal mortality ratio per(100000) live birth		1,107	2006	
		Proportion of births attended by skilled health personnel		49.2%	2006	
	Achieve, by 2015, universal access to reproductive health	Contraceptive prevalence rate		7.6%	2006	
		Adolescent birth rate		49/1000	2008	
		Antenatal care coverage (at least one visit and at least four visits		69.6%	2006	
Combat HIV / AID, malaria and other diseases	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	HIV prevalence among population aged 15-24 years		0.5% for males and 1.24% for females	2009	
		Condom use at last high-risk sex		3.3%	2006	
		Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years		53.5%	2006	

Goals	Targets	Indicators	Status 2004	Achievement		2015 Target
				Current Level	Reference Year	
	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Proportion of children under 5 sleeping under insecticide-treated bed nets		27.6%	2006	
		Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs		54.2%	2006	
		Incidence, prevalence and death rates associated with tuberculosis		2.2%	2007	
Ensure environmental sustainability	Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Proportion of land area covered by forest		29.6%	2009	
		CO_2 emissions, total, per capita and per $1 GDP (PPP)	20.1 Gig (1995)	14.2 Gig	2010	
	Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	Proportion of total water resources used		31.5%	2010	
	Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	Proportion of population using an improved drinking water source	56.1% (2006)			
		Proportion of population using an improved sanitation facility	31.4% (2006)			
	In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	Telephone lines per 100 population	2% (2005)	0.90%	2009	
		Cellular subscribers per 100 population	9% (2005)	28%	2009	
		Internet users per 100 population	N.A	8,2%	2009	

Source: SPHS-2010, NBHS-2009, SHHS-2006 and Administrative data from concerned institutions

1.6. Northern Sudan MDGs Status at a glance

Table 1.3 below depicts the goals, targets and progress in indicators for Northern Sudan across the eight goals. It is worth noting that targets and corresponding indicators for which no data/ information exist at the time of reporting have been excluded from the table.

Table 1.3.: Northern Sudan MDGs Status at a glance

Goals	Targets	Indicators	Baseline(1990)	Status in 2004	Achievement		2015 Target
					Current Level	Reference Year	
Eradicate extreme poverty and hunger	**Reduce by half the proportion of people living on less than a dollar-a-day**	The proportion of the population below one dollar per day	-	64%	25%?	2009	32%
		The proportion of the population below the national poverty line	90% (1992)		46.5%	2009	23.2%
		Poverty Gap			16.2%	2009	
		Poverty Severity			7.8%	2009	
	Achieve full and productive employment and decent work for all, including women and young people	Employment rate	89 %(1993)		83%	2008	
		Proportion of own-account in total employment(workers	41.1% (1993)		34%	2008	
		Proportion of contributing family workers in total employment(workers-family workers)	26% (1993)		22%	2008	
	Reduce by half, between 1990 and 2015, the proportion of people who suffer from hunger	Prevalence of underweight children under five years of age			31.8%	2006	
		Proportion of population below minimum level of dietary energy consumption	-	-	28.0%	2009	
Achieve Universal primary education	**Ensure that all boys and girls complete a full course of primary schooling**	Gross enrolment in basic education	57% (1990)	65.1%	71.1%	2009	100%
		Literacy rates of 15-24 year olds, women and men	27.1% (1990)	69% (2008)	77.5%	2009	100%
Promote gender equality and empower women	**Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015**	Ratio of girls to boys in primary, secondary and tertiary education			53.9 to 46.1%	2007	100%
			-secondary		51.6 to 49.4%	2007	100%
			-tertiary		54.1% females	2008	100%
		Share of women in employment in the non-agricultural sectors			59%	2008	100%
		Proportion of seats held by women in national parliament		9.7%	25%	2010	100%
Reduce child mortality	**Reduce by two-thirds, between 1990 and 2015, the mortality rate among children under five**	Under five mortality rate	123 (1990)	102 (2006)	102	2008	41
		Infant mortality rate	80 (1990)		71	2006	53
		Proportion of one year old children immunized against measles	50% (2000)		85%	2009	
Improve maternal health	**Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio**	Maternal mortality ratio	537 (1990)		534	2006	134
		Proportion of births attended by skilled health personnel	24% (1990)		57%	2006	
	Achieve, by 2015, universal access to reproductive health	Contraceptive prevalence rate (current use)	7.0% (2000)		7.6%	2006	
		Adolescent birth rate (12-14) years			76/1000	2008	

Goals	Targets	Indicators	Baseline(1990)	Status in 2004	Achievement		2015 Target
					Current Level	Reference Year	
		Antenatal care coverage (at least one visit and at least four visits	70%(2000)		70%	2006	
Combat HIV / AID, malaria and other diseases	**Have halted by 2015 and begun to reverse the spread of HIV/AIDS**	HIV prevalence among population aged 15-24 years			0.5% males & 1.24% females	2009	
		Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS			4%	2006	
		HIV prevalence among population aged 15-24 years			0.5% for males and 1.24% (combined north & south)	2009	
	Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	Proportion of population with advanced HIV infection with access to antiretroviral drugs			13.12%	2009	
	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Incidence and death rates associated with malaria	7.5 million 35,000 (2001)		3.1 million reported cases 8,844 death cases	2009	
		Proportion of children under 5 sleeping under insecticide-treated bed nets	21% (2005)		41%	2009	
		Incidence, prevalence and death rates associated with tuberculosis			120		
		Proportion of tuberculosis cases detected and cured under directly observed treatment short course			81.8%		
Ensure environmental sustainability	**Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources**	Proportion of land area covered by forest		29.6(2004)	29.4%	2010	
		CO_2 emissions, total, per capita and per $1 GDP (PPP)	20.1 Gig (1995)		14.2 Gig	2010	
	Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	Proportion of total water resources used			31.5%	2010	
	Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	Proportion of population using an improved drinking water source	64% (1990)		65%	2009	82%
		Proportion of population using an improved sanitation facility	33% (1990)		42%	2009	67%
Develop a global partnership for development	**In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries**	Proportion of population with access to affordable essential drugs on a sustainable basis			Public health sector (40%- 55%) & private sector (90%)	2009	
	In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	Telephone lines per 100 population	2% population. (2005)		0.9 % of populations	2009	
		Cellular subscribers per 100 population	9% population (2005)		28 % of population	2009	
		Internet users per 100 population	8.2% Population (2009)	-	10.4 % of Population	2010	

Source: SPHS-2010, NBHS-2009, SHHS-2006 and Administrative data from concerned institutions

1.7. Southern Sudan MDGs Status at a glance

Table 1.4 below depicts the goals, targets in the targets and progress in indicators for southern Sudan across the eight goals and targets. It is also worth noting that targets and indicators for which data do not exist at the time of reporting have been excluded From the table.

Table 1.4.: Southern Sudan MDGs Status at a glance

Goals	Targets	Indicators	Status in 2004	Achievement		2015 Target
				Current Level	Level	
Eradicate extreme poverty and hunger	Reduce by half the proportion of people living 0n less than a dollar-a-day	The proportion of the population below one dollar per day	>90%			45%
		The proportion of the population below the National poverty line		50.60%	2009	45%
		Poverty gap ratio		24.00%	2009	
		Share of the poorest quintile in national consumption		4.00%	2009	
		Prevalence of child malnutrition (weight/age) % of under five	48%			24%
	Reduce by half the proportion of people who suffer from hunger	Proportion of the population below minimum level of dietary consumption	23%	47.00%	2009	11%
Achieve Universal primary education	Ensure that all boys and girls complete a full course of primary schooling	Net enrolment in primary education		48%	2009	
		Literacy rates of 15-24 year olds		36.70%	2008	100%
Promote gender equality and empower women	eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015	Ratio of girls to boys in primary, secondary and tertiary education		.70, .48,.46	2008	1
	Empower women	Ratio of literate females to males among 15-24 year olds		0.67	2008	1
		Proportion of seats held by women in GOSS		32%	2010	

		Government				
Reduce child mortality	Reduce by two thirds the mortality rate among children under five	Under five mortality rate		381	2008	
		Infant mortality rate		131	2008	
Improve maternal health	Reduce by three quarters the maternal mortality ratio	Maternal mortality ratio		1,989	2008	1680
		Proportion of the population using solid fuels		98.90%	2008	
	Reduce by half the proportion of people without sustainable access to safe drinking water	Proportion of the population with sustainable access to an improved water source		49.50%	2008	
	Achieve significant improvement in lives of at least 100 million slum dwellers by 2020	Proportion of the population with sustainable access to improved sanitation		23.90%	2008	

Source: SPHS-2010, NBHS-2009, SHHS-2006 and Administrative data from concerned institutions

II. Goal By Goal Assessment of the MDGs

2.1. Eradicate Extreme Poverty and Hunger (Goal 1)

Reducing absolute poverty by half by 2015 is one of the targets under this goal. It is measured by the proportion of people below the national poverty line (head count index). The main instruments for this are growth and distribution of income. Hence the challenge to growth and the nature of growth (whether it is pro-poor or not) has an important bearing on achieving this goal. Reducing by half, between 1990 and 2015, the proportion of people who suffer from hunger measured by the food poverty index and malnutrition indices (such as stunting and wasting) is another important target related to Goal 1 of the MDGs.

Poverty refers to a condition of not having the means to afford basic human needs such as clean water, nutrition, health, education, clothing and shelter.

A dollar a day is taken as a de facto global poverty line in establishing proportion of people who lives in extreme poverty in material (income/expenditure) terms. This one dollar a day poverty line is compares to consumption or income per person which includes consumption from own production and income in kind.

Sudan adopts a poverty definition based upon the Islamic religion, country context, and cause of poverty. The poverty referred to here is expressed by the inability to meet the minimum requirement for daily life (cost of basic needs approach).

2.1.1. Current Status and Trends

The effort to prepare a poverty eradication strategy in Northern Sudan had started since 1999 by establishing a poverty unit in the Ministry of Finance and National Economy, and a high council chaired by the President was formulated to supervise the preparation and the implementation of the poverty eradication program (Ministry of Finance & National Economy, 2010).

A strategy was launched despite the acute lack of data and a workshop was conducted to discuss the concepts, policies and the extent of poverty. In 2004 a draft interim national poverty eradication strategic plan was edited. The African Development Bank provided a grant to contribute to the national efforts to eradicate poverty in Sudan in both northern and southern Sudan. But no official poverty reduction strategy document has been issued so far in Sudan

Poverty in Sudan poses a huge challenge to the government and stakeholders (private sector, and NGOs) effort in the country. The factors that may have aggravated the poverty situation in Sudan include:

- The effect of liberalization of economic policy on the poor and vulnerable groups.
- The long economic international sanctions handicapped access to international initiatives such as (HIPCS).
- The long civil war and conflicts in southern, western, eastern Sudan.
- The increased amount of external debt.

According to the 2009 National Baseline Household Survey for Northern Sudan, the proportion of the population below the poverty line is estimated at 46.5%. Poverty gap ratio and poverty severity indices are estimated at 16.2% and 7.8%, respectively in North Sudan.

The Poverty gap ratio measures the average shortfall of the income of the poor (those below the poverty line) relative to the poverty line. This means that on average per capita income/expenditure of the poor in North Sudan falls short of the poverty line by 16.2%. The third measure reflects the severity of poverty (7.8%) which is also believed to be one of the highest by all standards. The size of the latter two measures could be a reflection of the nature of growth (likely to be small if growth is pro-poor and lare if growth is not pro-poor). This poverty line is not based on the Global De facto Poverty Line of 1 Dollar a day. This is based on National Poverty Line estimated from the 2009 National Baseline Household Survey (NBHS) of Northern Sudan. .

Table 2.1.: Poverty Key Indicators for Northern Sudan

MDG 1: Key Indicators for Northern Sudan	
Poverty Headcount Ratio (percentage of Population below the national poverty line)	46.5%
Poverty Gap Ratio	16.2%
Poverty Severity	7.8%

Source: Household Survey, 2009

Southern Sudan, a region long-affected by conflict and by the lack of development efforts, expectedly has visibly high levels of poverty among the population. However, the impossibility of conducting extensive fieldwork and rigorous surveys during the war (which ended with the signing of the Comprehensive Peace Agreement in 2005) meant that the levels and patterns of poverty in Southern Sudan had never been reliably estimated until recently. Official estimates predicted a poverty rate of more than 90% of the population living on less than one-dollar-a-day in 2004[6], although this was a 'deductive estimate', lacking any solid evidence base.

In recent years, much statistical information has been collected including extensive data on extreme poverty and hunger. While due to the lack of historical data trend analysis of these dimensions is not possible, there is now solid baseline information to monitor the progress of development efforts in the future.

The Government of Southern Sudan, with support from development partners, carried out a large multi-topic consumption survey (National Baseline Household Survey) in 2009 which is representative for Southern Sudan, its ten constituent states, and its urban and rural areas. This survey was used to generate a report on estimates of poverty incidence which was released to the general public in June 2010[7]. The report was based on consumption as a welfare indicator, produced and estimated the poverty line for Southern Sudan (Table 2.2.).

Table 2.2: Key Poverty Indicators for Southern Sudan

MDG 1: Key Indicators for Southern Sudan	
Poverty Headcount Ratio (percentage of Population below the national poverty line)	50.6 %
Poverty Gap Ratio (incidence x depth of poverty)	24 %
Share of the poorest quintile in Southern Sudan consumption	4 %
Prevalence of underweight children under five	32.8 %
Proportion of population below minimum level of dietary energy consumption	47 %

[6] New Sudan Centre for Statistics and Evaluation/UNICEF (2004): Towards a Baseline: Best Estimates of Social Indicators for Southern Sudan

[7] Southern Sudan Centre for Census, Statistics and Evaluation (2010): Poverty in Southern Sudan: Estimates from the NBHS 2009

Source: SSCCSE, 2009

Poverty in Southern Sudan is widespread; approximately half of the population (50.6%) lives on less than the official poverty line[8]. This poverty is distributed in very definite spatial patterns:

- The poverty headcount ratio in rural areas (55.4%) is more than double the ratio in urban areas (24.4%)
- Poverty rates vary significantly between states – from three in four people in Northern Bahr el Ghazal state (75.6%) to only one in four people in Upper Nile state (25.7%)

This information is important as it allows the government to target its development interventions for further enhancement of efficiency and effectiveness in its poverty reduction endeavor.

The consumption and poverty profile also indicates that although the poverty line divides the population almost exactly in half, there is in fact a vast gap between the poor and the non-poor: the average consumption of the poor is only a quarter of the consumption of the non-poor. The bottom quintile in the population, i.e. the poorest 20% of the population, account for only 4% of the private consumption in Southern Sudan; the top quintile accounts for 50% of consumption in Southern Sudan.

The poverty gap ratio for the population is 24%, which implies that the average deficit in consumption of each person in the country is 24% below the poverty line, if the non-poor are considered to have a zero shortfall. On the other hand, the poverty gap among the poor is 47%, that is, the average consumption of the poor falls short of the poverty line by 47% (around 34 SDG per person per month).

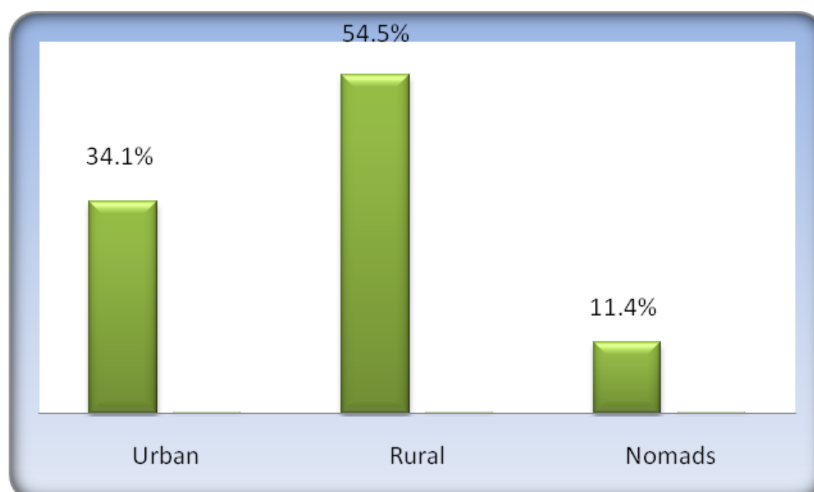
Southern Sudan has a very young population. The Sudan Population and Housing Census (2008), which was the first reliable Census conducted covering the whole of Sudan in 25 years, documented that 72% of the population was under the age of 30, and 44.3% below the age of 15. In this context, it is unsurprising that the burden of poverty falls heavily on children: about half the population below the poverty line (49.2%) is below the age of 15. Disaggregation of the composition of the poor by sex reveals that the proportion of men and women among the poor is almost identical indicating that there is not a significant gender gap in poverty in Southern Sudan.

Employment

In Northern Sudan the reported total number of those employed stood at 6,677,410 of which males accounted for 76.1% and females for the residual 23.9%. Of the total number employed in Northern Sudan; 34.1% were in the urban sector, 54.5 in the rural areas and 11.4% were nomads as depicted in the figure below. Employment to population ratio stood at 39.5% based on populations of working age category (15-59). Unemployment rate among (15 -59 years) stood at 17 %. Youth (15-24) unemployment rate stood at 25.4%.

Figure 2.1: North Sudan Percentage of Total Employed by Mode of Living

[8] The estimates established a poverty line of 73 SDG per person per month; at current exchange rates (July 2010), this translates to about $1.04 per person per day.



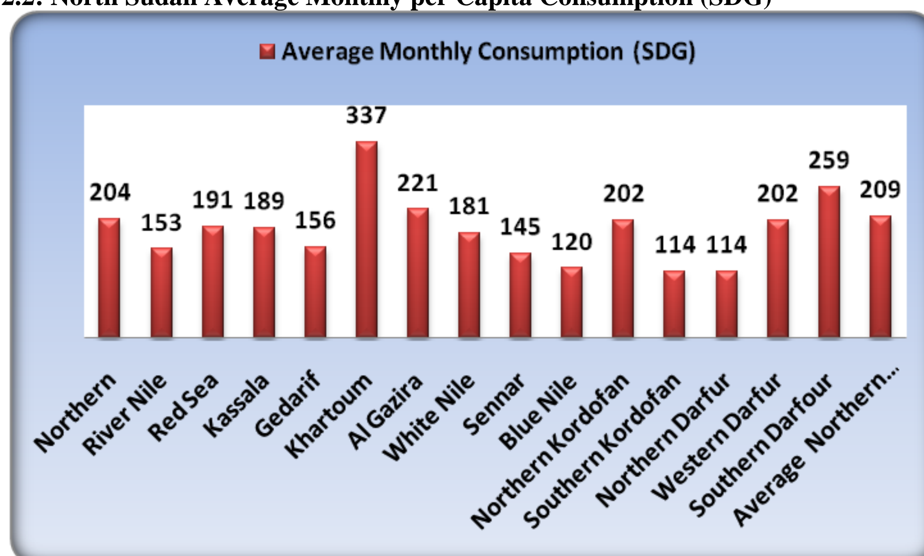
Source: Sudan Population and Housing Census 2008

Consumption and Food Poverty

The 2007 survey focused on the commodities and services basket and the consumption patterns in Northern Sudan. the daily consumption per person was computed at 2.508 SDG and stood at an average of 3.34 SDG in urban areas and 2.02 SDG in rural areas. The monthly per capita consumption in Northern Sudan was estimated at 209 SDG. On average, urban areas showed consumption levels significantly higher than rural areas, 227.6 SDG and 169 SDG, respectively.

The survey shows that food consumption still constitutes the bulk of household consumption although it declined from 62% in the previous survey to 52% as per the latest survey results. This indicates the improvement in the living standard as reflected in the increased share of non-food consumption (such as telecommunication, restaurant). The share of food in household consumption was estimated at 52% and 62% in urban and rural areas, respectively. The survey also indicates that the poorest households on average spent 58% of their income on food and 30% on shelter. The monthly per capita Consumption in Northern States is depicted in figures 2.2 & Table 2.3 below).

Figure 2.2: North Sudan Average Monthly per Capita Consumption (SDG)



Source: CBS Household Quick Survey 2007

Table 2.3: Average Consumption in Urban/ Rural Northern Sudan (SDG)

Area	Average

Urban	279
Rural	169
Total	209

Source: CBS the Household Survey 2007

Across the states in Northern Sudan, average consumption per capita is the highest in Khartoum State (337 SDG per month) and the lowest in Northern Darfur and Southern Kordofan which averaged 114 SDG per month each.

According to the food insecurity survey in North Sudan, food deprivation refers to the proportion of the population whose dietary energy consumption is below the minimum dietary energy requirements (MDER) estimated for Northern Sudan at 1751 kcl.

Accordingly, in northern Sudan, the proportion of the population below the minimum level of dietary consumption was estimated at 31.5%. The percentage in urban areas is almost similar to the rural areas estimated at 31% and 34% respectively. Across the Northern states, the level of food deprivation varies significantly. It registered 44% in the Red Sea, 15% in the Gazira and River Nile.

The survey shows that food deprivation is higher among female-headed households (37%) than in male headed households (31%), due on average to better access of male-headed households to education and income. Besides, the survey shows that the rate of food deprived differs according to household size, ranging from 5% for households of one or two members to 49% for households with more than 9 members.

The survey identified income as the most important factor which determines the level of food-deprivation, as 20% of the poor population were food-deprived compared to almost none in the higher income category.

The depth of hunger tended to be similar in the urban and rural areas which stood at 343 and 344 kcal , respectively. There is also sizeable disparity between northern states (331 kcal) and southern states (427 kcal) followed by the difference between male and female headed households (324 kcal) and (371kcal), respectively.

Estimated at 61.4%, expenditure on food accounted for a large share of household consumption in Sudan. The food ratio decreased with income, the poorest income quintile spent 71.5% compared to 57% for the richest quintile.

In southern Sudan, the proportion of population below minimum level of dietary energy consumption has been calculated through the analysis of the food consumption module of the NBHS-2009, which collected information on both the physical consumption of a range of food items, and their monetary value. Analysis of physical food consumption of the population in Southern Sudan reveals that close to half the population (47%) has a calorie consumption of less than the minimum level of dietary energy consumption and is food deprived. The survey was not primarily designed for the computation of food security indicators; as such, the report on the food security indicators is still in draft form and thus the results quoted here are provisional.

The underweight prevalence among children

The underweight prevalence among children is internationally recognized as a public health indicator for monitoring nutritional status and health in the population. Sufficient and good quality of nutrition is the cornerstone for development.

The prevalence of underweight children is the percentage of children under five years old whose weight for age is less than minus two(-2) standard deviation from the median for the international reference population age 0 – 59 months.

The nutrition situation in Sudan is poor, characterized by high levels of underweight and chronic malnutrition, as well as persistently elevated levels of acute malnutrition. Nationally, one third (31%) of children under the age of five years in Sudan is moderately or severely underweight (<-2 Z score, weight for age). Almost one third of children (32.5%) suffer from moderate or severe chronic malnutrition (<-2 Z score, weight for height), underlining the long term and prevalent under nutrition and morbidity throughout the country. Nationally, the level of global acute malnutrition (14.8% -<2 Z score, weight for height) is just below internationally recognized standards for indicating a nutrition emergency. These figures vary significantly between states

Unfortunately, recent comprehensive Southern Sudan-wide data on malnutrition among children is not yet currently available. Data on child anthropometry (body measurement of children), which is used in calculating malnourishment rates among children, was collected in the National Baseline Household Survey (NBHS 2009) and the Sudan Household Health Survey – II (2010) which is not yet available for analysis. The most recent data available on indicators of child malnutrition are from the Sudan Household Health Survey – I (2006).

Child malnutrition by weight for age indicator is the best monitoring tool because malnutrition is linked to poverty. Even a moderate malnutrition increases their risk of dying and effects health status later in life. Table (2.4) below reflects northern Sudan percentage of children aged (0 – 59) months who were moderately or severely malnourished, (under weight prevalence rate).

Table 2.4: Children's nutritional status and percentage of children aged 0-59 months who are severely or moderately malnourished, northern Sudan, 2006

Item	Weight for age		Height for age		Weight for height			Number of children aged 0-59 months
	% below - 2SD	% below - 3SD	% below - 2SD	% below - 3SD	% below - 2SD	% below - 3SD	% below + 2SD	
Sex								
Male	30.5	7.9	32.9	10.0	14.6	3.5	3.1	1,357,028
Female	28.6	6.5	29.6	9.0	12.7	3.3	4.4	1,250,715
State								
Northern	32.1	11.7	33.6	9.1	17.9	6.5	7.7	46,768
River Nile	24.6	4.5	24.8	6.4	10.8	2.1	1.9	65,948
Red Sea	30.8	10.4	30.5	9.7	13.6	5.5	2.4	43,070
Kassala	29.5	8.6	36.4	12.6	17.0	3.8	4.3	62,060
Gadarif	32.4	7.0	35.6	9.7	10.9	1.6	1.8	153,733
Khartoum	21.7	3.5	25.3	8.3	11.2	2.5	4.3	532,017
Gezira	25.0	4.4	28.6	8.6	8.8	1.4	1.6	366,273
Sinnar	25.3	5.7	31.2	10.6	10.6	2.6	3.2	100,381
Blue Nile	36.4	9.0	40.2	12.7	10.0	2.3	2.6	218,740
White Nile	32.0	8.3	36.7	9.4	11.8	3.4	3.3	81,410
N. Kordofan	33.6	9.1	34.6	11.2	10.8	1.9	3.7	106,479
S. Kordofan	25.5	4.3	30.5	5.2	12.1	1.8	4.6	67,286
N. Darfur	34.4	7.7	26.5	7.3	18.1	4.2	2.8	64,139
W. Darfur	38.1	13.6	26.7	5.1	22.9	5.7	0.0	39,938
S. Darfur	32.3	6.8	30.5	9.6	10.9	1.2	1.5	192,332
Age								
< 6 months	5.0	1.2	8.2	2.6	6.9	1.6	9.2	246,881
6-11 months	19.5	4.1	18.1	3.9	13.5	2.9	5.1	326,095
12-23 mths	37.2	8.5	37.1	10.4	19.3	4.7	3.3	572,466
24-35 mths	35.2	11.0	36.6	11.7	13.2	3.0	2.8	555,493

36-47 mths	32.1	7.0	33.8	11.0	11.7	3.1	2.8	531,974
48-59 mths	31.1	6.7	37.9	13.0	13.1	3.8	2.3	374,833
Mother's education								
None	35.6	9.5	36.5	11.8	16.3	4.3	4.0	1,193,493
Primary	26.9	5.8	29.9	8.3	11.7	2.3	3.5	824,337
Secondary	19.4	3.8	21.2	5.8	11.0	2.9	3.7	535,680
Total	29.6	7.2	31.3	9.5	13.7	3.4	3.7	2,607,743

Source: SHHS 2006

According to the SHHS (2006), in southern Sudan, 32.8% of children under five were underweight, defined as having a weight-for-age z score (using WHO standards) below 2 standard deviations. Being underweight reflects both acute and chronic malnutrition, physical states which are separately captured using weight-for-height and height-for-age z scores.

2.1.2. Interventions to Eradicate Poverty

Efforts have been exerted to prepare a poverty eradication strategy in Northern Sudan, starting with establishing a poverty unit in the Ministry of Finance and National Economy in 1999. In 2000, a higher council chaired by the President of the Republic was formed to supervise the preparation and the implementation of a strategic paper for the poverty eradication program. In 2004 a draft interim national poverty eradication strategic plan was edited. The government planned to have a full NPSP in 2008 in line with 25 years and 5 years strategic plan. Furthermore, it formulated a growth-oriented 25 years strategy (2007-2031) to provide services and sustain economic growth. This is in addition to increasing the pro-poor spending to 9% of the GDP in 2009. The monetary policies targeted the poor by allocating 12% of commercial banks ceilings to finance microfinance projects (Ministry of Finance and National Economy).

The pro-poor public spending and the efficiency of this spending are well recognized in fiscal policies in Sudan. In most PRSP related literatures, pro-poor spending is defined as "spending that benefits the poor more than the non poor; spending that actually reaches the poor and spending to have an impact on the welfare of the poor over time" (Ministry of Finance and National Economy).

Due to the lack of credible data on poverty and other welfare measures until recently, it has not been possible for the Government of Southern Sudan (GOSS) to formulate a Poverty Reduction Strategy. However, with the publication of these new estimates, and the formation of the new government following April 2010 elections, the process of formulating such a plan is high on the government agenda.

In spite of the numerous challenges, Southern Sudan has considerable potential for economic growth and poverty reduction. The area contains the majority of Sudan's currently known proven and probable oil reserves, and the best quality agricultural land. With access to oil revenues, Southern Sudan has a major advantage over most emerging post-conflict governments, with significant resources available for development. The challenge is to channel the oil wealth to promote growth and poverty reduction in the non-oil sectors.

The maintenance of relative peace and security has enabled Southern Sudan to begin opening up road access and de-mining of key transport routes. Over 2,000km of roads have been opened up, and public transport services are now available on almost all major routes. Almost two million IDPs and refugees have returned to the South since 2004 (SSCCSE, 2009). The key elements of the enabling environment which GOSS is striving to provide include peace and security, rule of law, macroeconomic stability, a clear and well coordinated regulatory framework, basic infrastructure such as roads, and effective tax administration.

In December 2009, the Government prepared and released the *GOSS Growth Strategy 2010 – 2012* that stated that – "Broad based economic growth is the only sustainable way to increase living standards and reduce poverty". The Report provides the framework for GOSS engagement with the economy, and its understanding of the chief constraints and priorities over the next three years. The Report identified several binding constraints to growth, the most important of which were insecurity, poor infrastructure and multiple taxation; other identified constraints included inadequate access to finance, poor animal and crop technology, poorly defined land rights, lack of irrigation, lack of skills and tools, limited electricity supply for strengthening the agricultural value chain, and traditional negative attitudes to gender.

It is anticipated that a Poverty Reduction Strategy once developed will take into account all of these constraints, and also look at the other dimensions of welfare such as education, health and gender equity.

The GOSS Aid Strategy (GOSS, 2007) lays out the principles that guide development partners' assistance to Southern Sudan. The six principles of the Aid Strategy are that development partner assistance must be *aligned* with government priorities. It must be coordinated with government programs. It must be predictable, and it must be harmonized. Aid must be used for the institutional development of GOSS where possible, and there must be mutual accountability between GOSS and donors. The Aid Strategy also lays out GOSS aid policy, which states that aid expenditure must be focused on development expenditures and not salaries or recurrent costs.

In order to apply these principles to support the GOSS Growth Strategy and lead to poverty reduction, donor partners are providing analysis that helps identify the constraints to growth and poverty reduction, supporting and training to help GOSS tackle these constraints, and also providing resources directly to help GOSS invest in infrastructure development, health, education etc.

At the federal level, priorities across the sectors were directed towards the agricultural sector followed by infrastructure .In spite of the reliance on provision of primary education and health, water within the states; the GoNU launched economic policies and national projects to reduce poverty. The federal development projects focus on agricultural revival, infrastructure such as roads electricity and providing services to the nomads and their animals in order to mitigate poverty. The total federal development pro-poor spending has increased during the period 2004 to 2009 as shown in table (2.5).

Table 2.5: Pro-poor Spending during the period 2004 – 2009 (Million SDG)(All Sudan)

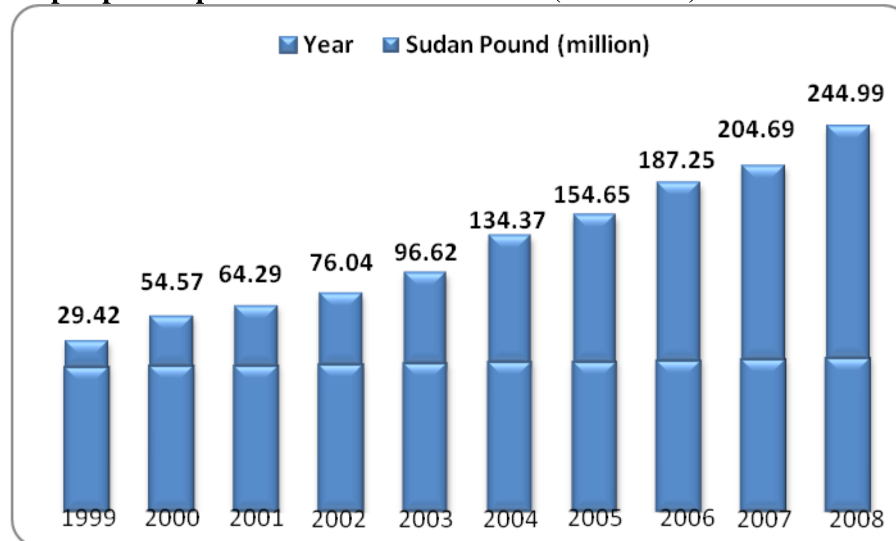
Item	2004	2005	2006	2007	2008	2009
Total pro-poor spending(SDG)	4269.8	6519.5	8199.7	13671.1	17471.8	15012.7
Pro-poor spending percentage of GDP (%)	6.21%	7.61%	8.31%	12.99%	13.67%	10.27%

Source: Ministry of Finance and National Economy 2009

Zakat is a certain fixed proportion of the wealth to be paid annually for the benefit of the poor in the Muslim community. The payment of Zakat is obligatory as it is one of the five pillars of Islam. *Zakat* is the major economic means for establishing social justice and leading the Muslim society to prosperity and security. Sudan is among the countries that consider *Zakat* Fund a means to supporting the poor. An example of government expenditure targeted at the poor is the *Zakat* Fund which shows a steady increase pro-poor expenditure trend all through the last decade (see figure 2.3).

As a percentage of a total pro poor government spending, however, expenditure on the poor from the Zakat Fund constituted 3.2% in 2004 and declined steadily thereafter and reached 1.4% of the total pro-poor expenditure in 2008.

Figure 2.3: pro poor expenditure from Zakat Fund (1999-2008)



Source: CBS, Statistical Year Book

2.1. 3. Major Challenges

The causes of poverty in Sudan are multidimensional and can be summarized as follows:

- Effect of liberalization on the poor and vulnerable categories of the population.
- Concentration of socio-economic development in a few areas(lack of inclusive development)
- Limited diversification as reflected in the expansion of the oil sector while the non-oil sector has been declining. The oil sector being capital intensive, its employment intensity and hence poverty reduction impact has been limited
- Absence of relevant poverty reduction strategies and tools.
- Economic sanctions that handicapped access to debt relief and additional external finance through initiatives such as the Heavily Indebted Poor Countries (HIPCs)
- Long civil war and conflicts in southern, western, eastern Sudan.
- The huge debt burden.
- Poverty is a common occurrence in Southern Sudan and affects half of its population. Urban areas are significantly less poor than rural domains. The distribution of the poor reflects the distribution of the population: nine out of ten poor live in the countryside.
- It is therefore not very obvious which policy options are best suited to reduce poverty in the short and medium term; but there is a need to accelerate the implementation of the GOSS Growth Strategy and begin to prepare a poverty eradication strategy that will clearly define the right policies and programmes in each sector to deal decisively with the occurrence of absolute poverty and hunger.

2.1.4. Assessment of Progress to Date and Prospects

According to the Joint Assessment Mission Report (JAM, 2005) poverty incidence for North Sudan was estimated at about 64%[9]. Although this estimate was not reached based on any scientific method, it has been used as a baseline for income/consumption poverty since then. As noted above, according to the 2009 National Baseline Household Survey based poverty analysis report issued recently; poverty incidence based on income/consumption was estimated at 46.5% for North Sudan. If one is to go by the baseline set by the JAM in 2005,

[9] This is based on a Dollar a Day Poverty Line (Defacto Global Poverty Line) while the latest is based on National Poverty Line estimated based on the NBHS (2009).

income/consumption poverty has declined by about 20 percentage points since 2005. But still as shown by the latest result (46.5%) nearly half of the population is below the poverty line in North Sudan. The poverty gap ratio and poverty severity index for 2009 being 16.2% and 7.8%, respectively; this shows that income/consumption poverty is wide and deep in North Sudan. Thus meeting MDG1 for North Sudan could be a challenge given the current level of poverty. Specifically in Southern Sudan states, more than 90% of the population was estimated to be living under one-dollar-a-day in 2004. Although this was a 'deductive estimate', lacking solid evidence base, it is quite true that the populations was absolutely poor and living in hunger as the civil war raged on. The end of hostilities, the signing of the CPA and increased provision of basic services that followed seem to have contributed to reduced proportion of the population living under poverty considerably; to only about half of the population. Given this state of affairs and if the present level of peace and tranquility is sustainably improved, it is very possible to achieve the MDG 1 of reducing absolute poverty and hunger by half in 2015.

2.2. Achieve Universal Primary Education (Goal 2)

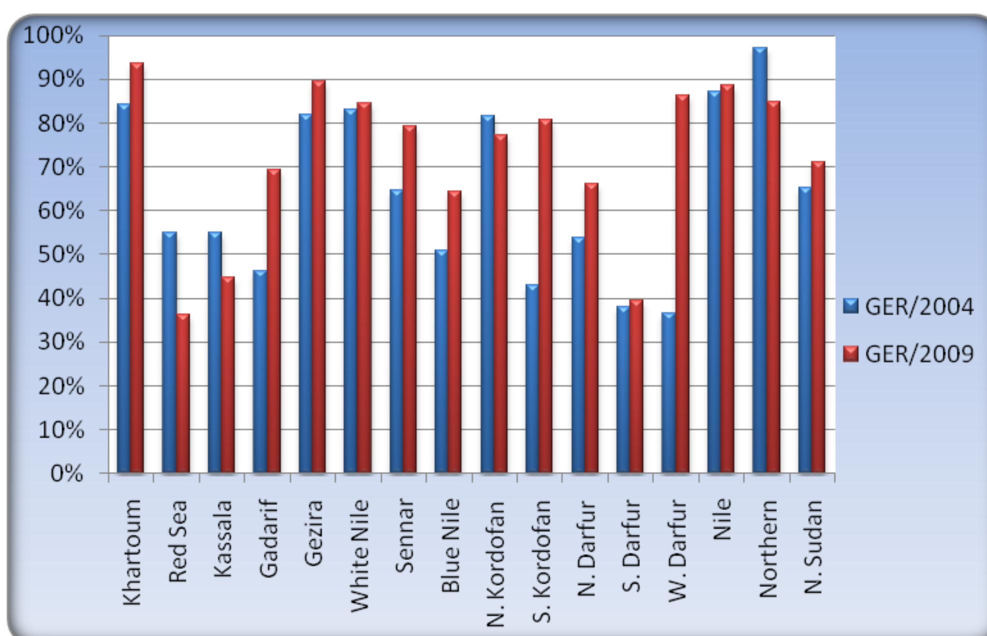
This goal is to ensure that, by 2015, all boys and girls will be able to complete a full course of primary schooling, through assessing; net enrolment ratio in primary education; proportion of pupils starting grade 1 who reach last grade of primary; and literacy rate of 15-24 year-olds women and men.

2.2.1. Current Status and Trends

Education plays effectively a central role in achieving the MDGs. Scientific research and studies have conclusively proved the significant contributions of education to the welfare of individuals and sustained economic growth through increased productivity, especially in agriculture. Hence, education impacts substantially on reduction of poverty and hunger.

In Northern Sudan Gross Enrolment Rate (GER) has reached 71.1% with a wider disparity among states ranging from 93.75% in Khartoum down to only 36.1% in the Red Sea. The period 2004 – 2009 witnessed an increase of 1.1 percentage point annually in GER. The absence of data has hindered the measurement of NER as most of the children did not have a birth certificate which directly affects enrolment age. Figure 3.1.below sheds light on the geographical disparity in access to primary enrollment which should be addressed to help achieving MDG2. The survival rate up to grade 5 and grade 8 for both sexes stood at 70% and 62%, respectively. .

Figure 2.4: Gross Enrollment Rate(GER) in North Sudan by States, 2004 to 2009



Source: Source: Federal Ministry of General Education (FMOGE) Planning Administration 2004 & 2009

In Southern Sudan the primary school cycle is eight years and the appropriate age of enrolment is 6 years. Children who start primary education at the age of 6 and do not drop-out or repeat, will finish a full primary school cycle at age 14; while the secondary cycle is 4 years. Four programs have been established under the Alternative Education System (AES) that targets over-age children, demobilized soldiers and adults.

The Net Enrolment Ratio for southern Sudan rose from 15.8% in 2006 (SHHS, 2006) to about 48.0% in 2008 indicating tremendous improvement as far as enrolment is concerned. The Net Enrolment Ratio (NER) also indicates that fewer boys than girls were enrolled in school in 2009. Enrolment disparities exist across states, with the highest NER found in Unity, Upper Nile and Northern Bahr-el-Ghazal. Lowest NER is found in the Greater Equatoria region. The Gender Parity Index (GPI) based on the NER of 0.73, ranges from as low as 0.48 in Warrap to 0.93 in Central and Western Equatoria. This means that in Warrap only one girl for every two boys is enrolled in primary school[10]. The following Tables (3.1) and (3.2) show the Gross Net Enrolment Ratio in primary for all States and the whole of Southern Sudan in 2009.

Table 2.6: Primary School Net Enrolment Rate (NER) in Southern Sudan , 2009

State	6-13 pop.	6-13 enrolled	Total NER	Male 6-13 pop.	Male 6-13 enrolled	Male NER	Female 6-13 pop.	Female 6-13 enrolled	Female NER
Central Equatoria	242910	102926	42%	126714	55343	44%	116196	47583	41%
Eastern Equatoria	222055	82428	37%	118411	49077	41%	103644	33351	32%
Western Equatoria	127209	50962	40%	67870	27835	41%	59339	23127	39%
Jonglei	323972	154838	48%	182650	94602	52%	141322	60236	43%
Unity	142772	83270	58%	74771	53882	72%	68001	29388	43%
Upper Nile	227661	137185	60%	126912	79873	63%	100749	57312	57%
Lakes	162244	68692	42%	86357	44288	51%	75887	24404	32%

[10] Government of Southern Sudan, Ministry of Education (GoSS MoE), 2009

Warrap	231886	100596	43%	117319	68523	58%	114567	32073	28%
Western BG	71803	38352	53%	37935	23299	61%	33868	15053	44%
Northern BG	169199	98268	58%	85950	64946	76%	83249	33322	40%
Total	1921711	917517	48%	1024889	561668	55%	896822	355849	40%

Source: SHHS, 2006

Table 2.7: Primary School Gross Enrolment Rate in Southern Sudan, 2009

State	Total GER	Male GER	Female GER
Central Equatoria	57%	60%	54%
Eastern Equatoria	50%	57%	43%
Western Equatoria	56%	58%	53%
Jonglei	76%	84%	66%
Unity	102%	130%	71%
Upper Nile	89%	94%	82%
Lakes	68%	88%	45%
Warrap	69%	97%	41%
Western Bahr-el-Ghazal	74%	87%	59%
Northern BG	84%	113%	54%
Total	72%	85%	57%

Government of Southern Sudan, Ministry of Education (GoSS MoE), 2009

MDG 2 aims for a NER of 100 percent by 2015. Close to 91 percent of all children in primary school in Southern Sudan are overage. The Gross Enrolment Rate (GER) is therefore substantially higher than the NER. GER is 72 percent; 85 percent for males and 57 percent for females[11].

In 2006, 19.6 percent of the adult population in south Sudan was reported as being able to read and write a simple sentence. At the time, the literacy rate was reported to be 28.2 percent amongst the (15-24) year olds or about 8.6 percent higher than among the adult population. There were substantial gender disparities both for adult and youth literacy. Approximately, 20 percent more men than females were reported to be literate both amongst adults and youth. According to the 5th Sudan Population Census conducted in 2008, the literacy rate among the 15-24 year olds was reported to have risen tremendously to 36.70% (see table 3.3.) below.

Table 2.8: Literacy Rates for Youth (15-24 years) in 2006 and 2008[12]

	2006	2008
Male	38.0%	36.7%
Female	18.4%	29.6%
Total	28.2%	36.7%

5th Sudan Population Census conducted in 2008

In northern Sudan, considerable progress in literacy has been made as compared to its low rates of 27 .1% for adults in 1990. It was below 20% for women. Literacy rates have risen to 61% for both sexes in 2007. It has reached 71% for males and fell to 52% for females. Literacy rate for the age group (15-24) has reached 77.5 for both sexes. It stood at 85% for males and 71% for females. Recently, a sub-sector strategy for an alternative learning program for children and young people out of school 2009-2010 has been developed targeting one million from age-group 7-24 years. A relevant curriculum and master training manual have been developed.

[11] GoSS MoE, 2009

[12] Education Status Report for Southern Sudan-Juba, Feb. 10-11 2010 presentation made by World Bank Team (preliminary results) & the 2008 5th PHC Long Form Questionnaire

2.2.2. Interventions to improve Primary Education

Since 2004 Sudan witnessed positive developments which opened new opportunities for real progress on education for all especially at the basic level. The peace agreement ended a long dragging civil war in the South in 2005, as well as armed conflicts in other parts of the country. Investment in petroleum accelerated economic growth (7 %+) which has encouraged external co-operation. Equally important, the Interim National Constitution 2005 stipulates: "The state promotes education at all levels all over Sudan and shall ensure free and compulsory education at the primary level and in literacy education programs".

The government commitment to the provision of free and compulsory basic education for all is reflected officially in the Interim National Constitution as well as in the Twenty-Five National Strategy 2007-2031. Also, the National Plan for Education for All was developed in 2003- with detailed activities, programs and estimated budget. Nevertheless, assiduous efforts are critically needed to substantially improve all basic education indicators to ensure quality education for all by 2015. Besides, there is also a Five-Year Plan 2007-2011 which is an integral part of the Twenty-Five National Strategy 2007-2031. Both plans provide a roadmap for the further development of education for making solid progress towards achieving MDG2 by 2015.

The 2005 Comprehensive Peace Agreement, among other things, provided for a semi-autonomous Government of Southern Sudan (GOSS) along with its own ministries, including the Ministry of Education. This has paved the way for broad and strategic long-term planning efforts in the area of education. So far, initial steps have been taken towards the establishment of a Sector Wide Approach (SWAP) to planning; and a sector-wide, strategic education development plan is being developed beginning with the Education Status Report that provides diagnostics of the educational system in Southern Sudan.

Besides, GOSS has formulated a policy that makes primary education compulsory and free. The policy will become law when Parliament passes the relevant draft Bill into law.

2.2.3. Major Challenges

In spite of the progress made in the education sector, major challenges exist that may hinder the likelihood of achieving the target on primary education in all parts of the country. These challenges are specifically pertaining to Northern Sudan include:

- Poverty and illiteracy are among the factors for the deprivation of children from poor families to attend school up to the end of the education cycle.
- Strengthening the capacity of relevant educational institutions for improved planning, financing, budgeting, management and monitoring to ensure efficiency and better service delivery;
- Review, reform and revitalize educational policies negatively impeding the development of education to ensure better quality and availability of EFA by 2015.
- Considering the financial unfavorable situation and challenges of decentralization
- Large-scale rehabilitation and reconstruction of school facilities to create friendly school environment conducive to efficient learning.
- Some constraining factors have resulted in serious impediments to the achievement of the MDG2, leading to some key educational policy issues. First, free and compulsory basic education for all could not be implemented as most families pay for their children education. Second, teachers' development policy requiring recruitment of university graduates for basic level is not attained as more than 70% are secondary school graduates. Third, though gross enrolment rate stands at 71, there are more than

3.5 million adolescents out of school as well as persistent gender inequalities and geographical disparities.

- The policy of decentralization of administration and management of basic education being the responsibility of local councils, this has to a greater extent contributed to very low level of education funding. It is imperative to revise and further reform these key policy issues to enhance the quality of education and ensure its availability for all by 2015.
- Inadequacy of the amount of funding for education.

Southern Sudan has specific challenges which can be summarized as follows:

- **Fiscal constraints:**
  - The educational system in Southern Sudan is weak and underfunded. Decades of civil war have destroyed schools and led to the exodus of teachers. GOSS has made education a priority and one of the main objectives of the Education for All (EFA) is to increase GOSS expenditure on education to 15 percent of public expenditure consistent with prioritization of education.
  - Estimated per student recurrent public spending on education is currently SDG 153 (5 percent) per year for primary and 953 SDG (30 percent) for secondary. However, the distribution varies across states. The largest state, Jonglei, with a population of 1.4 million receives 14.5 million SDG (5 million SDG less than average and 11 SDG per person), while the smallest state, Western Bahr-el-Ghazal, with a population of 0.3 million, receives 11.9 million SDG (36 SDG per person)[13].

- **Quality and effectiveness:**
  - Years of conflict have not allowed for consistent training of teachers and many trained teachers have left Sudan or have become internally displaced. Only 13 percent of the teachers working in Southern Sudan are considered trained[14] and 46 percent are primary school leavers. The student teacher ratio (STR) is 1:52 However, many teachers working in Southern Sudan are volunteers and are awaiting recruitment of paid teachers. Teacher absenteeism is common and hampers student learning[15].
  - The quality of teaching, poor school materials and infrastructure contributes to high repetition rates, which again bloats the school system. The drop-out rate is also high. In primary schools, average dropout rate are 25 percent and 24 percent for girls and boys respectively. A limited number of children are registered at birth and parents do not often know how old their children are; which, in part, accounts for late school enrolment. Increase in percentages of primary school repeaters as indicated in Table 4.3. below.

Table 2.9: Primary School Repeaters by Grade, 2009[16]

P1	P2	P3	P4	P5	P6	P7	P8
9.8%	10.0%	9.3%	9.4%	9.3%	9.6%	9.6%	11.5%

Source: The 5th Sudan Population Census conducted in 2008

  - Quite a number of children have never attended school or had to leave due to the civil war. It is only now that these children have managed to start their schooling.

[13] Education Status Report for Southern Sudan – Juba, February 10-11 2010" presentation made by World Bank Team (preliminary results)

[14] Defined as having a diploma in teaching, or completed in- or pre-service training.

[15] GoSS MoE, EMIS, 2009

[16] Calculated as a percentage of the total number of student in the respective grade

These children are at a greater risk of dropping-out. Children are often forced to leave school because the family does not have enough food and/or the children will need to work to generate income. Many girls are married off or fall pregnant before they complete primary education.

- Currently, in Southern Sudan comprehensive data base is not available for a full cohort analysis. A re-constructive cohort analysis indicates a completion rate of 9 percent and 15 percent for girls and boys respectively. All in all, only 12 percent of the boys and girls starting primary 1who make it to primary 8[17].

➢ **Other Challenges in education:**

- *Trained teachers:* Few students make it through primary schooling in Southern Sudan. The reasons for this are diverse, but it is evident that the number of untrained teachers with low academic qualifications contributes significantly. The capacity for planning and systems development in the ministry of Education is also quite weak and urgently requires strengthening.
- ***Insecurity:*** Localized conflicts in several counties have greatly contributed to children being displaced from their communities and moving to areas where access to schooling is not assured.
- ***Mobile populations:*** A large part of the Southern Sudan population is nomadic and this prevents them from attending formal school. Efforts have been waged to create educational opportunities for children belonging to nomadic communities who are always on the move, but these efforts are yet to be systematized and strengthened.
- ***Overage children:*** Children starting schooling late are a common phenomenon in Southern Sudan. This leads to high drop out before completion of the primary cycle. Young girls above a certain age are often married off, and boys who are perceived by the community to be grown-up are often taken out of school to work since parents often cannot afford to feed them. As a result of these and other factors, high dropout, poor attendance, retention and low efficiency characterize the educational system in Sudan.

2.2.4. Assessment of Progress to Date and Prospects

With regard to GER, in the period between 2004 and 2009 for North Sudan by states for both sexes; there has been slight increase in enrollment from 65.1% in 2004(the year of the previous MDGs Report), to 71.1% in 2009. This is tantamount to an annual average increase 1.1 percentage point. If this trend is to continue during the coming five years (up to the 2015 time line), it is unlikely for North Sudan to achieve the target of MDG2 even in terms of GER let alone NER.

It is also unlikely that Southern Sudan will achieve the Universal Primary Education Goal. However, the supportive environment exists to accelerate progress towards universal primary education. Besides, development partners are likely to increase their support to the education sector following a peaceful referendum as this is the only assured way of creating an educated work force which is currently lacking in almost all sectors.

Despite notable progress in the field of access with reference to basic education and literacy since 2000, much is left to be done regarding coverage, efficiency, quality, equity and relevance in Sudan.

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[17] The completion rate using the reconstructive cohort method states the percentage of students entering grade 1 in 2008 who will complete grade 8. The completion rate calculates this based on dropout, repetition and promotion rates observed between 2008 and 2009. The completion rate assumes the trends observed between 2008 and 2009 will remain unchanged until the 2008 P1 students reach P8

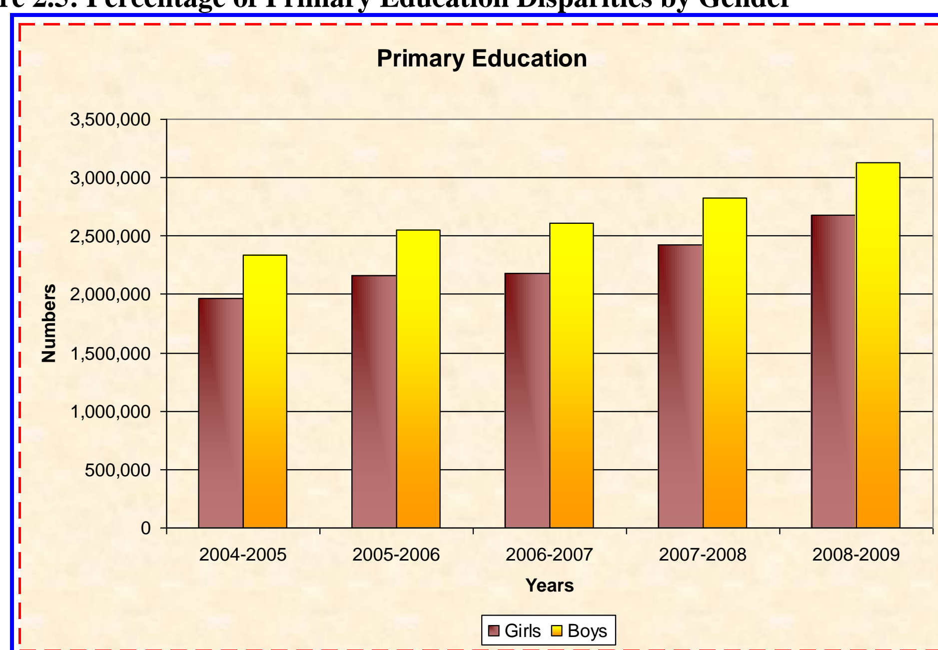
2.3. Promote Gender Equality & Empower Women (Goal 3)

This goal considers eliminating gender disparity in primary and secondary education, preferably by 2005, and at all levels of education by 2015. Ratios of girls to boys in primary, secondary and tertiary education, share of women in wage employment in the non-agricultural sector and proportion of seats held by women in national parliament are performance indicators for monitoring this goal.

2.3.1. Status and Current Trends

In northern Sudan, the data on general education show modest progress and variations of girls' education compared to boys. This is illustrated by the following graph (Figure 2.5). Despite the persistent gender gap in primary education, there are considerable improvements owing to the efforts made by the government over the last five years. The establishment of a directorate for girl's education, as stipulated in the Girls Education Policy, at both federal and state levels in 2000 helped in narrowing the gender gap in basic education. This is believed to have contributed to a major progress with regard to girls' education. Besides, the percentage of those enrolled in continuing education has increased from 48.3 % during 2000-2001 to 64.4 % during 2006-2007. This stood at 65.4% among girls compared to 71.4% among boys.

Figure 2.5: Percentage of Primary Education Disparities by Gender



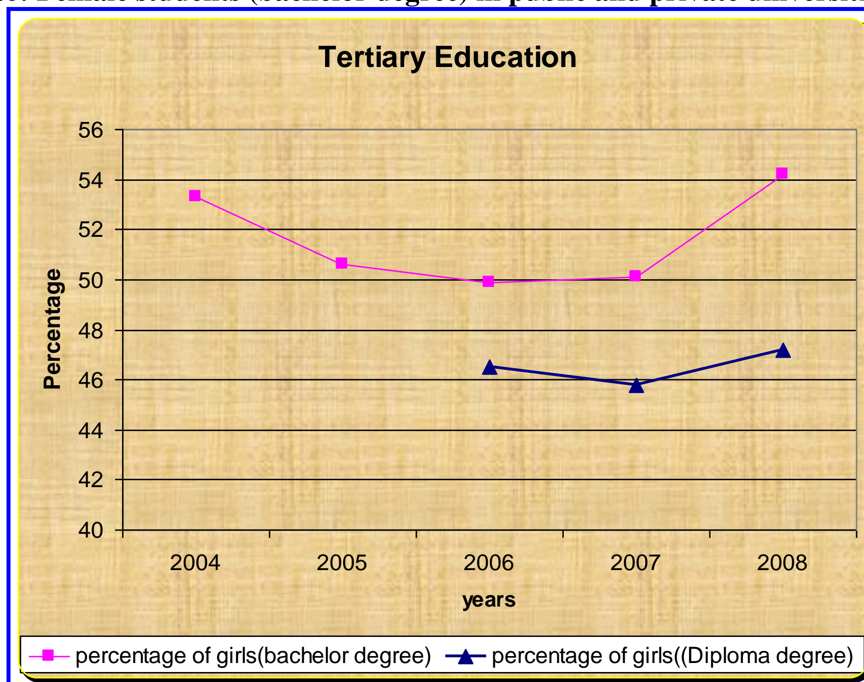
Source: MOGE Statistical Year Books 2005 to 2009 Central Bureau of Statistics

In respect to secondary schooling in northern Sudan, the number of secondary school male students has increased from 334,975 in 2007-2008 to 385,584 in 2008-2009 which translates to a 15.1% increase. The number of female students increased from 312,885 to 367,486 which again translate to a 14.9 % Increase. In the year 2008 and 2009, enrollment rate for boys stood at 29.6% and 29.4 %(slight decline from the preceding year) while the rate for girls enrollment improved from 26.3% to 29.9% for girls during the same period. From the data, it may seem on the surface that gender parity is more or less achieved. But the low level of secondary enrollment for both sexes is by itself a concern.

There are considerable gender disparities among the 15 northern states in regard to enrollment in secondary education. The data shows that in some states, girls' enrollment surpassed boys and the opposite is also true in some other states.

At tertiary education level, it is evident that there is a higher rate of enrolment of girls than boys in Northern Sudan (see figure 2.6). The ratio is stable despite the slight decline in 2006 after which girls' rate of enrollment reached 54.1% in the year 2008. The rate of females in tertiary education has been increasing faster than that of males, which indicates to a narrowing gap towards parity.

Figure 2.6: Female students (bachelor degree) in public and private universities



Source: MOGE Statistical Year Books 2005 to 2009 Central Bureau of Statistics

In Northern Sudan the number of female students in literacy and adult education programs for the year 2008-2009 declined to 43% compared to its level during 2005-2006. The directorate for adult education within the Federal Ministry of Education is responsible for literacy programs such as: (1) Combating illiteracy targeting both men and women, but women enrollment is higher than that of men. (2) Compressed curriculum, which also focuses on dropouts.

For southern Sudan, the following tables (Table 2.10 and table 2.11) show the percentage of girls to boys and of girls to total student population in primary, secondary, AES and tertiary education.

Table 2.10: Percentage of girls to boys & of girls to total student population in primary, secondary, AES and tertiary education in Southern Sudan

Primary					
Year	Girls	Boys	Total	% of girls to boys	% of Girls to Total No. of students
2009	508,776	871,804	1,380,580	58.4	36.9
2008	474,733	809,519	1,284,252	58.6	37.0
Secondary					
Year	Girls	Boys	Total	% 0f girls to boys	% of Girls
2009	12,050	31,977	44,027	37.7	27.4
2008	7,254	17,890	25,144	40.5	28.8
Alternative education System (AES)					

YEAR	Female	Male	Total	% of girls to boys	% of Girls
2009	92,280	124,959	217,239	73.8	42.5
2008	38,938	51,283	90,221	75.9	43.2
Tertiary					
Year	Female	Male	Total	Women to men	% of Girls
2009	2,626	6,495	9,121	40.4	28.8

Source: Education Statistics for Southern Sudan (2009)

Table 2.11: Primary School Gross Enrolment Rate in Southern Sudan, 2009

State	Total GER	Male GER	Female GER
Central Equatoria	57%	60%	54%
Eastern Equatoria	50%	57%	43%
Western Equatoria	56%	58%	53%
Jonglei	76%	84%	66%
Unity	102%	130%	71%
Upper Nile	89%	94%	82%
Lakes	68%	88%	45%
Warrap	69%	97%	41%
Western Bahr-el-Ghazal	74%	87%	59%
Northern BG	84%	113%	54%
Total	72%	85%	57%

Source: Education Statistics for Southern Sudan (2009)

Regarding participation of women in the formal non-agriculture sectors, there is a clear progress in their participation across the national economy. However, gender disparity in the formal sector is quite noticeable. According to the laws of employment, women in Sudan have equal opportunities to employment as men. The law of equal pay applies to both men and women as long as they perform the same responsibilities. The pattern of employment is consistent with the economic sector where females are dominant, such as the informal and agricultural sectors. However, the expansion of education and other social services in Sudan is reflected in some changes in the pattern of female's labor status in particular encouraging them to engage in the formal sector. Women numbers in the low and middle ranks is relatively high whereas they still occupy very few positions at high levels.

Since independence, Sudanese women have been active in public life. In particular, progress in political participation is noticeable since the seventies. Table 2.12 below shows the proportion of seats held by women in parliament and ministerial positions.

Table 2.12: Sudanese women in National Assembly

Year	Total number of seats	Proportion of seats held by women	Form of allocation
1958	95	None	-
1965	261	0.4%	Election
1980	368	4.9%	Appointment
1982	153	9.2%	Appointment
1986	261	0.7%	Election
1996	400	5.9%	Appointment
2004	360	9.7%	Appointment/Election
2010	451	25%	Election

Source: Sudanese Women's General Union (SWGU), 2010

In Northern Sudan, women occupy 28% of the seats in the newly elected parliament in 2010. This is a milestone, and came as a result of demands by Sudanese women activists and pressures led by other women stakeholders and NGOs. Accordingly, the proportion of women in the national legislative council increased from 9.7% in 2004, to 25% in the recently elected assembly.

Women parliamentarians comprise more than 300 in all legislative assemblies in Sudan; and this is the largest number ever in Sudan's modern history.

With regard to southern Sudan, Tables 2.13., 2.14., 2.15., 2.16., 2.18 and 2.19 show the percentage of women in political positions including southern Sudan Legislative Assembly, State Assemblies, Government Ministries, chairpersons and under-secretaries.

Table 2.13: Proportion of seats held by women in Southern Sudan Legislative Assembly:

Year	Female	Male	Total	Ratio (F/M)	Percentage (Female to Total)
2008	No figures				
2009	32	138	170	1:4	18.8
2010	54	116	170	1:2	31.76

Source: Education Statistics for Southern Sudan (2009)

Table 2.14: Proportion of seats held by women in States Legislative Assemblies of Southern Sudan:

Year	Female	Male	Total	Ratio (F/M)	Percentage (Female to Total)
2008	No figures				
2009	109	371	480	2:7	22.7
2010	136	344	480	2:5	28.3

Source: Education Statistics for Southern Sudan (2009

Table 2.15: Proportion of seats held by women Governors in Southern Sudan States:

Year	Female	Male	Total	Ratio (F/M)	Percentage (Female to Total)
2008	1	9	10	1:9	10
2009	1	9	10	1:9	10
2010	1	9	10	1:9	10

Source: Education Statistics for Southern Sudan (2009)

Table 2.16: Proportion of Female Ministers in the Government of Southern Sudan:

Year	Female	Male	Total	Ratio (F/M)	Percentage (Female to Total)
2008	3	23	26	1:8	11.5
2009	3	23	26	1:8	11.5
2010	7	25	32	2:7	21.9

Source: Education Statistics for Southern Sudan (2009)

Table 2.17: Proportion of Female Chairpersons of Independent Commissions:

Year	Female	Male	Total	Ratio (F/M)	Percentage (Female to Total)
2008	3	10	13	1:3	23.1
2009	3	10	13	1:3	23.1
2010	3	7	10	1:2	30.0

Source: Education Statistics for Southern Sudan (2009)

Table 2.18: Proportion of Female Undersecretaries in the Government of Southern Sudan:

Year	Female	Male	Total	Ratio (F/M)	Percentage (Female to Total)
2008	1	25	26	1:25	3.8
2009	2	24	26	1:12	7.8
2010	2	30	32	1:15	6.3

Source: SSLA Protocol Office

2.3.2. Interventions to improve Gender Equality and Empowerment of Women

In 2005, a national plan for Combating Gender Based Violence (CGBV) was promulgated, administered by the Unit of Combating Violence against Women, Ministry of Justice. The Government adopted a national policy on women empowerment in 2007.

The national policy for girl's education is another policy adopted by the government in 2007. Similarly the national strategy on Female Genital Mutilation (FGM) introduced in 2008, is a step in the right direction towards tackling FGM related risks.

The adoption of the quota system in the general election law of 2008, which guaranteed 25% of the total number of seats for women per legislative assembly, is evidence of positive developments towards political empowerment for women in Sudan.

The government of Sudan has enhanced its organizational structures to respond to violence against women and children. It established a unit for combating violence against women and girls within the Ministry of Justice in 2006 with branches in seven states. Moreover, the Ministry of Interior, in 2006, established the Family and Child Protection Unit and similar branches in some states have also been opened.

The General Directorate for developing and organizing the banking system has adopted economic programs, responsive to women, through a decree issued by the Central Bank of Sudan in 2007. The Bank allows a minimum of 12% to finance businesses. 70% of the portfolio will go to finance businesses, in rural areas, of which 30% is supposed to be reallocated for financing women development related projects.

The interim national constitution (in article 32) stated the principle of equal payment for equal work and affirmed positive discrimination for women.

The national civil servant law (2007) affirmed the principle of free competition for selection to jobs and reaffirmed the principle of equal pay for equal work and stressed selection and promotion according to merit.

The 2004 nationality law, revised in 2005, gave women the right to pass their nationality to their children. The 1991 criminal law was amended in 2009 to include a provision on special protection for women during armed conflicts. The armed forces law, formulated in 2007, included an article on “special protection for women during armed conflicts”.

In 2005, the Government of Southern Sudan (GOSS) adopted a national plan of action on Combating Gender Based Violence (CGBV) because gender-based violence was commonly practiced. Following this plan of action, GOSS adopted a national policy on women empowerment and the national policy for girls’ education in 2007; and the national strategy on Female Genital Mutilation (FGM) in 2008. The adoption of the quota system in the general election law of 2008, which guaranteed 25% of the total number of seats for women in the legislative assemblies, in addition to earlier policies constituted the necessary evidence of the then existing political will to empower women in Southern Sudan. Besides, the 2010 elections for members of the Southern Sudan Legislative Assembly, which assured 28.3% of women representation (which is above the 25% GOSS had planned to achieve for women) is further evidence of this political will.

Along with the necessary legal reforms, the Government of Southern Sudan has also formulated a number of strategies, policies and projects which are at various stages of implementation.

2.3.3. Major challenges

- Negative traditional social and cultural attitudes, values and stereotypes that hinder girls from education especially in rural areas,
- Nomad females' children education. During the past three years, progress has been made in nomad education where the total gross enrolment has increased from 16% to 33% among whom boys constituted 73.7% and girls 61.8%. (Source: Nomad education strategy 2009, MOE).
- Allocate sufficient resources to monitor the implementation of educational reforms policies and the cultural attitudes having impacts on girls' education.
- The need to encourage non-formal education programs and build campaigns of continuing distance education and e-learning programs targeting women.
- The production and use of gender-disaggregated statistics be promoted as a fundamental tool for monitoring of labor market and participation of women in senior management.
- The need to promote girls' vocational training and in-service training through incentives, grants, and subsidies.
- The need for government, private sector, political parties, and nongovernmental organizations to review the criteria and processes for recruitment and promotion. Also, there is a need for clear legislations to protect gender equality and rights in the civil service.
- The need to formulate policies that enhance the protection of women working in the informal sector and inclusion of their economic contributions in the national economy.
- Enhancing women's participation in future elections through gender sensitive civic education and voter education programs.
- The biggest challenges in women empowerment include lack of institutional infrastructures, funding of sensitization programs and shortage of personnel to carry out women empowerment sensitization campaigns. The lack of the necessary organization and physical infrastructure in the country, especially in Southern Sudan, is currently the most daunting challenge because it inhibits gender sensitization down to States, Counties and Payams levels.
- While a free basic education policy exists, the school environment, cultural norms and level of vulnerability and poverty hinders the overall school enrolment for all children and negatively impacts the access to education for girls in particular, as compared to boys.

2.3.4. Assessment of progress to Date and prospects

From the data presented above on the different indicators related to promotion of gender equality and women empowerment, it is evident that Sudan is making encouraging progress towards achieving this goal by 2015. However, in some aspects, such as secondary education enrolment, extra effort is required in southern Sudan, while more needs to be done particularly in the area of increasing girls' enrollment in secondary education. Evidently, the Government of Southern Sudan has shown the political will to promote gender equality and empower women by putting the right policies in place, enacting the relevant laws where they are required and by designing the right strategies and programs. As a consequence, the ratio of girls to boys in primary, secondary and tertiary education has been rising. Similarly, the proportion of seats held by women in the GOSS Government has been rising, albeit somewhat slowly. This lackluster performance in women empowerment may not help achieve the MDG goal by 2015, but it is a move in the right direction given that supportive environment is in place.

2.4. Reduce Child Mortality (Goal 4)

This goal aims to reduce by two thirds, between 1990 and 2015, the mortality rate among children under-five through reducing under-five mortality rate, infant mortality rate and improve the proportion of 1 year-old children immunized against measles

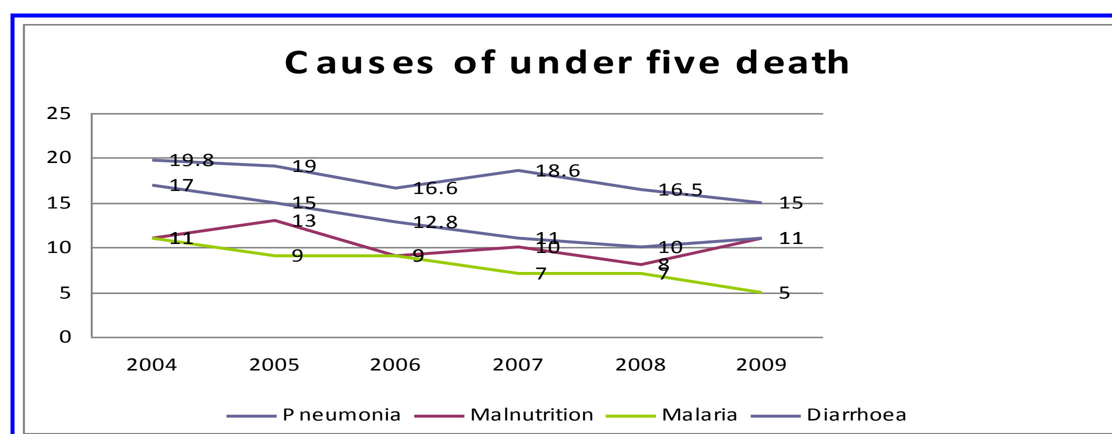
2.4.1. Current Status and Trends

Since 1989-1990, three national surveys have been conducted in Sudan (SDHS, SMS and SHHS), using different methods to estimate under five child mortalities rates, making it unreliable to compare mortality trends over time. Moreover, data analysis is not consistently disaggregated by urban/rural, by gender or by educational background of mothers, the case that makes comparability almost difficult.

In this context, analysis is made based on available data trying to shed light on key elements of progress or otherwise towards 2015. Expressions such as ''has fallen'' or '' has increased" are based on observation rather than statistical significance.

Pneumonia, malaria, diarrhea, and malnutrition usually coupling one or two of the mentioned illnesses still represent the major causes of under-five illness and deaths as per FMOH annual statistical reports (2004-2009) as figure 2.7 below shows.

Figure 2.7: Causes of Under-five deaths



Source: FMOH annual statistical reports 2004-2009

Under five Mortality Rate (U5MR) in North Sudan has declined slightly from nearly 130/1000 live births (L.B) in mid 1990s to 104/1000 L.B in 1999 (SMS-1999- North Sudan), with a further marginal drop to 102/1000 L.B in 2006 (SHHS 2006) , compared to the national rate of 112/1000 LB (SHHS 2006).

The same source of information shows more or less a similar track for IMR in North Sudan, where it has been observed to decline from nearly 80/1000 L.B in mid 1990s to 68//1000 (SMS 1999) but slightly increased to 71/1000 L.B in 2006. The overall picture shows inter-regional variations, where (U5MR) in Blue Nile, South Kordofan, West Darfur and Red Sea reached 178, 147, 138 and 126 per 1000 L.B (SHHS 2006), respectively.

IMR remained high in the same states mentioned above in addition to Ghadarif (86/1000 LB). Interestingly, almost the same pattern is observed based on the results of the SMS 1999. Data was not disaggregated by gender for North and South. However, national disaggregated data

does not reflect notable difference by gender with regard to IMR (78 males & 84/1000 females), except for U5MR, where it is 106 for males and 119 per 1000 L.B for females.

In Southern Sudan the young children face daily threats from Malaria, diarrheal diseases, Acute Respiratory Infection (ARI), vaccine preventable diseases and malnutrition. Health infrastructure is limited and decades of conflicts have reduced national capacity considerably. Less than half of the population has access to appropriate health care, while more than 40% have no access to safe drinking water.

Against the above background, Southern Sudan is struggling to achieve the MDG 4 though the prognosis is mixed. Child mortality is particularly high in Southern Sudan. Infant Mortality Rate (IMR) and Under-five Mortality Rate (U5MR) were estimated at 150 and 250 per 1000 live births respectively during the 1990s to 2000 but U5M declined from an estimated 250 per 1,000 live births in 2001 to 135 in (SHHS-2006). Malaria morbidity and mortality remains high due to low long lasting insecticide nets (LLIN) household availability (11.6%); use and poor access to effective recommended treatment; DPT 3 coverage stands at 20.2%; Measles immunization stands at 27.7%; Neonatal Tetanus Protection at birth stands at 30%. Epidemics and high burden of communicable diseases (especially infectious, parasitic and water related diseases), compounded by underlying high prevalence of malnutrition and inadequate health services contribute significantly to the high levels of IMR and U5MR (SHHS-2006).

At national level, the educational background of mothers reflects a significant difference in U5MR between children of mothers with no education (121/1000LB) and those with primary education (96/1000LB). The difference rises when no education is compared to mothers with secondary education (89/1000 LB). It was foreseen in 2004(MDGR1) that with investment on girl's education, U5MR will decrease. Robust comparability could not be made as different indicators were used in SMS 1999 and SHHS 2006. Interestingly it is not clear why the educational background of mothers with regard to IMR does not show similar differences as of U5MR. IMR of children of mothers with no education is (86/1000LB), those with primary education (74/1000LB), but the differences increase when compared to mothers with secondary education (61/1000 LB).

Neonatal mortality in North Sudan remained to constitute almost 50% of the IMR all through the last 20 years (SMS and SHHS), a condition that requires further analysis of the underlying causes and accordingly develop effective interventions. The main causes for neonatal mortality are not well defined in Sudan.

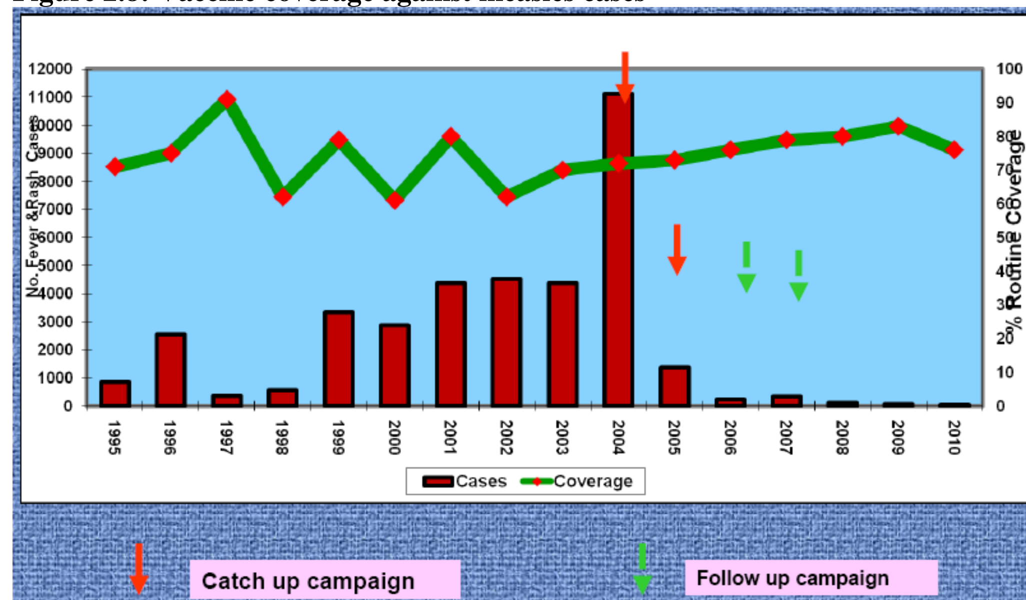
More than 80% of deliveries in Sudan occur at home (FMOH/MOHGOSS/CBS/SSCCSE). Sudan Household Health Survey 2006), where the village midwife (a cadre who receives 9 months training) or the medical assistant is the sole health care provider.

Assessment of neonatal services in 22 Hospitals in 11 states in 2005 revealed that nurseries for neonatal care were present in only 41% of the surveyed hospitals, just above 50% had separate neonatal wards and incubators; whereas only 36.4% of neonatal wards were supervised by nurses qualified in neonatal care (FMOH assessment report 2005).

In Southern Sudan, child care practices, including feeding practices and health seeking behavior of caregivers, are generally poor. While mothers practice Continued Breastfeeding up to 23 months (Continued Breastfeeding stands at 71.8%), exclusive breastfeeding practice is very low among mothers (Exclusive Breastfeeding stands at only 21.2%). Complimentary feeding rate during 6 – 9 months is 28.6% and Vitamin A supplementation rate is 39.8 (SHHS-2006).

In northern Sudan, measles coverage showed declining rates between 1990 and 2000 up to 50% (MICS 2000). Remarkable increase has been witnessed in coverage from 2004 to 2009 to almost 85%, resulting in the decrease of measles cases (see figure 2.8 below)

Figure 2.8: Vaccine coverage against measles cases



Source: EPI programme 2010

In Northern Sudan almost one third (31.8 %) of U5 children suffer from moderate and severe underweight prevalence (weight for age), close to the national estimate of 33%. Similarly almost 33 % suffer from moderate or severe chronic malnutrition (height for age) as per SHHS 2006, both indicating inadequate food intake coupled with other morbidities. Results of SHHS 2006 have clearly shown alarming family and community health practices indicators: 37% of mothers exclusively breastfeed their children up to six months while only 40 % continue breastfeeding up to two years. Only 9% of care givers know two danger signs of pneumonia; one of the major child death diseases. Proper home management of diarrhea is known to 20% of care givers while only 28% surveyed children slept the night before the survey under LLINT. Such inadequate feeding and health practices in addition to inadequate facility based services further put child health at risk.

In southern Sudan, the reported immunization performance indicators (based on the DPT-3 coverage and DPT1-DPT3 dropout rate) shown in the table 2.19 below indicate that the routine immunization coverage has improved while the drop-outs remain a challenge. This is mainly due to poor access to service which emanates from inadequate infrastructure and trained personnel. The infrastructure is poor in terms of communication, transportation networks, physical health facilities and cold chain equipment to reach the service nearer to the community. As pointed above, there are too few health units with cold chain facilities for the geographical size of Southern Sudan

Table 2.19: Southern Sudan's Reported Immunization Coverage and Dropouts: 2004 to 2009

Indicator	2004	2005	2006	2007	2008	2009
% DPT3 coverage of children <1	10%	13%	12%	20%	22%	43%
% Dropout (DPT1 to DPT3) of children <1	56%	54%	46%	41%	44%	39%

Source: Southern Sudan EPI data unit

Threat of morbidity and deaths from measles remains high for many of the children. About 30% of the children under the age of one were not immunized against the disease by routine immunization services in Southern Sudan in 2009, reaching as high as 60% in some of the states. In 2008 and 2009, GOSS and development partners conducted the measles immunization campaigns focusing mainly on high risk areas with low coverage, reaching 629,266 children aged between six and 59 months (a decent 88% coverage). This contributed towards a reduction of reported cases of measles to 137 with one death in 2009 from 396 with 11 deaths in 2008. Strengthening routine immunization services will ensure that more children are protected against measles especially in high risk counties with large number of un-immunized children.

2.4.2. Interventions to reduce child mortality

- Considerable number of child health and other health related supporting policies were either recently developed or implemented. All policies address the right of children to access quality child health care and nutrition services namely at PHC level. Policies emphasize adequate and quality emergency hospital care and maintain decent and safe service delivery at community level where no health facilities exist.
- Strategies that accelerate and support routine service delivery such as Accelerated Child Survival Initiative including country specific package were implemented.
- Guidelines and protocols to ensure quality child case management are introduced or strengthened: Emergency Triage Assessment and Treatment at referral sites; management of severe acute malnutrition at hospital and at community levels, and management of sick child using community health workers.
- Joint and intensified efforts of partners were exerted to support measles's routine vaccination, catching up and follow up campaigns. This has resulted in increased measles vaccine coverage noted from 2005 and onwards and consequently decreased cases.
- New vaccines that protect children against most common debilitating diseases e.g Pentavalant vaccine were introduced, while routine and supplementary immunization services through the Reach Every District (RED) strategy: were expanded.
- Establishment of Academies of Health Science, to produce allied health personnel with the objective of filling the gap in skill mix namely in rural areas where no or few medical doctors exist.
- Revitalization of the community health workers experienced in late 1970s and early 80s, aiming at increasing universal access to PHC and ensuring equity.
- Laws, regulations and joint agreements addressing critical child's health issues were issued or enacted. Examples are: presidential decree on free treatment for children, unified child law, draft of national code for banning breast milk substitutes and maternal leave.
- The Government of Southern Sudan has made some relative progress in the policy area in addressing constraints to the attainment of MDG 4. It has developed policy guidelines and the Basic Package of Health, Nutrition, Water and Sanitation Services necessary in reducing maternal health.
- In southern Sudan, the Basic Package of Health, Nutrition and WASH Services (BPHN&W) was developed and endorsed at the highest level under the Accelerated Child Survival Initiative (ACSI) in 2007 as the innovative strategy to deliver the package to all in three phases. Immediately thereafter, the GOSS and development partners began the development of a plan which calls for reaching all, especially the vulnerable population; with cost-effective and high impact interventions/services for the prevention and treatment of malaria, diarrhea, ARI, measles, neo-natal tetanus, malnutrition, clean delivery, etc; and at the same time accelerate service delivery towards achieving the health Millennium Development Goal targets. The three phases of the strategy include the Jump-start Phase, the Pulse Phase and the Routine Phase.

All the phases are described in terms of delivery of services in campaign, out-reach, revitalization and strengthening of the health care delivery system.

- In southern Sudan the Jump-start Phase was initiated in 2007 and launched 2009 in Hiyala Payam, Torit County, and Eastern Equatoria State. The aim of the Jump-start Phase is to scale-up integrated one time delivery of services/interventions (including Long Lasting Insecticide Nets; Measles and Tetanus Immunization; Vitamin A Supplementation; De-worming; promotion of Hand-washing and Breast-feeding; screening and referral of severe malnourished children to therapeutic feeding facilities) over a period of one month in all 10 states. By the end of June 2010, the interventions have been taken to scale in 35 out of 79 counties. This means that 85% of under-five children have been reached with the high impact interventions. The impact of the ACSI Jumpstart needs to be evaluated to find out the impact on under-five morbidity and mortality.

2.4.3. Major challenges

- The interventions required to save two-thirds of U5 deaths are available, the problem is to reach those who need them most (ACCESS).
- The unequal distribution of child health care providers between the center and the states and limited human resources and rapid turnover of staff.
- Low access/coverage to appropriate health care and nutrition services due to limited health seeking behavior and variable community acceptability of existing services
- Limited capacity of government to procure sufficient drugs, other essential supplies and equipment.
- Inadequate funds for non-emergency interventions.
- Complex Emergencies- Man made, natural and disease outbreaks
- The need for more in-country and government funding support
- Synergy of efforts between all partners.
- Addressing the continuum of care through implementation of child health minimum package of care.
- Introduction of new vaccines (introduction of routine Rotavirus, Pneumococcal and measles second dose vaccines (MCV2))
- Continuing the measles eradication initiative.
- Health system strengthening specially at both the primary and hospital care levels and strengthening the health information system.
- Reinforcing the nutritional surveillance system and its extension to new sites;
- Support food fortification strategies
- Strengthening the essential nutrition package in BHU, health centers and hospitals
- In southern Sudan reported immunization performance indicators (based on the DPT-3 coverage and DPT1-DPT3 dropout rate) indicate that the routine immunization coverage has improved while the drop-outs remain a challenge. This is mainly due to poor access to service which emanates from inadequate infrastructure and trained personnel. The infrastructure is still poor in terms of communication, transportation networks, physical health facilities and cold chain equipment to reach the service nearer to the community as desired. As pointed above, there are too few health units with cold chain facilities for the geographical size of Southern Sudan.
- Another challenge is the threat of morbidity and deaths from measles.. About 30% of the children under the age of one were not immunized against the disease by routine immunization services in Southern Sudan in 2009, reaching as high as 60% in some of the states. In 2008 and 2009, the GOSS, in collaboration with partners conducted the measles immunization campaigns focusing mainly in high risks areas with low

coverage, reaching 629,266 children aged between six and 59 months (a decent 88% coverage.

2.4.4. Assessment of Progress to Date and Prospects

The limitation regarding systematic analysis of national indicators based on data from different surveys has made it difficult to evaluate progress in a scientific manner. However, the stagnant low coverage indicators, high percentages of malnutrition among children and slow progress in mortality reduction, raises a concern regarding progress towards achieving targets by 2015. Unless intensive and effective interventions that equally address underlying causes of child mortality are implemented, the rate would unlikely come down before 2015. Measles coverage on its own might be achieved. However, if other problems affecting child health are not addressed effectively, achieving this indicator by itself may not be of much significance.

Evidently, the GOSS has not performed well in reducing child mortality thus far. The major causes of child mortality are low immunization rates; low rates of access to safe drinking water and sanitation facilities; low utilization of insecticide treated nets and prompt treatment for malaria. Available statistical data indicate a worsening situation with regard to child mortality. Regardless of the policy options and resources available to GOSS and development partners, it is unlikely that Southern Sudan will reverse the current trend and reduce child mortality and achieve MDG 4.

2.5. Improve Maternal Health (Goal 5)

This goal aims at reducing by three quarters, between 1990 and 2015, the maternal mortality ratio. Progress towards MDG5 will be assessed by looking at improvements in the provision of reproductive health care services. This calls for looking at the three agreed upon indicators: the maternal mortality ratio (MMR); the contraceptive prevalence rate and the proportion of births assisted by a trained birth attendant together with other proxy indicators. The latter will be very important in the context of Sudan since routine information systems are inadequate and vital registration is lacking

2.5.1. Current Status and Trends

In northern Sudan there is an observed instability in MMR levels evident in the figures in 1990 (DHS), 1999 (SMS) and 2006 (SHHS/northern states) as indicated by the rate of MMR which stood at 537, 509 and 638 respectively. There is however wide variation both between and within regions. However, estimating MMRs across time (measuring the trend) should be considered cautiously since there were differences in the coverage and methodology amongst the three successive surveys that furnished the data used for deriving the estimates. It is hoped that the recently conducted SHHS survey (February 2010) will provide trends to reflect the degree of progress or deterioration with regards to MM indicators.

For the second indicator related to skilled birth attendants , delivery by trained personnel in Northern Sudan accounts for 57% of deliveries (national average 49.2%) while institutional deliveries account for 19.4% of all births, with caesarian section rate of national average 4.5% in (SHHS 2006).

The Sudan Reproductive Health Policy foresees FP as one of the top priorities among its reproductive health issues. However, the trend in contraceptive prevalence rate is alarming. The most recent figure (SHHS 2006) showed that on average 7.7% of currently married women are using any form of contraception, a mere 0.7% increase from the 1999 figure– and a decline of almost two percentage points since 1989/90. Even so, the unmet demand for

contraception is low at 5.7% reflecting high levels of illiteracy and poor knowledge regarding the importance of birth spacing among females.

The total fertility rate was estimated at 5.1 births per woman (SHHS 2006) with marked differences between urban and rural areas. In the urban areas, since 1990 the TFR has fallen by one birth per child bearing woman– a reduction that correlates strongly with improvements in women's literacy which encouragingly reached 70% for women aged 15 to 19 years.

According to the Annual Report of the NRHP 2008, antenatal care (ANC) services in Northern Sudan has been provided by 43% of facilities, a substantial increase from the 21% figure in 2007. However, there has not been improvements in the service utilization figures; the proportion of mothers receiving at least one antenatal care visit has stayed static at approximately 70% through the 1990s to 2006 (SHHS), while post-natal care has increased from 13% to 18% (SHHS), a proxy indicator from the percentage of women receiving post-partum vitamin A. Both the women's educational level and economic level of the household seem to influence the proportion of pregnant women receiving ANC from qualified personnel. The current provision of specific care provided as part of the antenatal care remains quite inadequate, as pertaining to blood pressure measurement, and blood and urine testing. Still, data on the standard 4 ANC visits is not available.

According to national EmONC need assessment report 2005, only 47% of hospitals are providing adequate comprehensive EmONC services; 17% of the hospitals were not capable of performing emergency surgery. At the beginning of 2009, distribution of EmOC equipment to 29 target hospitals in the 15 northern states has helped to raise EmOC coverage from 56% to 79% in northern Sudan.

In southern Sudan, the MMR is one of the indicators used for monitoring progress towards the achievement of the MDG 5. The Sudan Household Health Survey (SHHS) conducted in 2006 indicated that Maternal Mortality Ratio (MMR) in Southern Sudan stood at 2054/100,000 live births; and in 2008, the MMR is reported to have improved to 1,989 (5thSPHC, 2008) deaths out of 100,000 lives. In 2006, there were variations between states within south Sudan, the highest MMR being in Western Equatoria standing 2327/100,000 and the lowest in Unity state standing at 1732. These MMR figures are still some of the highest compared to the situation in Sub-Saharan countries.

In southern Sudan, according to the 2006 Sudan Household Health Survey (SHHS, 2006); only 10.02% of all births were attended by "skilled" health staff or Skilled Birth Attendants. There are no data showing the current status of this indicator until the results of the on-going Sudan Household Health Survey II-2010 are out sometime during the year but it is important to report that until thus far, only ten (10) registered midwives are practicing in Southern Sudan and they are mostly practicing in the State Capital hospitals far from the villages where mothers die. The Contraceptive Prevalence Rate (CPR) for which the 2006 SHHS indicated CPR of 3.5% and an unmet need of family planning is 1.2%. This is not the true picture of demand of women for use of family planning. It instead clearly shows most women don't have knowledge about family planning.

The antenatal care coverage for Southern Sudan as indicated in the 2006 SHHS was 16%. ANC service is provided through Primary Health Care Units (PHCUs), Primary Health Care Centers (PHCCs) and State and County hospitals. The quality and type of services is variable and often questionable.

The adolescent birth rate stands at 204/1000 births. This fact is worrisome for many reasons. The younger a woman who gets pregnant is, the more severe the outcome of pregnancy will be including maternal death and severe complications such as Obstetric fistulas. GOSS, and

development partners, especially United Nations Population Fund (UNFPA) has started Adolescent Sexual Reproductive Health Programs in Central Equatorial. The lessons and challenges learnt from this initial effort will help in crafting policies and strategic approaches on Adolescent Reproductive Health for the whole of Southern Sudan.

2.5.2. Interventions to improve Maternal Health

Interventions implemented during the 6 years since the last MDGs report in 2004 focused on increasing accessibility and improving the quality of RH services through training of medical assistants on provision of reproductive health services, mainly ANC and family planning services. Quality of service provision has also been addressed through the development of antenatal, post-natal, family planning, and post-abortion care standards and guidelines. Intense awareness raising efforts were exerted through the development of IEC material addressing the various RH issues, as well as via national and local broadcasting media in the different states. .

A National Strategy for Scaling up Midwifery in Sudan was developed and endorsed on the International Day of the Midwife (15th May 2009). This national strategy includes both long and short term strategies for midwifery services in the country, based on creating a professional and competent workforce. The development and expansion of the village midwives training program during the past six years have shown progress, but more expansion is needed to cover this vast country.

Further development in the curriculum towards achieving skilled birth attendant standards has been undertaken to improve the quality of midwifery services, based on that, the RH Directorate adopted a program for upgrading midwifes currently in the service. The newly developed two-year curriculum has been started and will ultimately be expanded to all midwifery schools in Sudan, functioning through the Academy for Health Sciences. The basic requirement for the midwifery technician curriculum is completion of basic schooling (eight years), while the BSc program initiated in October 2009 enrolls secondary school graduates.

In an effort towards reducing morbidity and mortality related to pregnancy and childbirth, Sudan has adopted free caesarean section policy in 2008 and free delivery care in 2010 aiming at improving utilization and quality of care with emphasis on making life-saving care free..

Major efforts are being made by the FMOH to expand access to EmONC services; an EmONC map has been developed showing the needs of each individual state in terms of basic and comprehensive EmONC facilities. The EmONC Map was widely shared in order to streamline interventions supported by the different partners within these state priorities. Furthermore, to support the referral system, the FMOH distributed 108 ambulances in 2008 to support EmONC centers in the states.

In 2009, a Ministerial Decree for mandatory notification and surveillance of every maternal death and the establishment of both national and state Higher Committees for Maternal Mortality Reduction were launched. This development reflects an increasing political and resources commitment to track maternal health modality. This Decree has been supported by the nomination of a national committee and a national registrar for maternal deaths. Positive actions are being undertaken in response to the findings of these reviews, ranging from blood donation campaigns counteracting deaths from hemorrhage to availing magnesium sulphate for eclampsia cases. Information on maternal deaths has served to enhance the commitment of state officials to maternal health issues and gaps in services.

The FMOH and partners agreed to adapt the regional road map and in 2009 the national MNH work plans endorsed it. The main focus is to strengthen and consolidate country efforts to reduce maternal and neonatal mortality in line with the Millennium Development Goals through achieving a high coverage of a defined set of effective evidence-based interventions focusing on continuum of care. The road map implementation consists of two phases: initial phase 2009-2011 (focus on inputs) implementation plan and consolidation phase 2012-2015.

As a strategic intervention, and as an evidence of government's resolve to improve maternal and neonatal health, Sudan recently launched the National Reproductive Health Policy, 2010 which envisions a quality reproductive and sexual life for all women, men, adolescent young children and the elderly.

GOSS has a policy that clearly addresses maternal health issues and the Maternal Neonatal and Reproductive Health (MNRH) strategic framework elaborates the way forward to achieve the desired changes on maternal and neonatal health. High level Government commitment and involvement of development partners with implementation of the strategic framework as well as grass root level community participation will play key roles in achieving the noble cause of saving Southern Sudanese mothers. Table 2.20 below shows the planning and targets till 2015.

Table 2.20: Planning and target indicators till 2015

Indicators	2006	2008	Milestone 2011	Milestone 2013	Target 2015
Maternal Mortality (per 100,000 live births)	2,054	1,989	1930	1810	1680
Infant mortality (per 1000)	102		96	91	85
U5 mortality rate (per 1000)	135		128	120	115
Contraceptive Prevalence Rate	3.5%		4.7%	5.8%	7.0%
Women with births overseen by skilled birth attendants in HFs	10.02%		13.6%	17.0%	20.0%
Case Fatality Rate of women delivering in health facilities (Per 100,000 live births)	1062 (7hospitals)		885	710	530
Caesarean sections as a proportion of births	2.3%		3.0%	3.8%	4.6%
Exclusive breast feeding rate (0 – 5 months)	20%		27%	33%	40%
Attendance ANC with skilled birth attendant	26%		40%	44%	52%
Pregnant women receiving 2 doses of anti-tetanus vaccine or fully immunized	32%		43%	53%	64%

Ministry of Health, GoSS, 2010

On skilled care at birth, UNFPA has trained 96 community Midwives to date some of whom are working now in hospitals and health centers but with limited institutional support. UNFPA has also trained more than 360 health workers of various cadres on Emergency Obstetrics and Neonatal Care (EmNOC) skills many of whom are working across Southern Sudan. Currently UNFPA through its Implementing Partners has admitted and sponsored 130 Community midwife trainees in Maridi and Yei Training schools which will add to the number of skilled birth attendance when they graduate after 18 months of training. UNFPA in consultation with the Ministry of Health has contributed financially and technically for the establishment and running of the new College of Nursing and Midwifery in Juba which will provide 20 Nurses and Midwives at diploma level. This and other efforts are crucial in raising the critical mass of trained health workers who will be at the forefront in attending deliveries and reducing maternal mortality as a final goal.

2.5.3. Major Challenges

Reproductive health in Sudan is facing huge challenges related to different levels of care as well as policy and community levels. These challenges are reflected in shortfalls in the availability, accessibility and quality aspects:

- Shortage of education, equipment and supplies, and skilled health personnel.
- Wide spread misinformation among the general public in regard to reproductive health options.
- Low literacy levels hamper training of skilled medical workers, particularly midwives. Besides, there is a lack of standardized population-based statistics to guide program planning and baseline data to facilitate effective evaluation of progress.
- Poorly functioning health systems, with weak referral systems, especially during obstetric and neonatal emergencies
- Poor logistics for management of drugs, family planning commodities and equipment.
- Inadequate national human resource management, worsened by a continuing brain drain of skilled personnel
- Working in a large country with a population that is thinly spread and a highly mobile one (Refugees, displaced, nomads and massive rural-to-urban-migration).
- Recurrence of natural and man- made disasters.
- Under-utilization of survey findings and inadequate in-depth research.
- Family planning is characterized by low existence of prevalence rates, cultural and political barriers and high numbers of unwanted pregnancies.
- Improvements in girls' education and an increased prevalence and utilization of contraception and child spacing.
- Commitment of the necessary financial and human resources to implement the strategies and policies currently in place effectively and efficiently.
- Inadequate access to essential maternity and basic health care services and low utilization are the two main causes of maternal deaths in Southern Sudan. Unless drastic corrective measures are made in these directions, reducing maternal deaths remains intractable (A Baseline Formative Research Report, UNICEF & MOH-GOSS, 2010). It is estimated that up to 80% of maternal deaths could be averted if access to improved services were increased and utilized by pregnant and post-partum mothers.
- Most maternal deaths are related to obstetric complications – including post-partum hemorrhage, infections, eclampsia and prolonged and obstructed labor and complication of abortions. Other indirect causes include anemia (exacerbated by malaria), HIV and other conditions that increase the risk of hemorrhage.
- The key challenges in increasing maternal health in Southern Sudan include the absence of emergency obstetric service at reasonable distances, reproductive health/ family planning services including uninterrupted supplies and trained providers and human resources.
- Published studies from countries with a good track record that reduced maternal mortality demonstrates that motivated, competent well trained midwifery skill personnel at grass root level is key in reducing maternal mortality. Secondly, infrastructure development in roads, transport, midwifery schools and social development including women empowerment, education, and gender equality issues can play a supportive role. For example, the fact that the unmet need for use of contraception in Jonglei state is 99 % shows that GOSS together with its development partners must undertake heavy social mobilization and high level advocacy seminars and workshops to increase demand for contraception. Unpublished observation from centers like Malakal Hospital where contraception service is available shows women are interested to use contraception. Lack of access to family planning methods,

reproductive health commodity supplies, knowledge of health providers, and physical infrastructures are few of the additional challenges. All these challenges require a high level commitment from both GOSS and development partners alike.

2.5.4. Assessment of Progress and Prospects

The MDG target for maternal mortality is to reduce the ratio by three-quarters from 509 per 100,000 to 140 per 100,000 live births. However, MMR for northern Sudan in 2006 was 534 per 100.000 live births. The instability in MMR estimates and lack of comparable data to measure the trend makes it difficult to tell the progress. In southern Sudan in 2006 and 2008, maternal mortality was estimated to be 2,054 (SHHS, 2006) and 1989 (5th SPHC) maternal deaths per 100,000 live births respectively. The 5th Millennium Development Goal to reduce maternal mortality by 75% during the period 1990-2015 may therefore not be easy to attain. But the Government of Southern Sudan openly declared to reduce maternal mortality by making it a priority from 2010 and in the subsequent years. It has also implored development partners to support and direct actions aimed at drastically reducing maternal mortality and morbidity in Southern Sudan. Given the encouraging environment that currently exists, the GoSS may well re-direct resources to reduction of maternal mortality which is already showing a declining trend. The still high level of mortality and the sluggish decline witnessed so far demonstrates the severe gap for Sudan in terms of achieving this goal by 2015.

2.6. Combat HIV/AIDS, Malaria and other Diseases (Goal 6)

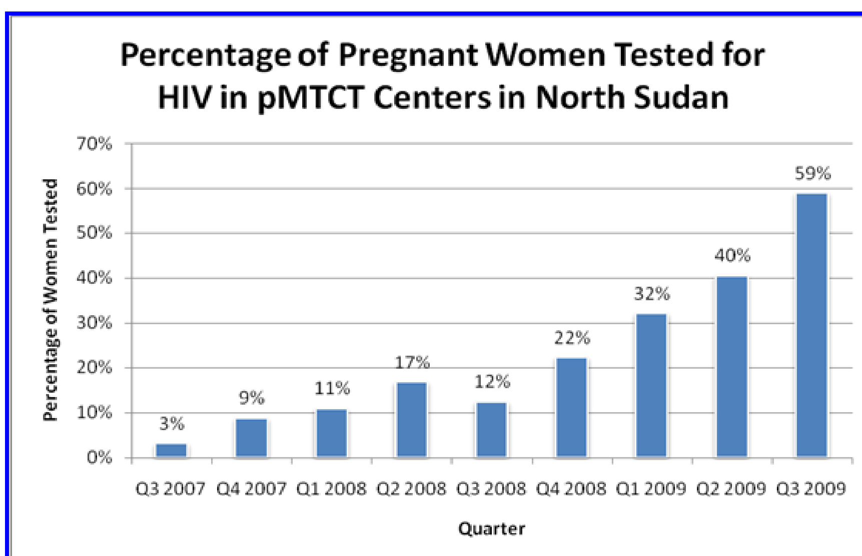
This goal aims to have halt by 2015 and begin to reverse the spread of HIV/AIDS, as well availing access to universal treatment for HIV/AIDS and reversing the incident of malaria and other major diseases such as TB in Sudan

2.6.1. Current Status and Trends

HIV/AIDS

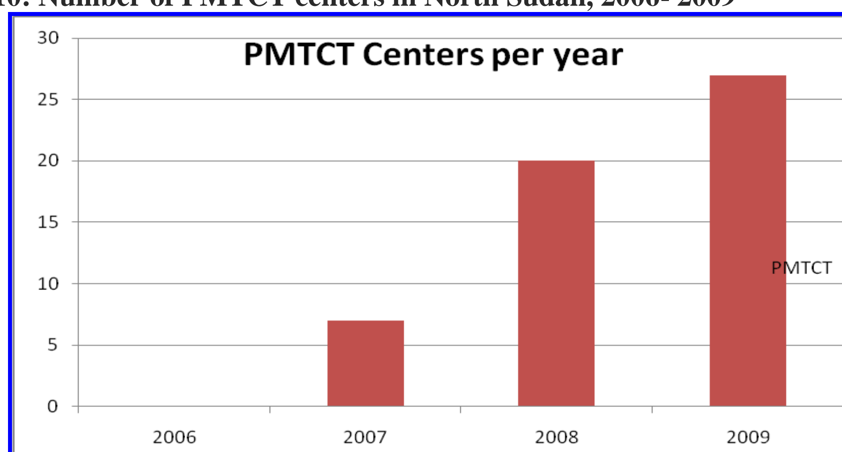
The estimated HIV prevalence among the general population 15-49 years in North Sudan is 0.67% (SNAP, 2009). The average HIV prevalence rate among pregnant women attending antenatal care (ANC) is 0.19% an average of 0.33% in rural sites; 0.14%; urban sites, 0.26% among IDPs pregnant women, and 0.27% for refugees (Sentinel Surveillance Survey 2007) as shown in figures 2.9. and 2.10. According to these data North Sudan has a low HIV prevalence rate with female to male ratio of 0.5%. The HIV epidemic pattern is similar to what is prevailing in the Middle East and North Africa (MENA) region, which is low level or concentrated epidemic mainly affecting most at risk and vulnerable populations.

Figure 2.9: Percentage of Pregnant Women Tested for HIV in Northern Sudan, 2007-2009



Sources (graphs): SNAP M & E reports 2006- 2009

Figure 2.10: Number of PMTCT centers in North Sudan, 2006- 2009



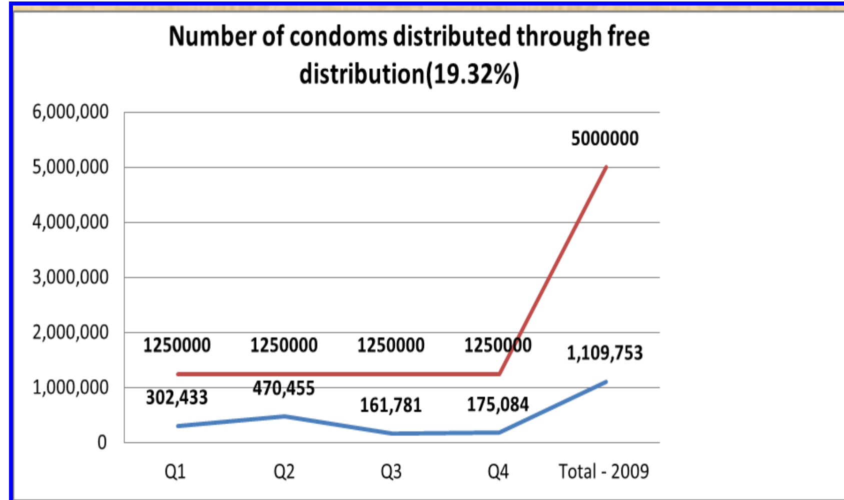
Sources (graphs): SNAP M & E reports 2006- 2009

The estimated prevalence among population aged 15-24 years (combined North and South) is 0.5% for males and 1.24% in females (SNAP, 2009). The prevalence still remains low partly due to almost universal male circumcision in North Sudan, the low risk behavior among the general population and; the cultural norms among communities that contribute to slow the spread of HIV.

In southern Sudan the provisional estimate of HIV prevalence is slightly over 3 percent (3.04% in 2009). The number of people living with HIV is 149,717 (Adult 135,466 and Children 14,251) and about 16,133 new infections per year. Although HIV issues have taken a high priority on the political agenda, resulting in increased access to HIV services in the last few years, the burden of the HIV/AIDS is still immense and requires concerted and sustained effort from all partners.

In northern Sudan behavioral studies show limited condom use among FSWs and MSMs and the potential bridge populations (truck drivers, youth and migrants). These populations view a condom as a contraceptive and not a measure for HIV prevention. Consequently, the majority of the FSWs practice unprotected sex for clients' satisfaction. However there is no data on condom use at last high risk sex. Figure 2.11 shows condom distribution in northern Sudan.

Figure 2.11: Condom Distribution in 2009

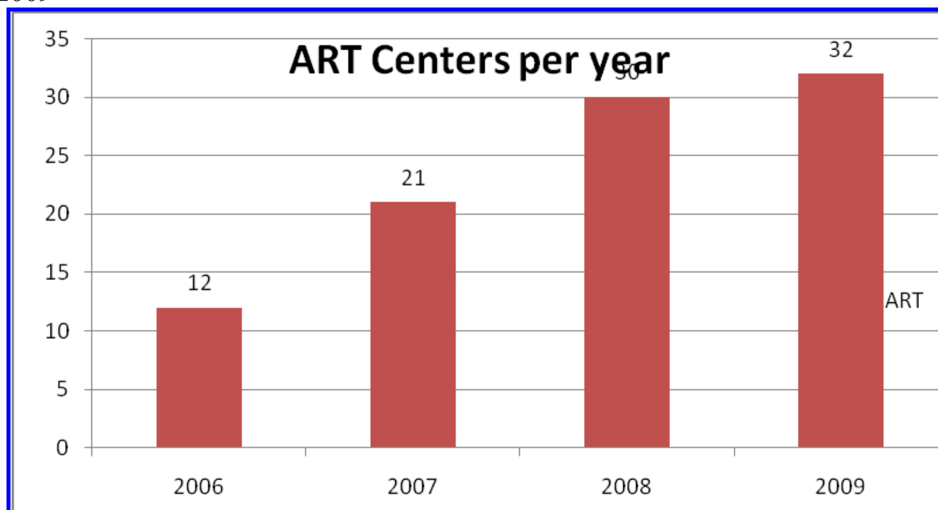


Sources (graphs): SNAP M & E reports 2006- 2009

The Sudan Household Health Survey (SHHS, 2006) revealed that 70.4% of all the respondents had heard about AIDS; 51% identified sexual intercourse as the main mode of transmission; 39.7% identified blood transfusion, and 38.8% mentioned HIV transmission through injection by needles used by others. Only 4% of the respondents knew all the three ways to prevent HIV transmission. There is no adequate information pertaining to knowledge of HIV/AIDS specific to 15-24 years age group or on the ratio of school attendance of orphans aged 10-14 years.

HIV treatment and care services have been introduced in all the 15 States in North Sudan. There are 32 Anti-retroviral therapy (ART) sites in the country (see figure 2.12 below), having at least one site for each. About 1,996 patients (13.12%) are currently on ART out of a total of 15,210 PLHIV in need of the service. Most ART sites are located at tertiary and secondary hospitals.

Figure 2.12: Number of Antiretroviral and Opportunistic Infections treatment Centers 2006-2009

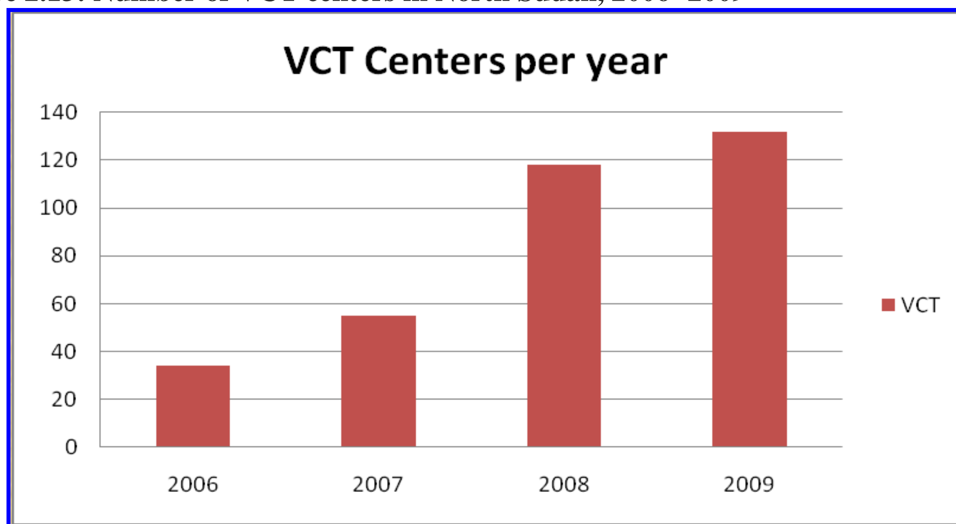


Source: SNAP annual reports 2006- 2009

In Northern Sudan a total of 30,000 people were tested for HIV in 2009 in 137 HIV testing and counseling (HTC) centers in Northern Sudan (see figures2.13. and 2.14 below). Mobile and outreach HTC services targeting MARPs and vulnerable populations are also provided to increase access to services. HTC services using a Provider Initiated approach (PITC) was introduced in TB clinics and plans are underway to introduce it in Sexually Transmitted Infections (STIs) clinics in an effort to expand HTC services to those who may be in need of treatment.

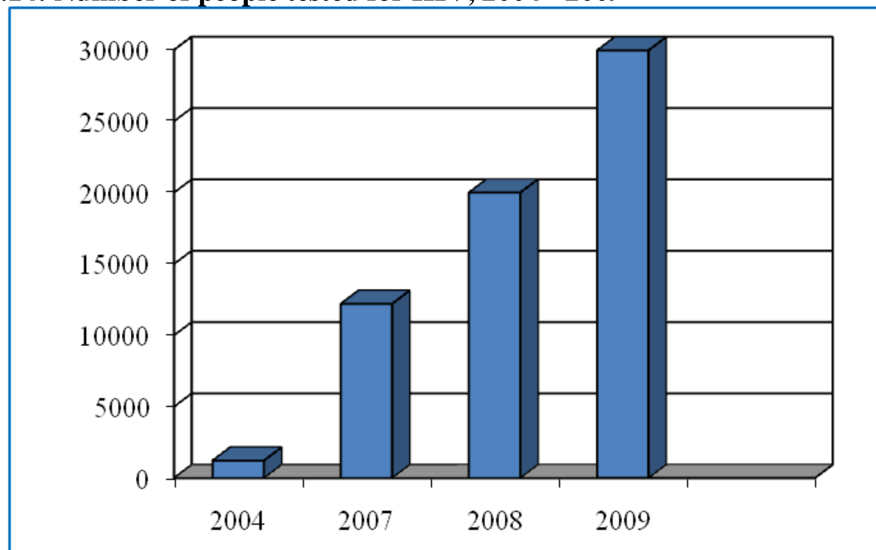
In southern Sudan, the availability and uptake of HIV testing and counseling services continued to increase in 2009. The total number of facilities providing HIV testing and counseling increased by about 11 sites: from 31 in 2008 to 65 in 2009. During that time over 50,052 people were counseled and tested in these facilities. Yet despite the expansion of HTC services, knowledge of HIV status and VCT uptake remains low among the general population in Southern Sudan.

Figure 2.13: Number of VCT centers in North Sudan, 2006- 2009



Source: SNAP annual reports 2006- 2009

Figure 2.14: Number of people tested for HIV, 2004 - 2009



Source: SNAP annual reports 2006- 2009

In southern Sudan tremendous progress has taken place in terms of scaling up of HIV/AIDS service delivery to the population of Southern Sudan since the last Interim MDG report of 2004. HIV/AIDS curriculum has been integrated into school curriculum through the Ministry of Education. School teachers across the ten states have undergone training in HIV/AIDS life skills. About 90,633 in and out of school youths have been exposed to HIV/AIDS education across southern Sudan and more than 130,659 high risk groups have been sensitized on HIV/AIDS. Additionally, about 1,483,358 condoms have been used by the general population; and 2,836 people with advanced HIV infection have access to ARVs against a baseline of zero in 2004 (see Table 2.20 below.).

Table 2.20: Current Status of HIV/AIDS Achievements

Target	Indicators	Baseline: 2006 Sudan Household Health Survey	Progress: March 2010	2015 Target
6.A. To have halted by 2015, and begun to reverse, the spread of HIV/AIDS.	HIV prevalence among population aged 15-24 years	3.1%		
	Condom use		1,483,358	
	Proportion of women aged 15-49 years with comprehensive correct knowledge of HIV/AIDS	13.71%		
	Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years	No data	No data [available from PHC long form]	
6.B. Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.	Proportion of population with advanced HIV infection with access to antiretroviral drugs	0	2,835 people on ARVs	100%
6.C. Have halted by 2015 and begun to reverse the incidence of malaria and other diseases				

Ministry of Health, GoSS, 2010

2.6.2. Interventions to halt the Spread of HIV/AIDS and Combat Malaria and TB

HIV/AIDS

The main focus of the HIV/AIDS control program (SNAP) has been on advocacy, involvement of all sectors in the national response, provision of HTC, PMTCT and ART services, treatment and control services for sexually transmitted infections (STIs), provision of services to MARPs and Monitoring and Evaluation (M & E). The main donors (Global Fund, United Nations Agencies, embassies and the private sector) have provided some resources for supporting the awareness raising programs among different sectors, capacity building for all the stakeholders, PMTCT, VCT, ART, blood safety and Monitoring & Evaluation surveillance and survey, MARPS interventions and for supporting people living with HIV/AIDS (PLHIV), but there are still gaps and unmet needs.

Over the past 6 years the Government of the Sudan has been giving more focus to HIV/AIDS. The UN Theme Group on HIV/AIDS and UNAIDS in Sudan have also embarked on advocacy and sensitization campaigns. In addition, FMOH has held an inter-country meeting for the Ministers of Health of nine neighboring countries to discuss cross-border issues,

including HIV/AIDS and the IGAD Project is now one of the most effective projects in Sudan.

Sudan's national policy on HIV\AIDS was launched in 2004. On HIV/AIDS, MOHE HIV/AIDS workplaces have been developed for uniformed forces. Most of national and states ministries have HIV governance structures in place. High level political commitment is evident through the involvement of Ministers and Undersecretaries.

The FMOH has developed a number of short- and long-term HIV/AIDS strategic plans. The first major effort to develop a strategic plan based on epidemiological and behavioral grounds was in late 2002 when the Government undertook a comprehensive situation and response analysis. This formed the basis for an evidenced-based national strategic plan for 2003-07, followed by the national multi-sectoral strategic plan 2004-2009. Currently FMOH is finalizing preparation of the 2010–14 national strategic plans.

Mainstreaming is clear in the education sector where an HIV curriculum has been developed and teachers are trained (MOGE, MOHE). Mainstreaming is also evident in the Ministry of Guidance where special modules have been developed to train religious leaders. Some of the trained are delivering messages to the people through sermons and the media.

Efforts to reduce stigma accelerated through sustained advocacy, mass media communication and legal reform led by the Ministry of Justice. MOGE, MOHE, MOC, Y & S, Sudan uniformed forces and MOL developed their sectoral plans on HIV and AIDS.

In all 15 northern states PLHIV associations have been established, with assistance from SNAP federal and state level and UNDP (GF resources).

In southern Sudan the situation has greatly improved in terms of policy and the enabling environment for HIV/AIDS since the interim MDG report of 2004. The GOSS has produced policy documents including the Southern Sudan HIV/AIDS Strategic Framework (2008-2012), the HIV/AIDS Policy for Southern Sudan, the HIV/AIDS Monitoring and Evaluation Framework, the Behaviour Change Communication (BCC) Strategy for Southern Sudan and the Condom Strategy for Southern Sudan. A number of key guidelines and protocols for Prevention of Mother-to-Child Transmission (PMTCT), VCT, Sexually Transmitted Infections (STI), Blood Safety, Anti Retro Virals (ARVs), have also been produced and are used to guide the intervention.

In the past, the systemic weak monitoring and evaluation systems found in Southern Sudan were largely attributed to lack of an M&E framework, M&E tools and skilled human resources. However, progress has been registered in some of the above areas recently with the development of M&E framework, standardized reporting tools, regular training of health care workers on M&E; and above all the establishment of the national M&E system and Data Centre at the GOSS level. This M&E system will need to be rolled out to the States and Counties and the lowest health facility units where data collection takes place.

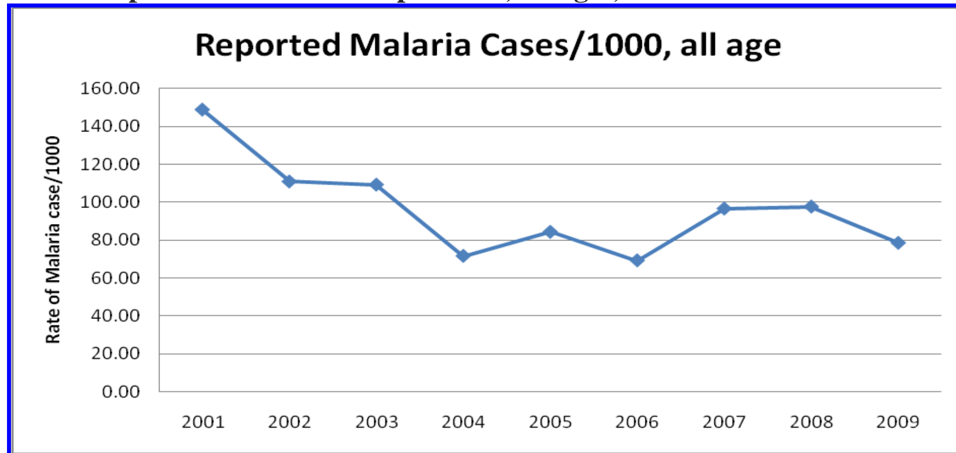
Malaria

Malaria is a leading cause of morbidity and mortality in Sudan. Symptomatic malaria accounts for 17.5 of out-patients clinic visits and approximately 11% of hospital admissions (Annual Health Statistical Report 2009). The entire population of Sudan is at risk of malaria, although to different degrees.

In the northern states in 2009, 2.3 million patients had been treated free of charge with ACTs (uncomplicated malaria cases), Reported malaria cases and deaths caused by malaria during

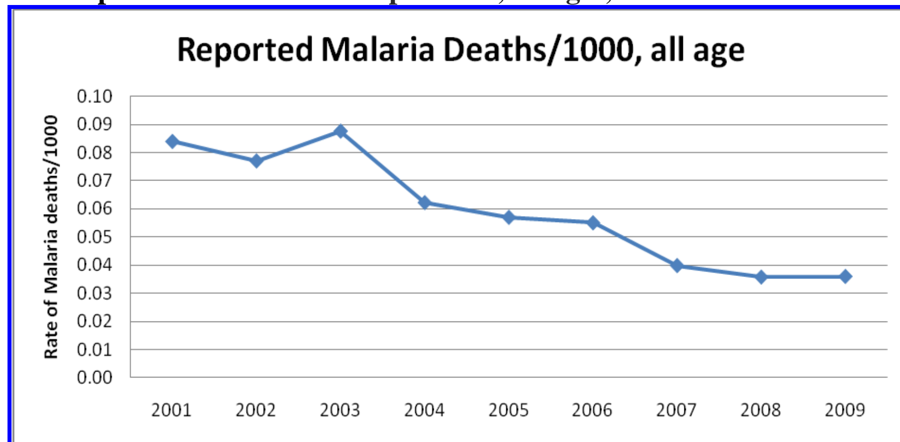
this year were 2,491,376 and 1,142 respectively (see figures 2.15. and 2.16.). There is a remarkable reduction in estimated malaria cases and deaths from 2001 to 2010; 7.5 million cases to 3.1 million cases while for deaths from 35,000 in 2001 to 8,844 in 2009. Plasmodium Falciparum is by far the predominant parasite species 98% of malaria cases are due to P.falciparum (MIS 2005).

Figure 2.15: Reported malaria cases per 1000, all ages, 2001- 2009



Source: National Malaria Control Programme (NMCP) Annual Report 2009

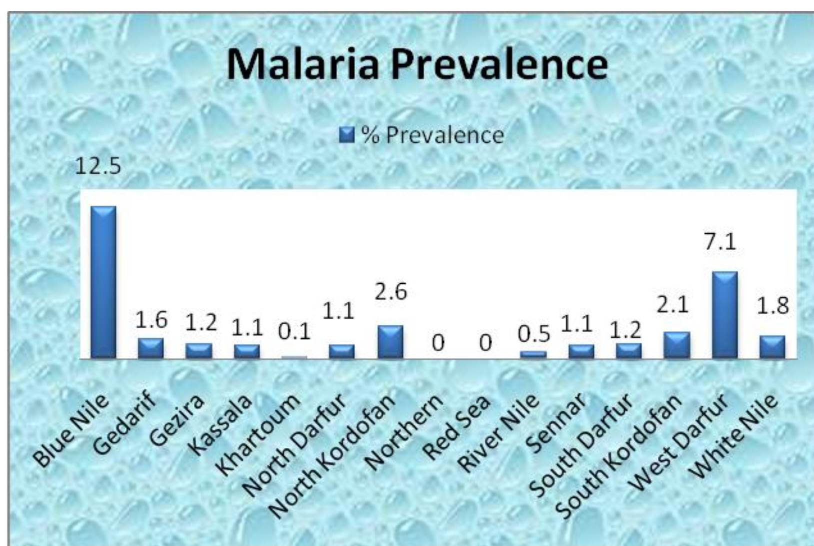
Figure 2.16: Reported malaria Deaths per 1000, all ages, 2001- 2009



Source: National Malaria Control Programme (NMCP) Annual Report 2009

Malaria infection was marginally higher among male, compared to female members of the household and almost three times higher in rural areas compared to urban. All states except Blue Nile (12.5%) and West Darfur (7.1%) reported prevalence of less than 3% (see figure 2.17). There were only marginal differences in infection prevalence by age. However, infection prevalence among individuals in the lowest income quintile was almost 7 times higher than those in the high quintile.

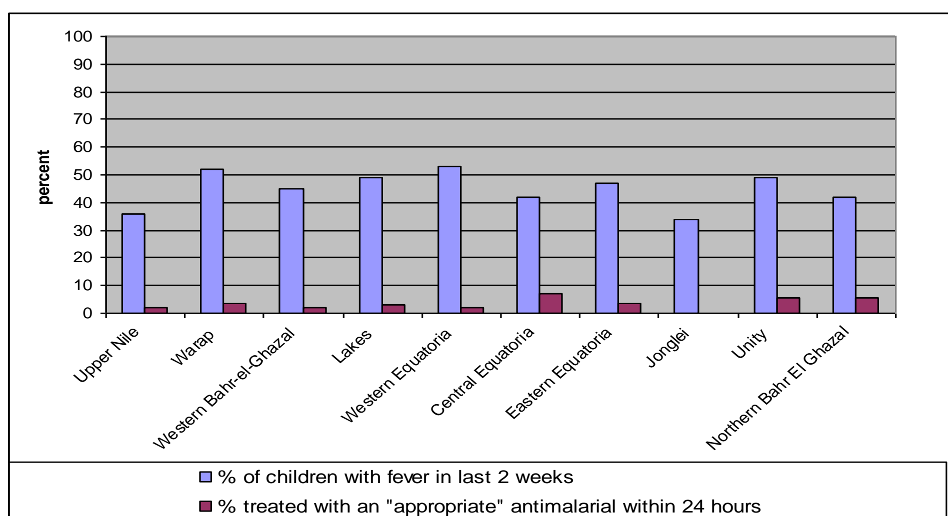
Figure 2.17: Malaria Prevalence in Northern Sudan by States



Source: Malaria Indicator Survey (MIS) 2009

Southern Sudan climate is suitable for malaria transmission throughout the year, the endemicity varies between meso-, hyper-, and holoendemic. The major vectors are Anopheles gambiae, arabiensis and funestus subspecies. Plasmodium falciparum is the dominant parasite species. The duration of transmission varies across the country, longer in the southern parts (7 – 8 months) than in northern parts (5 – 6 months). Increased resistance of Plasmodium falciparum to Chloroquine (CQ) and Sulfadoxine Pyrimethamine (SP) has led to treatment policy update and Artemisinin based Combination Therapy (ACTs) has been introduced. However, access to ACTs remains constrained partly due to limited geographical access to formal health facilities (see Figure 2.18 below).

Figure 2.18: Access to prompt, effective treatment for malaria by state– SHHS, 2006



Source: SHHS, 2006

To increase access, especially for children under 5 years in rural areas, Southern Sudan has adopted the Home Management of Malaria (HMM) strategy as part of an integrated child survival program. Promotion and use of Long Lasting Insecticide treated mosquito nets (LLINs) is the main vector control intervention at the moment. Southern Sudan aims to achieve universal coverage through providing one LLIN for every 2 people in a household. Over the last 3 years, more than 5 million LLINs have been procured by UNICEF and distributed with support from MDTF, Global Fund, USAID, UNITAID and other partners.

In southern Sudan plans are under way to establish an Integrated Vector Management (IVM) strategy that will include Indoor Residual Spraying (IRS) and environmental management where applicable. The strategy for control of Malaria in pregnancy is 3 –pronged: use of LLINs, Intermittent Presumptive Treatment (IPT) and correct malaria case management. The coverage of IPT is still low.

In 2001 a national 10 years strategic plan was developed; and was updated in 2007 for the period 2007 – 2012. In 2004, the national drug policy was updated to use ACTs where more than 90% of facilities were providing it free of charge. In the period 2007 - 2009, NMCP has distributed about 6 million bed nets.

Like all public health programs, the institutions and systems for delivery of malaria control and prevention interventions were interrupted by several years of conflict. The signing of the Comprehensive Peace Agreement (CPA) in 2005 provided an opportunity for re-establishment of a National Malaria Control Program (NMC); and since then, sound malaria control policies and strategies have been put in place, active partnerships have been established and the platform for scaling up malaria interventions laid. . More than 5 million Long Lasting Insecticide Treated Nets (LLINs) have been distributed in the last 3 years. Treatment with Artmisinin-based Combination Therapies (ACTs) which is recommended by WHO to be the best treatment for uncomplicated malaria is provided at all levels of the health care system including the community. While key challenges remain, there are increased opportunities and commitment by Government to achieve universal coverage of cost-effective malaria interventions.

A National Malaria Control Program (NMCP) has been set up and was recently upgraded to a department headed by a Director. Most of the key staff have been recruited and the department is effectively playing its policy formulation and coordination role. The Malaria Technical Working Group brings together all major partners to agree on the malaria strategic direction and priorities. At state level, most state Ministries of Health have full-time state malaria coordinators. At county and health facility levels, delivery of malaria control and prevention services is fully integrated into the primary health care networks. At community level, volunteers are selected by community members to serve as Community Drug Distributors (CDDs) under the HMM strategy.

In northern Sudan, the percentage of households with at least one Insecticide Treated Net (ITNs) has increased from 21% in 2005 to more than 41% in 2009. A pilot project for Home Malaria Management was implemented and reached more than 90% coverage in the target 163 localities in 2009. From 2005 up to date the Government allocated more than 40 million USD for malaria control.

Southern Sudan drafted a Malaria Control Strategic plan that serves as the platform for coordinated malaria control and prevention interventions. Corresponding strategies and operational guidelines have also been developed for diagnosis, treatment, promotion of LLINs and Behaviour Change Communication.

Southern Sudan has mounted a comprehensive response to control and prevention of malaria. The key principles include:

- Strong RBM partnership involving all sectors and stakeholders
- Enhance community involvement
- Target biologically vulnerable groups (children under five and pregnant women)
- Synergy between malaria control and health systems development
- Operational research

The Southern Sudan malaria control and prevention technical strategies are fashioned around the Global Roll Back Malaria strategy. National targets are well aligned to both international and regional targets (e.g. Abuja targets). Current targets are mainly informed by the 2005 World Health Assembly target of ensuring that at least 80% of those at risk of, or suffering from malaria, benefit from major preventive and curative interventions, by 2010.

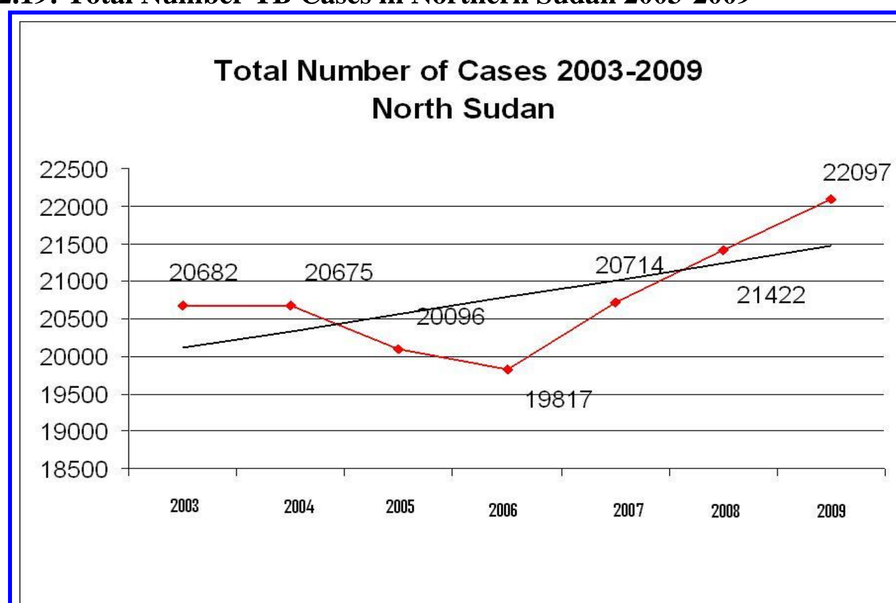
As indicated, Southern Sudan is in the phase of scaling up malaria control and prevention interventions. Innovative approaches such as mass campaigns for distribution of LLINs and provision of ACTs through HMM are being utilized so as to rapidly increase access to cost effective interventions. More than 5 million LLINs have been distributed across all ten states since 2008.

The Sudan Household and Health Survey (SHHS) of 2006 provided the most robust baseline indicators for key malaria interventions. Progress on the indicators will be measured under the 2010 SHHS. In addition a Malaria Indicator Survey (MIS) has also been conducted to measure the coverage of core interventions, prevalence of malaria parasites, malaria parasite species distribution and magnitude of anemia in children under 5 years. The Malaria Indicator Survey will be carried every two years to measure malaria control program performance as per strategic plan.

Tuberculosis

Sudan carries 15% of the TB burden in the Eastern Mediterranean Region (EMR). In 2009, the estimated incidence of new smear-positive TB cases was 60 per 100 thousand populations, translating to almost 18,536 new smear-positive cases. The actual detected were 8572 cases. This means a case detection rate of 46.2%. Although there is an improvement from 2004 detection rate (40%) but is still far below the global target of 70%. This low case detection is particularly a problem in war-affected and post-conflict areas. Prevalence of all forms of TB is 120 per 100,000 population or 37073 cases and the actual detected were 22,097 (59.6%) cases as shown in Figure 2.19 below.

Figure 2.19: Total Number TB Cases in Northern Sudan 2003-2009

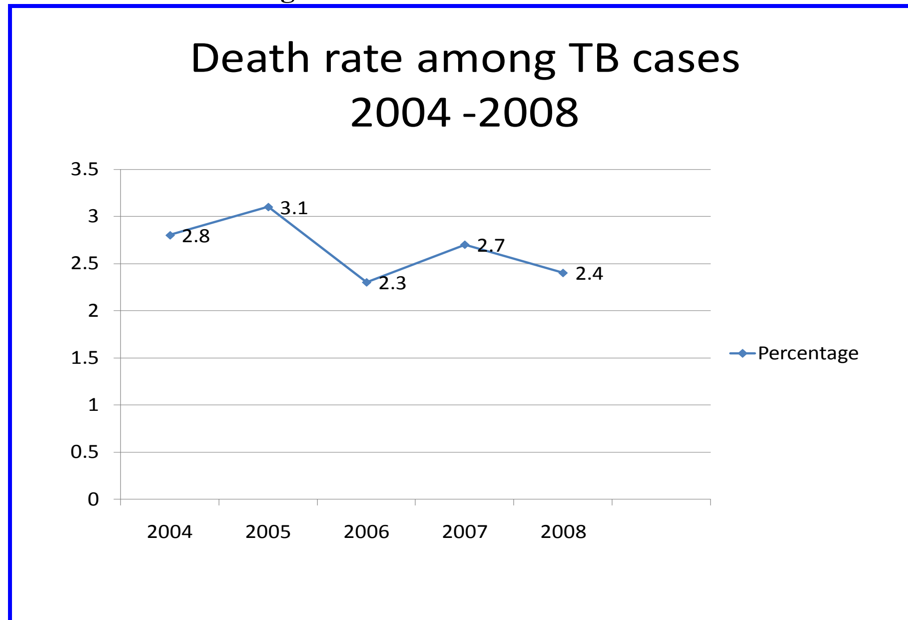


Source: Sudan National TB control program –annual progress report 2009

In northern Sudan treatment success rate of 81.8 % was achieved among the detected cases. However, the defaulter rate remains high with an average default rate of 10 %, particularly in areas that are affected by the civil war and conflicts in Darfur and the Eastern parts of the

country. In these areas, provision of all government health services, including TB services have been seriously affected. The concentration of health care provider activities in these zones has been drawn towards treating acute illnesses, with a resultant reduction in TB control activities. Death rate among TB cases declined from 4.7% in 1999 to 2.4 % at 2008 as figure 2.20 shows.

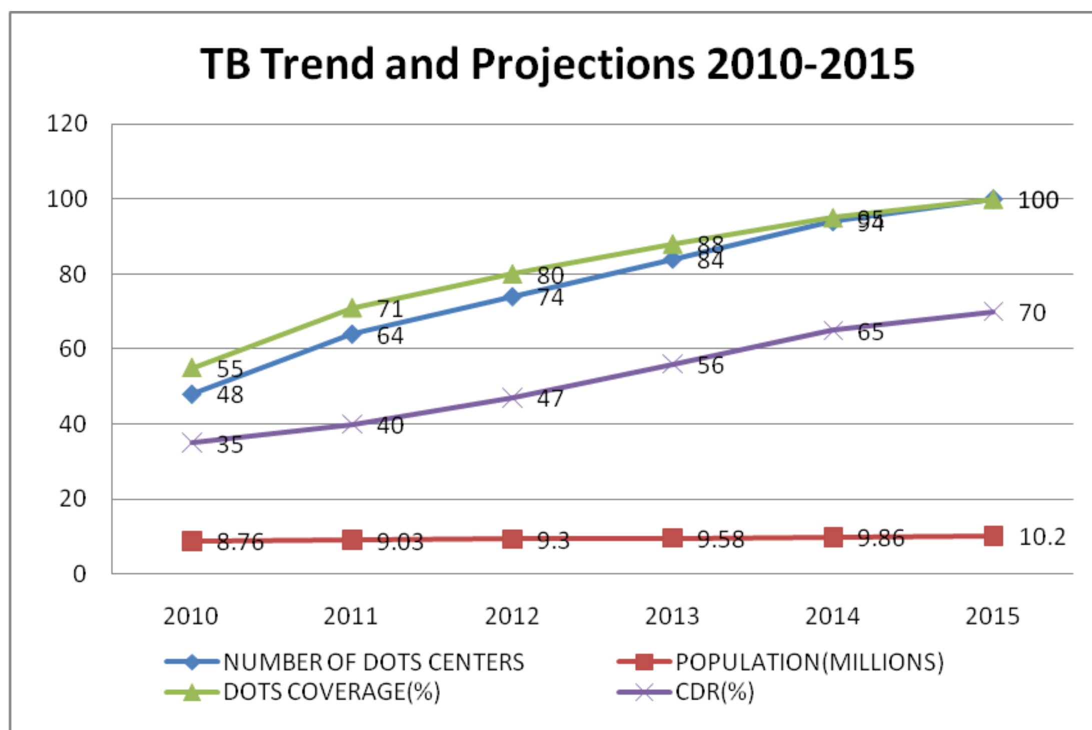
Figure 2.20: Death rate among TB cases declined 2004-2008



Source: Sudan National TB control program –annual progress report 2009

In Southern Sudan tuberculosis is one of the major causes of mortality and morbidity. Although its exact burden is not known, the incidence is estimated to be 79 sputum smear positive cases per 100,000 population and 140 for all forms of tuberculosis. With the population of Southern Sudan estimated to be 8.26 Million (census results 2009), around 12,268 TB cases occur annually in Southern Sudan of which 6,923 are of infectious forms. Cohorts of 2002 to 2007 indicated the number of new sputum smear positive TB cases increased from 752 to 2513 for sputum smear positive TB cases and 1260 to 4978 for TB cases of all forms respectively. Among the new sputum smear positive TB cases registered in 2007, the productive age group of 15 to 45 years was most affected and males were predominantly higher than females. This gender disparity requires establishing an evidence base to explain the current trends. Figure 2.21 shows TB trends and projection for southern Sudan.

Figure 2.21: TB trends and projections up to 2015



SHHS, 2006

As said in the foregoing, the exact situation of TB is not known in Southern Sudan, and the figures presented in the following Table 7.2 are WHO estimates.

Table 2.21: New sputum smear positive TB cases and all forms of TB (relapses)

Indicators	New sputum smear positive TB cases	All forms of TB (relapses)
Incidence and death rates associated with tuberculosis	79 Per 100,000	140 Per 100,000
Proportion of tuberculosis cases detected and cured under DOTS	158 Per 100,000	280 per 100,000
Mortality		56 Per 100,000

Source: WHO

Under the DOTS Programme, the number of new sputum smear positive TB cases detected and cured was 1,842 and 1250 respectively in 2008.

In an effort to follow up on MDR-TB, the SNTP established a national TB Reference Laboratory in 2003, and by the end of 2010 the laboratory will be able to perform DST. SNTP is planning to conduct a nation-wide MDR-TB survey in 2010.

The current strategic plan addresses the expansion and enhancement of quality DOTS, TB/HIV, prevention and control of MDR-TB, childhood TB, and empowerment of people with TB and communities, as priority areas for the period 2011-2015.

In southern Sudan, the GOSS TB program was formulated in November 2006 for coordination, monitoring and supervision of implementation of TB activities in southern Sudan in close collaboration with implementing partners and donors. It is structured with a central MOH-GOSS unit headed by a Program Manager, State TB office headed by state TB coordinator, county TB office headed by County TB coordinator and health facility headed by facility in-charge.

Under strong leadership of the Ministry of Health, clear TB policy and guidelines were developed in January 2007. In addition, the following policy and strategy documents have also been developed and endorsed by the Government:

- TB strategic plan 2009-2013
- TB specific human resource plan 2010-2014
- Laboratory quality assurance guidelines and
- Laboratory standard operating procedures

Tuberculosis has been recognized by the Government of southern Sudan as one of the priority infectious diseases of public health concern and is fully incorporated into the BPHS in southern Sudan that focuses on primary health care delivery at all levels. The TB programme under the BPHS focuses on intensifying community awareness through advocacy, communication and social mobilization as the best approach to detect infectious TB cases, treat them on a complete course of anti-TB treatment and consequently cut down on transmission. Consistent with this approach, an ACSM strategy has been developed and rolled out to all parts of southern Sudan. The programme has an M&E framework with clear indicators used for monitoring programme performance. The key monitoring indicators are DOTS coverage, case detection rate and treatment success rate. Over the years, the programme has made significant progress in terms of these indicators. DOTS coverage increased from 36% in 2007 to 49% in 2009 (aim for 100%), case detection rate from 19% to 34% (WHO recommended target 70%) and treatment success rate has been maintained well above 80% (WHO recommends at least 85%). As the TB programme has not yet fully covered the whole of southern Sudan, it is difficult to measure incidence trends for the whole region.

2.6.3. Major Challenges

- Need for more advocacy for reduction of stigma and discrimination associated with HIV/AIDS
- Need to improved quality services for HIV/AIDS.
- High population mobility due to rural- urban migration, displacement and armed conflict increase the risk of HIV/AIDS spread.
- The need for effective implementation of the sectors capacity development plan based on instructional assessment report by SNAP in partnership with UN Theme Group on HIV/AIDS which has provided technical assistance to serve key sectors to enhance their strategic framework for the next five years.
- More engagement of all potential partners, especially the private sector.
- Finding ways to involve civil society in a more coherent and coordinated manner within the national strategic framework of combating HIV/AIDS.
- The Government intends to decentralize the national response to HIV/AIDS. This will require enhancing human resource capacity, especially at the periphery.
- Increase the coverage and provision of quality services be the top priority of the SNAP Plan to attain universal access and reserve the trend to meet MDG 6 in few years.
- Major challenges in controlling and treatment of malaria include limited coverage of formal health services, human resource constraints, weak supportive systems such as HMIS, laboratories, referral hospitals and poor supply chain management including inadequate regulatory mechanisms.
- MDR: it is difficult to maintain continuous drug supply beside the limited number of staff trained to manage the severe adverse effects of the drugs.
- PPM: Although programmatic efforts were devoted to train key experts on PPM, there is still lack of coordination between the public and the growing private sector in the area of case detection and treatment.

- Sustainability of the political commitment Although the Government ensured constant priority of the TB agenda, supported NTP with an adequate legislation body and financed key program activities, more needs to be done. A separate budget for TB within MOH funding will further empower NTP and enhance sustainability of interventions.
- Limited access to health services mainly, in rural areas, due to distance, cost of transportation and other indirect costs related to loss of time contributed to delays in early detection and in adequate treatment of TB.
- The ongoing conflicts have caused displacement of populations thus making access to TB services difficult. For these reasons, the proposed strategy to expand DOTS in the war-affected and post conflict areas can only be achieved through establishing effective partnerships with national and international NGOs currently delivering health services to IDPs.
- There is a need to improve the laboratory network and services, and upgrading of the existing monitoring and supervisory system at different levels to meet the planned expansion.
- Staff training at different levels and development of TB service standards be aimed at improving the quality of services.
- Enhanced ACSM and building of community partnerships for DOTS implementation also be emphasised to improve case detection and reduce defaulter rates.
- Further and fullest expansion of treatment services with ACTs to peripheral zones.
- Expansion of malaria diagnostic services with quality assurance (microscopy and RDTs)
- Expansion of coverage with LLINs to achieve universal coverage
- Upgrading programme capacity at state and district levels.
- Provision of the quality services be the top priority of the program in order to reach universal coverage, either by preventive or curative intervention through increasing the coverage of diagnostic, ACTs and LLINs

2.6.4. Assessment on Progress to Date and Prospects

Although progress has been made in provision and delivery of services related to HIV/AIDS (PMTCT, Condom distribution ART and VCT centers); but still more efforts is needed given the fact that only 4% of the respondents knew all the three ways to prevent HIV transmission. The government has set plans in both northern and southern Sudan for combating HIV/AIDS. Malaria is one of the areas which Sudan has made tangible progress. Evidences in Northern Sudan shows that all states except Blue Nile (12.5%) and West Darfur (7.1%) reported prevalence of less than 3%. In southern Sudan where the climate is suitable for malaria transmission throughout the year; the malaria prevalence rate reached above 50%. However; GOSS plans are under way to establish an Integrated Vector Management (IVM) strategy that will include indoor Residual Spraying (IRS) and environmental management where applicable. Regarding TB, although Sudan shows improvement from 2004 detection rate (40%) but it still is far below the global target of 70%. This low case detection is particularly a problem in war-affected and post-conflict areas. In Southern Sudan tuberculosis is one of the major causes of mortality and morbidity. Sudan strategic plans and Ministry of Health plans set TB as priority areas for the period 2011-2015. While also GOSS TB program was formulated in November 2006 for coordination, monitoring and supervision of implementation of TB activities in southern Sudan.

2.7. Ensure Environmental Sustainability (Goal 7)

This goal represents the global commitment to integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources; reduce biodiversity loss, the proportion of people without sustainable access to safe drinking water and basic sanitation; and achieve significant improvement in the lives of at least 100 million slum dwellers.

2.7.1. Current status and trends

Environmental Loss

Sudan is endowed with huge and diversified natural resources, fertile land, natural forests, fresh water, biodiversity, wild and domestic animal stock, marine ecosystems, mineral and soil resources. The country is has faced and is being faced with numerous environmental problems including: desertification and land degradation, water pollution, deforestation, soil erosion and deterioration in biodiversity.

Deterioration in biodiversity and pressures on habitats are growing with more areas opened to development and investors. The impact of petroleum prospecting, drilling and transport on habitats, especially that of produced water on migratory birds is very disturbing.

Northern Sudan has six actual or proposed marine protected sites with a total area of 1,900 square kilometres and twenty six actual or proposed terrestrial and freshwater with a total area of 157,000 square kilometers. The protected areas cover approximately 10% of Northern Sudan, including terrestrial and marine protected areas.

In Southern Sudan the areas under forest reserves VARIES among the 10 states as reflected in Table 2.22 below:

Table 2.22: Areas under forest reserves, 2009

State	Reserved Forest		Under Reservation		Total	
	Number	Area (Ha.)	Number	Area (Ha.)	Number	Area (Ha.)
Upper Nile	26	204,488	13	361,093	39	565,580
Unity	0	0	1	2,179	1	2,179
Jonglei	1	204	4	9,089	5	9,293
West Bahr-el-Ghazal	12	304,730	0	0	12	304,730
North Bahr-el-Ghazal	0	0	11	23,396	11	23,396
Lakes	3	12,240	0	0	3	12,240
Warrap	1	641	0	0	1	641
West Equatoria	13	61,958	5	12,364	18	74,322
Central Equatoria	12	58,353	6	21,153	18	79,506
East Equatoria	4	120,165	9	13,633	13	133,685
Total		762,165	49	442,907	121	1,205,685

Source: Statistical Year Book for Southern Sudan 2009, SSCCSE

Total emissions of CO_2 was equivalent to 20.1Gig gram for the base year 1995 (HCENR, 2003) compared to the total emissions of CO_2 for the year 2000 which was equivalent to 14.2 Gig (HCENR, 2010).

According to (NOU & NC 2009), Sudan has achieved total compliance to Montreal protocol objectives (total phase out) of Ozone depleting potential. Zero consumption of Coloro -Floro Carbon (CFCs) was achieved by 2010 compared to actual consumption of 2004 which was

203. Actual consumption of carbon nitro-chloride is zero in 2010 compared to 1.1 in 2004. Hallons total phase-out was achieved since 1997.

According to the National Desertification Control Programmer's Monitoring Unit, more than half the area of the country (50.5% or 1,260,000 Km2 out of 2,492,000) is affected by desertification as a result of inappropriate land use method, over-grazing and deforestation. The forest and woodlands areas in Sudan currently amount to 74 million hectares which is 29.6 percent of its total area. However, the total forest area decreased from 76.4 million hectares in 1990 to 69.95 million hectares by the end of 2009. Soil erosion is a major problem resulting from repeated use of fire deforestation and drought.

2.7.2. Interventions

Reverse environmental loss

The country's environmental legislation is fairly well developed. There are several laws, acts, regulations, policies and standards in various environmental fields dealing with environmental protection, conservation and preservation.

The current environmental legislations are sector-based and a majority of the laws lack a mechanism for their implementation. The rights and obligations of people to live in a decent and healthy environment have been stated clearly in the Environmental Protection Act 2001 which provides a legal framework for policies and regulations for federal government. The 2005 Constitution sets new concerns that require inclusion in environmental law. The Bio-safety framework has been approved

As a member of the international community, the Government of Sudan has ratified a large number of environmental conventions such as:

- UN Convention on Biological Diversity and the Cartagena Protocol on Bio-safety
- UN Convention to Combat Desertification
- Framework Convention on Climate Change
- Kyoto Protocol to Framework Convention on Climate Change
- Protocol on the Protection of World Culture and Natural Heritage,
- The Convention on Wetland.

Sudan is party to other conventions relevant to wildlife conservation, such as the African Convention on the Conservation of National Resources, the Regional Convention for the Conservation of the Red Sea and the Gulf of Aden, the Protocol concerning Regional Cooperation in Combating Pollution by Oil and other Harmful Substances in the Red Sea.

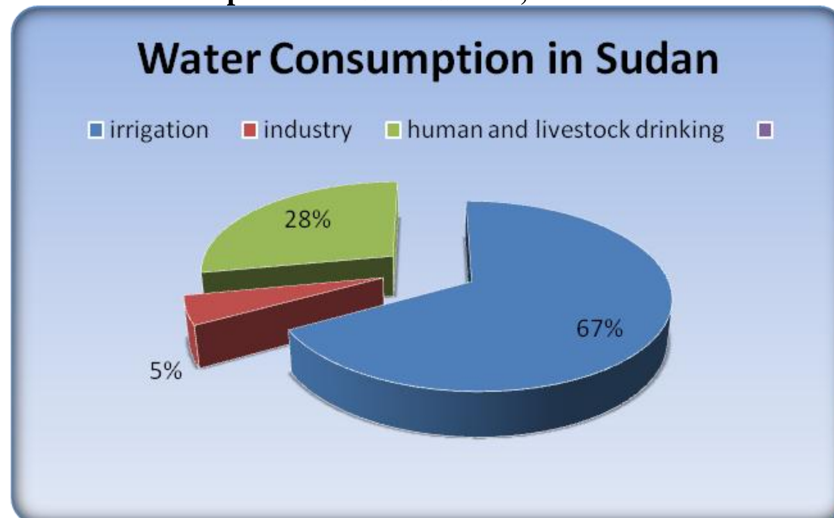
Sudan also adopted a number of environmental strategies and plans, such as national management plan for environment, national adaptation plan of action. In addition to that, a special environment court, number of environment units and state councils for environment have been established.

Even though Sudan is rich in its diversity of ecosystems, habitats, species and genetic resources, no coordinated, comprehensive surveys or assessments have been carried out. Most surveys and studies on biodiversity components have been fragmented and were tailored for limited academic or research and scientific purposes. Data collected or information gathered has most of the time been site-specific, local and at the particular institutional levels. The NBSAP project has taken the initiative of updating the information on biodiversity. The recent biodiversity countrywide assessment undertaken by NBSAP project was not very comprehensive but it constituted a benchmark and base information for the different ecosystems, habitats and species.

The convention on biodiversity enhanced wildlife conservation by promoting governmental policies and the inclusion of wildlife in the implementation of activities. In-situ conservation was improved by the establishment of new-protected areas. A number of sites have been listed as wetlands under Ramsar Convention. The government's declarations and the inclusion of biodiversity in the strategies and programs of the Agricultural Revival Program is considered to be a step in the right direction.

With a total population of about 40 million in 2008, the per capita share from the available water resources has been estimated at 790 m^3/y. This categorizes Sudan among the countries that fall below the water poverty line. The consumed water is used for irrigation 67%, industry 5%, human and livestock drinking and domestic use 28% (see Figure 2.22 below.). The evapo-transpiration losses account for 17%.

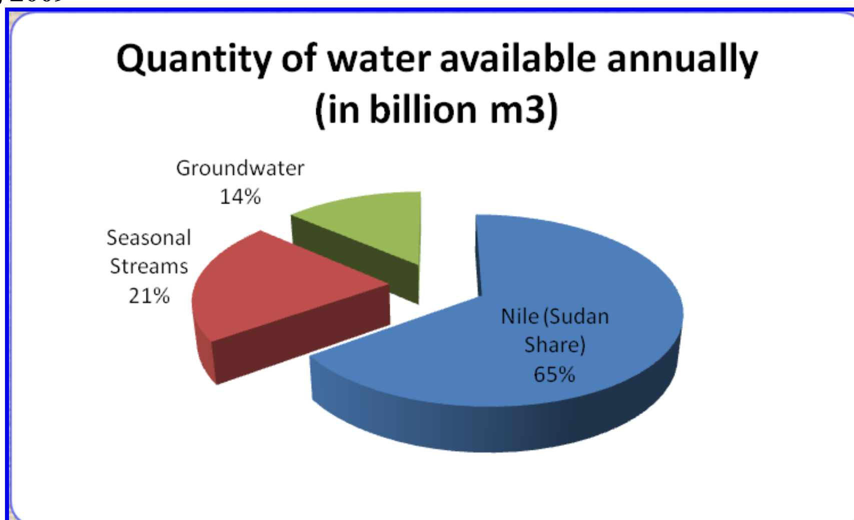
Figure 2.22: Water Consumption and Use in Sudan, 2009



Source: Public Water Corporation, 2009

Sudan is an arid and semi arid country with an average annual rainfall of 350 mm/y. The available water resources in the country comprise 31.5 billion from different sources including River Nile, seasonal streams and groundwater, as shown in Figure 2.23 below.

Figure 2.23: Percentage Distribution by Source of Quantity of water available annually in Sudan, 2009



Source: Groundwater and Wadies Directorate, MIWR, 2009

Access to safe drinking water and sanitation

Safe drinking water is a basic necessity for good health. Unsafe water can be a significant cause of diseases such as trachoma, cholera, typhoid and schistosomiasis. Drinking water can also contain hazardous physical, chemical and radiological contaminants with harmful effects on human health. In addition to its association with disease, access to drinking water may be particularly important to women and children, especially in rural areas, who bear the responsibility for fetching water, often for long distances.

Using 1990 as a baseline year, it was calculated that in order to achieve the MDGs by 2015 for water and sanitation, North Sudan has to attain 82% access to improved drinking water sources and 67% access to adequate sanitation as shown in the table 2.32 below:

Table 2.22: Access to safe drinking water base year 1990 and MDGs timeline 2015

Year	Reference	Access to safe drinking water (%)			Access to adequate sanitation (%)		
		Total	Urban	Rural	Total	Urban	Rural
1990	Baseline year	64.0	85.0	57.0	33.0	53.0	26.0
2015	MDGs- end year	82.0	93.0	79.0	67.0	77.0	63.0

Source: Public Water Corporation, UNICEF and 2006 SHHS

In 2006, Sudan Household Health Survey indicated that access to safe drinking water has decreased to 58.7% and access to improved sanitation increased to 39.9% in comparison with the baseline year access figures. The decrease in the access to safe drinking water was attributed to the frequent emergencies, inadequate sector funding and management challenges.

Since 2006, sizable successful efforts were exerted by the government, UN agencies and NGOs to increase the access to safe drinking water. By the end of 2009, access to safe drinking water has increased to 62% and access to improved sanitation has increased to 42% (Public Water Corporation, 7 year Strategic plan for north Sudan 2010-2016) as Table 2.23 below shows.

Table 2.23: Access to safe drinking water base year 1990-2009

Year	Reference	Access to safe drinking water (%)			Access to adequate sanitation (%)		
		Total	Urban	Rural	Total	Urban	Rural
1990	Baseline year	64.0	85.0	57.0	33.0	53.0	26.0
2006	SHHS	58.7	69.4	51.6	39.9	63.2	23.6
2009	PWC 2009	62.0	59.4	64.4	42.0	65.0	25.0

Source: Public Water Corporation, UNICEF and 2006 SHHS

In Southern Sudan, less than half of the population (about 48.30%) had access to improved sources of drinking water, and unprotected wells were still the most important sources of water in 2006 (SHHS1, 2006). By 2008, this percentage had only marginally increased to only 49.50% (5thSPHC, 2008).

In southern Sudan, the population using improved sources of drinking water is defined as the percentage of the population using piped water, public taps/standpipes, tube well/borehole, protected well, protected spring and rainwater collection. Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrheal diseases and polio. Improved sanitation facilities for excreta disposal include flush or pour flush to a piped sewer system, septic tank, or latrine, pit latrine with slab, and composting toilet. In Southern Sudan, on average, only 6% of the households use sanitary means of excreta disposal, with most of the remainder using either a pit latrine without a slab, or even

more likely, the bush (SHHS 1, 2006). In 2006, households in the State of Central Equatoria (14%) were more likely to use sanitary means of excreta disposal, while the figure was lowest in Warrap (1.5%), where most households had no toilet facilities whatsoever. In 2008, the situation had improved tremendously, with 23.9% of the households reported to use sanitary means of excreta disposal, on average (5th SPHC, 2008).

Improve Access to Safe Drinking Water

Considerable coordinated efforts are currently in place by the government and Water Supply, Sanitation and Hygiene (WASH) sector partners including UNICEF, UN agencies and NGOs at federal and state levels to narrow the gap between the current situation water and sanitation and MDGs targets as follows:

- Sector coordination forums are currently in place at federal and key states levels.
- Final draft for WASH policy has been prepared and expected to be approved by the end of 2010.
- WASH 15 states and federal 2010-2016 Strategic Plans are currently under preparation and expected to be finalized by the end of 2010.
- National 14 WASH service design and management manuals and guidelines were prepared and approved.
- Serious state, national and international fund raising and advocacy efforts are in place to mobilise the required funding for the sector.
- A draft paper on River Nile environment safeguarding has now been prepared by Nile Trans-boundary Environmental Project (NTEP) for monitoring the Nile water quality.
- Community Action for Total Sanitation (CATS) approach for community-based sanitation promotion is currently under implementation to scale-up sanitation interventions.
- The signature of Khartoum Declaration by 6 federal ministers to reflect their commitment to promote community-based sanitation and having clear sanitation institutional setup within the governmental structure.
- Higher priority is currently given to sector partners' capacity building and community empowerment (training and equipment) at federal, state, locality and community level.
- Recovery and development strategies (mainly cost-sharing and community participation) are currently in place to phase out emergency type interventions.
- WASH information system is being strengthened to improve reporting, planning and informed decision-making.
- In 2007, the Government of Southern Sudan (GOSS) designed a water policy to guide the implementation of water, sanitation and hygiene (WASH) programmes and provision of services. It is a comprehensive policy that aims to improve water quality, provide education to the rural communities, selection of appropriate technologies and the involvement of the communities and all other stakeholders.
- While the appropriate policy is in place, little has happened in terms of reducing the proportion of people without sustainable access to safe drinking water.

2.7.3. Major Challenges

- Inadequate sector funding for water and sanitation sector
- Inadequate implementation and management capacity of water quality and quantity
- Lack of sector policies, comprehensive sector plans and structure.
- Prolonged emergencies in different parts of the country which escalates the situation

- Weak sector coordination among the concern partners
- Inadequate community awareness
- Serious efforts and large resources are needed to upgrade the conservation status of the protected areas.
- The need to create enabling environment through strengthening national institutions and integration of biodiversity policies in the national decision-making process, marketing incentives and strengthened synergies and collaboration.
- The key challenges in the area of safe water provision include the lack of resources to facilitate investment in conservation, water quality and monitoring. Available information indicates that problems of sustainability are often due to inappropriate choice of technology type, location or design. There is a general bias towards borehole technologies but these frequently break down because users do not have the technical and financial capacity to maintain them without financial assistance. Besides, communities live in remote and inaccessible areas that make it difficult to maintain supply chains for spare parts.
- In the area of sanitation, hygiene education/public awareness is the overarching issue. Effective integration of sanitation and hygiene education with water supply interventions will depend on co-ordination and collaboration mechanisms between water sector agencies and other agencies such as education and health.

2.7.4. Assessment of Progress to Date and Prospects

Based on the current situation, the access gap is still big to reach the water and sanitation MDG targets. In order to realize the water and sanitation MDGs targets, access to safe drinking water and basic sanitation need to be increased by 20% and 25% respectively in the coming 5 years (2010-2015) for northern Sudan (see Table 2.24 below).

Table 2.24: Actual and Projected Access to safe drinking water and basic sanitation, northern Sudan, (1990-2015)

Year	Reference	Access to s afe drinking water (%)			Access to adequate sanitation (%)		
		Total	Urban	Rural	Total	Urban	Rural
1990	Baseline year	64.0	85.0	57.0	33.0	53.0	**26.0**
2006	SHHS	58.7	69.4	51.6	39.9	63.2	**23.6**
2009	PWC/UNICEF	65.0	75.0	56.0	42.0	65.0	**25.0**
2015	MDG year	82.0	93.0	79.0	67.0	77.0	**63.0**
Current Gap		**17.0**	**18.0**	**23.0**	**25.0**	**12.0**	**38.0**

Source: Public Water Corporation, UNICEF and 2006 SHHS

From the current trend and taking in to consideration WASH sector current and expected challenges; it is clear that North Sudan is not on-track towards achieving the MDGs targets for water and sanitation.

In southern Sudan the available data indicates that the proportion of the population with sustainable access to an improved water source was 48.3% (SHHS, 2006); and that this proportion only increased to 49.5% in 2008 (5thSPHC, 2008). Many challenges mentioned militate against the provision of sustainable access to safe drinking water. As such, it is unlikely that the target will be achieved for southern Sudan; but the Government and development partners are resolute in continuing to make the necessary interventions to alleviate the current situation.

2.8. Develop a Global Partnership for Development (Goal 8)

This goal analyses the progress on building partnerships at international, regional and national levels that involve the government, civil society, the communities as well as donors. The analysis will look at the position of Sudan with regards to performance indicators directly related to ODA, market access and debt sustainability.

2.8.1. Current Status and Trends

Sudan suffered from sanctions since the mid-1980s; and by 1990s, these sanctions became more severe. Although the signing of the Comprehensive Peace Agreement (CPA) has helped to stabilize the situation in Sudan; however, just before the signing of the CPA in 2005, another war started in Darfur in 2003. The Darfur crisis is currently preventing progress in global partnership to support the MDGs. These are all unfavorable factors as Sudan in dire need of finance to undertake significant investments. Peace and political stability remain pivotal for economic and social transformation and boosting pro-poor growth. Peace and political stability are also prerequisites in attracting private investments which may help enhance progress in some of the MDGs.

Net official development assistance (ODA) is one financing instrument for the promotion of economic development and welfare in countries and territories. ODA as a ratio to GNI has declined from 7.2% in 2005 to 4.8% in 2008, with a sharp decline in the growth rate from 44.7% in 2005 to -16% in 2007 to – 5.6% in 2008. Partly this has been owing to the fast growth in GNI due to high oil prices during the same period. On per-capita basis, it can be seen from Table 2.25 below that it increased from 47.1USD in 2005 to 57.6 USD in 2008. Compared to 2004, grants increased from 3% in 2005 to 4.2% in 2008,

Table 2.25: Net ODA per Capita Received during 2005-2008

Year	Net official development assistance received (current US$)	Grants, excluding technical cooperation (current US$)	Net ODA received (% of GNI)	Net ODA received per capita (current US$)
2005	1,823,220,000	1,664,940,000	7.2	47.1
2006	2,044,130,000	1,772,910,000	6.1	51.7
2007	2,111,510,000	1,939,890,000	5.1	52.2
2008	2,383,580,000	2,122,910,000	4.8	57.6

Source: OECD 2008

The Government of Southern Sudan received funds from different donors. This is reflected in Table 2.26 below for the year 2009 accompanied with projections up to the year 2012.

Table 2.26: GoSS Donor Funding by Sector 2009-2012 (US Dollar)

Sector	2009		Medium Term Projections		
	Budget	Exp Jan - June	**2010**	**2011**	2012
Accountability	17.997.025	7.138.126	21.744.500	13.900.000	**3.400.000**
Economic Functions	45.496.734	10.250.073	25.161.650	7.407.600	**0**
Education	70.009.118	29.541.743	52.637.223	23.013.726	**17.004.787**
Health	191.535.417	72.044.561	145.995.568	49.329.354	**36.627.831**
Infrastructure	110.790.007	42.510.630	155.864.774	43.171.000	**21.615.000**
Natural Resources	98.953.676	40.551.419	83.705.628	43.342.441	**17.350.778**
Public Administration	62.995.319	25.519.959	46.775.400	6.422.126	**9.018.016**
Rule of law	51.865.483	16.661.788	11.884.850	0	**0**
Security	62.938.072	15.351.498	127.060.643	40.681.816	**2.000.000**
Social& Humanitarian	20.200.059	8.843.755	17.143.536	5.751.605	**2.336.911**
Total	732.780.909	268.413.551	687.973.773	233.019.669	**109.353.324**

Source, GoSS Budget Book, 2010

The sect oral share of GOSS expenditure; the highest share goes to security with 24% followed by infrastructure at 16% and public administration 11% as reflected in Table 2.26 below.

Table 2.26: Sectoral Share of Expenditure, 2010

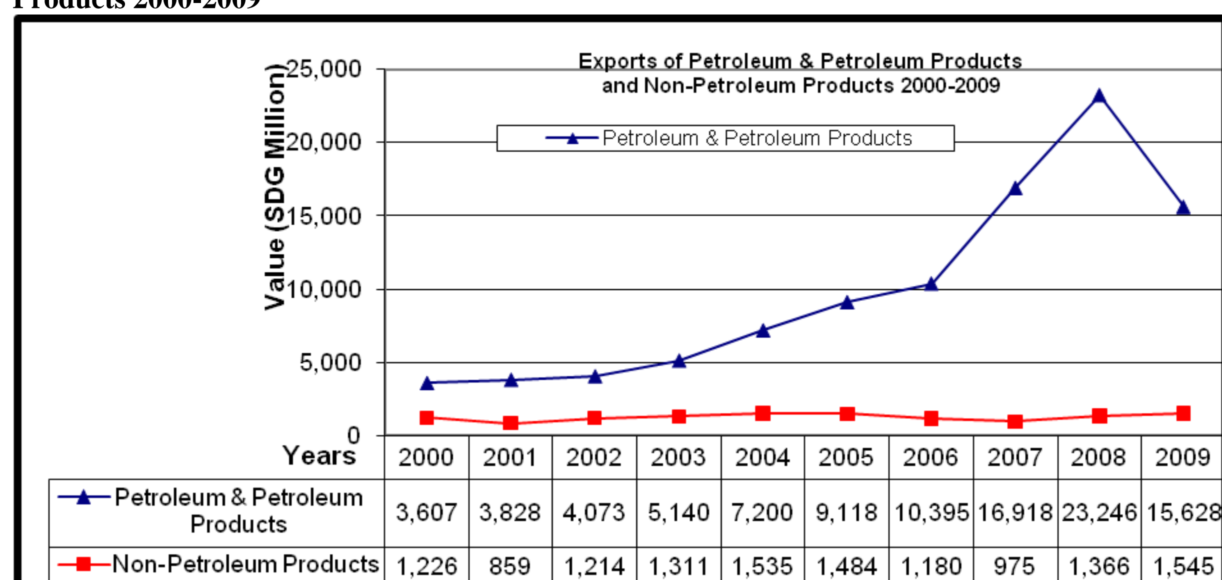
Sector	GOSS	DONORS(SDG equivalent)	Total	Sector % share
Accountability	161.059.999	52.186.800	213.246.799	3%
Economic Functions	161.400.000	60.387.960	221.787.960	4%
Education	323.530.000	126.329.334	449.859.335	7%
Health	189.440.000	350.389.364	539.829.364	9%
Infrastructure	602.682.255	374.075.457	976.757.713	16%
Natural Resources	217.820.000	200.893.508	418.713.508	7%
Public Administration	571.751.889	112.260.960	684.012.849	11%
Rule of law	487.918.801	28.523.640	516.442.441	8%
Security	1.145.819.999	304.945.543	1.450.765.543	24%
Social& Humanitarian	96.720.001	41.144.487	137.864.488	2%
Block Transfers to States	524.666.664	-	524.666.667	9%
Total	4.482.809.611	1.651.137.055	6.133.946.666	100%
Memo item				
Total Transfers to States including conditional Transfers				**1.222.497.112**
Total Transfers to States as a % of GOSS Budget				**%27**

Source, GoSS Budget Book, 2010

Market Access

Export is an engine of growth and development as it provides foreign currency for the imports of capital and intermediate, consumer goods and services for the different sectors producing commodities and services. On average, most of the exports revenues of Sudan come from oil (86% of total) and the rest 14% from agricultural and other industrial and non-oil export products during 2000-2009 as shown in Figure 2.24 below.

Figure 2.24: Exports of Petroleum and Petroleum Products and Non-Petroleum Products 2000-2009



Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Petroleum & Petroleum Products	3,607	3,828	4,073	5,140	7,200	9,118	10,395	16,918	23,246	15,628
Non-Petroleum Products	1,226	859	1,214	1,311	1,535	1,484	1,180	975	1,366	1,545

Source: (CBS),

On average, the volume of non-oil exports had not exceeded US$ 533 million during the period 2000-2009 despite the high GDP growth rate attained during this period. In view of

such factors, including low investment in agriculture, the competitiveness of agricultural exports has suffered and agricultural export earnings stagnated, although it still remained the dominant source of foreign exchange until the advent of petroleum exports in 1999. Since then, Sudan has turned from an agricultural exporter to a petroleum exporter, following the unprecedented boom of its petroleum export revenues.

The production base has not been well developed to match the changing demand of the dynamic international markets. On the contrary, many of the traditional competing export crops have lost many of their traditional markets. The key factors that contributed to the insignificant share of non- oil exports are supply side constraints: mainly: weak transportation systems, weak marketing services of grading, packing, storing and deficient information and inadequate promotion efforts. The limited financial position, weak trade-credit and trade-insurance for agricultural exports is believed to have increased the expected risk of exporters in exploring additional international markets and/or tapping other potential export commodities (Table 2.27 below shows Sudan imports and exports, 2000-2009).

Table 2.27: Trade Balance for the year, (US $) Millions 2000 – 2009

Year	Imports	Exports	Re-Exports	Trade Balance
2000	4261840	4832563	50092	620814
2001	5064689	4687155	169173	-208360
2002	6046458	5287200	276894	-482364
2003	7552848	6450880	352114	-749854
2004	10204753	8735308	579301	-890143
2005	16982709	10601781	361295	-6019634
2006	19111890	11575244	299826	-7236820
2007	19217385	17893359	135885	-1188141
2008	25785001	24612008	71597	-1101396
2009	19066460	17173482	88016	-1804962

Source: Central Bureau of Statistics, 2009

In terms of the traditional barriers to trade (tariffs barriers), Sudan faces few access problems at present. In most developed countries MFN rates for agricultural commodities of export interest to Sudan are either already low or Sudan benefits from nonreciprocal preferential trade arrangements (in view of its LDC status) which allow it to enjoy privileged access to these markets and enable exporters to pay lower tariffs or even enter markets quota and duty free. These preferences, however, contain exceptions from some countries, for example India, China, Korea and EU.

Sudan also benefits from several preferential arrangements that allow Sudanese firms to export to other countries without paying full MFN duties. Some of these—COMESA and GAFTA—are reciprocal agreements, i.e., Sudan receives duty free on its exports and provides duty reductions to imports from other parties to the agreements.

In spite of all the above preferential market access, Sudan in under – utilizing these opportunities because of problems related to Non-tariff barriers to trade including (TBT) technical barriers to trade & (SPS) sanitary and phytosanitary standards and complex qualifications which include high quality specifications set up by the importing countries. This is in addition to lack of technical knowledge, human resources and institutional capacity to take advantage of preferential arrangements.

Sudan's overall strategy to revitalize its agricultural potential and compete effectively in regional and world markets is to address the numerous constraints along the supply chain of products and exports. Sudan current trade policy is to diversify its export and production pattern so as to reduce the economy's dependence on oil export, and to maximize the benefit

from trade preferential treatment for Sudan's commodities in regional and international markets.

The challenges to the development of the trade sector are multi-varied requiring improvements in productivity, reducing high cost of production and the strengthening of institutional capacities of human, physical and environmental resources. The domains of reform for vitalizing and enhancing performance in the sector cover micro and macroeconomic policies, production policies and market policies.

Essential Medicines

The Sudan Government is very committed to tackling the problem of access to essential medicines. This commitment is stated very clearly in Sudan strategic documents such as the 25 years strategic plan for health in Sudan 2005-2029 as well as the national Drug Policy of Sudan (2005) in which certain visions have been developed for the process of price control and regulations to ensure that every citizen gets the medicine s/he needs, at a price s/he can afford.

These strategies, summarized in the NDP, 2005, include development of a national health insurance system, lowering cost through exemption from duties and taxes and regulating profit margins, price negotiation for single source products and printing of price information on packaging and publishing it annually. In addition to these policies Sudan governments have introduced supply reform strategies to increase availability of safe, effective and affordable medicines.

Public sector procurement of medicines is efficient as the procurement prices of lowest cost generics were found to be well below the international reference prices. It appears that patients may not always benefit from low procurement prices achieved by public sectors procurement bodies. Some times over 500% price differential was found between public and private sector procurement prices.

Import tariffs are imposed by Sudan government for both public and private sector imported medicines. These include customs duties, port charges and cure tax which adds up to 12.2%. In addition, other charges and fees may also add more than 10% on the price in addition to wholesale (15%) and retail (20%) mark-ups.

Regarding the affordability of medicines, on average, a lowest paid Sudanese government employee would generally need less than 1 day's wages for most model treatments when using generics in any of the health sectors (public, private or NGOs). The medicines which may be affordable to the lowest paid unskilled Sudanese government employee are in fact not affordable to the majority of population in Sudan. This issue is addressed while developing the related health policy at all levels in the country such as free medical service provided for some population groups and in health insurance schemes.

Although, most standard treatments are affordable in private and public health facilities, many people in Sudan earn less than the wages of the lowest-paid government worker. Considering a situation where there is very limited alternative financing of medicines (such as the health insurance which has about 12% coverage) many families will suffer financial distress when disease strikes. Indeed, some studies have shown that family members have to borrow money or sell assets to pay for treatment.

Regarding the availability of medicines, the essential medicines are provided via RDF programs. All states are covered by RDF programs; however within the state the services are not covering all health facilities. Low availability in the public health sector (40% - 55%), in a

part may be because of failure in the supply system such as: inadequate funding. Because many public facilities are not covered with RDF supplies, they are either funded by health workers or the community. The availability of essential medicines is much better in the private sector (90%) compared to public sector.

Although data is not available regarding access to medicines, from the above figures we can conclude that the access to essential medicines is approximately 50%

External Debt

The total external debt of Sudan as at December 31st, 2009 amounted to US$ 35.7 billion, showing an increase of about US$ 2,145 billion compared to December 31st, 2008 as shown in the Table 2.28 below. The 6.4% increase is attributed to the accumulation of contractual penalty interest rates.

Table 2.28: Sudan External Debt Position (US$ Million), 31st December 2009

Creditor	Total Debt 31st Dec 08	Disbursed Outstanding Debt	Interest Arrears	Penalty Interest	Total Debt 31st Dec 09
Multilateral Creditors	5,278	3,760	416	1,121	**5,297**
Bilateral					
Non-Paris Club	12,160	5,728	1,506	6,063	**13,297**
Paris Club	10,502	2,469	1,597	7,167	**11,233**
Commercial Bank	4,209	2,093	302	2,108	**4,503**
Foreign Suppliers	1,393	1,357	-	-	**1,357**
Total	33,542	15,407	3,821	16,459	**35,687**
% Share	-	43%	11%	46%	**100%**

Source: Central Bank of Sudan

Sustainability analysis of Sudan's total debt confirms that the country is in debt distress despite its considerable economic progress since 2000. Sudan is still suffering from a heavy debt burden. Sudan's external heavy debt solvency and liquidity ratio are well above the initiative thresholds for the year 2009.

The analysis conducted for 2009 confirmed that the country is in debt distress. The three solvency indicators are exceeding their policy-dependent thresholds. In particular the PV of debt to GDP ratio which reached 49 percent in 2009 (indicative threshold 100 percent). The PV of the debt-to-exports reached 410 percent in 2009 (indicative threshold 100 percent). The PV of debt-to-revenue estimated to be 402 percent in 2009 (indicative threshold 200 percent). Table 2.29 below shows Sudan external debt sustainability ratio and projection.

Table 2.29: External Debt Sustainability Rations Projections

Years	TD/Revenue	TD/XGS	TD/GDP
2009	449	373	66.6
2014	300	365	52
2019	312	618	45.5
2024	269.4	467	35.9
2029	202.6	255	25
LDCs thresholds	200%	100%	30%

Source: IMF Debt Sustainability Analysis 2009

As for the liquidity ratios (debt service-to-export ratio and debt service-to-revenue ratio) those were reported to remain below their policy-dependent threshold for 2009, i.e. Sudan will continue with its past performance in debt servicing and will not be able to fully repay its debt obligations.

2.8.2. International Initiatives for Debt Relief

The HIPCs initiative is a comprehensive approach to debt reduction for heavily indebted poor countries. The initiative was launched in 1996 in pursuance of the IMF and World Bank-supported adjustment and reform programs. Delivery of the relief imitative has been steady, and slow with an average of three countries completing the program and an average of two countries starting the program per annum. By end March 2009, the number of HIPCs eligible countries increased to 41.Of these, 24 have completed the program, 11 were between decision and completion point, and 6 countries are potentially eligible for HIPCs initiative assistance and may wish to avail themselves of the debt relief (Comoros, Kyrgyz Republic, Somalia, Eritrea, Nepal and Sudan). Under the Multilateral Debt Relief initiative (MDRI), 24 HIPC countries have benefited from 100 per cent cancellation of their outstanding multilateral debt claims from IMF, IDA, and the African Development Bank.

Completing the implementation of the initiative will require sustained efforts from the international community – creditors to support the remaining pre-completion point countries. The canceled arrears for the countries which benefited from the initiative amounted to nearly US$ 890 Million. Thus challenges to be addressed for a full implementation of the initiative include: (i) full financing of the HIPCs initiative and MDRI for the remaining countries (ii) full participation of official and commercial creditors to the initiative and (iii) support to the remaining countries to reach completion point.

Information and Communication Technology

The government is paving the way for an increasing role for the private sector in the national economy. Telecommunication services were the first and were privatized in 1993. Sudan was a pioneer in Africa and the Arab region in this regard. There are two landline telephone operators, Sudatel established in 1993 and started to provide its services in 1994. It had been the only operator and monopolized the market for quite a long period of time. The privatization era started in 1993 with public–to-private equity ratio 67% to 33% respectively. In 2007 this ratio reached 26% to 74%. The strategy is for the government shares to diminish gradually to zero. Canar is the other landline telecommunication company which was established in 2005 and is fully a private company. It started its commercial operation in 2006.

Regarding cellular operators, there exist three cellular operators which offer their services nationwide and two mobile operators have been licensed to provide their service in southern Sudan (GEMTEL, NOW). Zain Company is using GSM and GPRS technologies. It dominates %54 of the market share. MTN Company started to provide its service in July 2005, and is using GSM technology and 3rd Generation and dominates 25% of the market share. Sudani Company was established in 2006, using CDMA technology and dominates 21% of the market .Up to 1st quarter of 2010; the mobile tele-density in Sudan stood at 4.2 per 100. The tables 2.30 and 2.31 below indicate that almost 42.6% of the Sudanese population use cellular phones for communication; and in total 43.5% of the population use both cellular and landline phones for communication.

Table 2.30: Cellular Phones Subscribers (2005 – 2010)

Company	2005	2006	2007	2008	2009	2010
Zain	1,598,145	3,129,316	3,407,501	4,529,539	8,492,657	8,781,750
MTN	1,600,150	1,027,300	1,882,445	2,264,711	3,772,556	4,043,049
Sudani	NA	903,819	2,178,000	3,578,774	3,074,682	3,444,308
Total	3,198,295	5,060,435	7,467,946	10,373,024	15,339,895	16,271,117

Source: National Telecommunication Corporation, 2010

Table 2.31: Landline (fixed) Phones Subscribers (2005 – 2010)

Company	2005	2006	2007	2008	2009	2010
Sudatel	670,000	488,000	200,000	81,717	66,112	47,775
Canar	104,720	202,000	222,067	274,360	297,251	299,520
Total	774,720	692,006	424,074	358,085	363,363	347,295

Source: National Telecommunication Corporation, 2010

The National Telecommunication Corporation has conducted the first ICT survey in 2010 to have a real indication for the internet usage, and the result is yet to be published. In 2008, the estimated internet users were 4,200,000.

2.8.3. Diffusion of Technology

The figures above show clearly that the diffusion of Information and Communication Technology is is very encouraging. Such development can be expected to have very positive social and economic impacts; such as more family and social connection, interaction and networking regardless of time and location, invigorating trading economic activity and the increasing the velocity of money circulation and reducing transaction costs, which would particularly benefit small and medium size enterprises.

III. Conclusion and Recommendation

3.1. Conclusion

From the analyses expounded in the preceding sections of this report, the following broad conclusion can be drawn:

- Despite the plethora of constraints and impediments to Sudan's performance; the country has made some good and tangible progress towards achieving many of the MDGs. Across the spectrum, however, the nature of the progress made has been patchy and uneven;
- It is abundantly clear that the extended armed conflicts in a number of regions in Sudan have had significant direct and indirect retarding impacts on the quality and level of past performance and progress towards achieving the MDGs. The signing of the CPA and Eastern Sudan Peace Agreement and the current efforts being made towards achieving a peaceful resolution to the conflict in Darfur, provides invaluable opportunity for the country to build on the achievements made so far and make solid and enhanced progress to achieve most of the MDGs by 2015. Attaining and maintaining an enduring peace is a critical condition in southern Sudan and Darfur;
- For optimal performance and progress to achieve the MDGs by 2015, the country and the people would need to surmount a wide range of challenges; and this requires commitment of the resources required and efficient and effective planning, coordination, true partnership spirit between government and non government organizations, the private sector and community based organizations as well as the international community;
- Building the statistical capacity across the board is an absolute necessity in order to have the requisite capabilities and competencies in place that enable evidence-based policy-making, planning, decision-making, statistical tracking, monitoring and evaluation.

3.2. Recommendation

The report contains only one recommendation for enhancing and accelerating progress in order to achieve the MDGs in the 5 years remaining to 2015; namely that - effective and

efficient holistic interventions be made to address the challenges identified in this report regarding each of the MDGs, and - a task that must be given top priority is boosting and strengthening statistical capacity to furnish reliable and accurate data that enable monitoring, tracking and evaluation of performance regarding the MDGs and the broader socio-economic development domains.

Annex 1: List of Government Officials who spearheaded the MDGR Preparation Process and Contributors from Government and UNDP Sudan

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