

The Republic of South Sudan (RSS)

Ministry of Water Resources & Irrigation (MWRI)



Water, Sanitation & Hygiene (WASH) Sector Strategic Framework

*“Water for Life and Development,
Sanitation and Hygiene for Healthy and Productive Citizens”*

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FOREWORD

The Ministry of Water Resources and Irrigation (MWRI) is mandated to address all water related functions in collaboration with the States and Counties. MWRI leads development of policies, strategies, guidelines, regulations and standards; in addition to coordinating external support. Thus, MWRI is to ensure coordinated development and management of water resources on one the hand, and provision and sustainability of water and sanitation services on the other.

In line with the decentralisation as provided for in the Interim Constitution of Southern Sudan (2005) at the time, MWRI led the development of a Water Sector Policy in a participatory manner that ensured inputs from various stakeholders. Approved in 2007, the Policy outlined how the sector will evolve, including establishing a distinction to its broad sub-sectors, namely: Water Resources Management (WRM), Rural Water Supply and Sanitation (RWSS), and Urban Water Supply and Sanitation (UWSS).

The Policy set out key priorities for water sector development and linkages to the other sectors, and provided a basic framework to guide future detailed implementation strategies that would provide further clarity to the sector entities. Following approval of the Policy, MWRI, key Government sector stakeholders and partners involved in water, sanitation and hygiene (WASH), identified the need for distinct sub-strategies to be prepared, including Water Resources Management (WRM); Rural Water Supply (RWS); Urban Water Supply (UWS); Sanitation and Hygiene (S&H); in addition to an institutional framework and an Investment Plan.

The Republic of South Sudan (RSS) emerged from civil war that destroyed basic infrastructure, Government institutions and undermined service delivery. The Government of Southern Sudan (GoSS) at the time was established in October 2005 under such circumstances; and the Water Policy was developed to address this inheritance. The purpose of this strategic framework is to operationalize the Water Policy through effective and technically sound strategic approaches. It shall enable this young nation to establish water and sanitation infrastructure and manage it in a sustainable manner for the delivery of WASH services as public goods to its citizens within the timeframe up to 2015. It points out the key strategic areas that need to be tackled within specific sub-sectors as well as the whole sector. It provides direction for the sub-sectors and the overall governance and development priorities, upon which the action and investment plans are to be developed.

This strategic framework shall pave the way to move from ad-hoc interventions to well-planned and well-targeted development programmes, including aid modalities such as Programme Based Approaches (PBAs). Hence, it shall guide the sector towards achieving the MDGs and to contribute to the overall socio-economic development of South Sudan. With this strategic framework, MWRI, key RSS sector stakeholders and partners have initiated an inclusive sector wide governance and development process. It will enable them to: identify sources, mobilise resources for investment, address priority interventions, leading towards sustainable, equitable and publicly accountable response to water related public-health and livelihoods' aspirations in South Sudan.

Paul Mayom Akec Riak
Minister, Ministry of Water Resources and Irrigation
The Republic of South Sudan, Juba

ACKNOWLEDGMENT

This “WASH Sector Strategic Framework” is an outcome of a collective effort through a consultative process carried out across South Sudan by the Government and its Partners under guidance of the South Sudan Water Sector Steering Committee (SSWSSC).

Building on the sector experiences as well as existing strategic planning documents and mechanisms in South Sudan, MWRI led a sector-wide dialogue and engagement in developing this strategic framework. Major technical inputs were coordinated by the four sub-sector task forces, through vertical and horizontal consultations. Hence, this document is a product of a myriad of WASH stakeholders, partners, professionals and practitioners with varying mandate, expertise and affiliation (Annex 1.5.1) With their different backgrounds, all of them contributed right from the identification of the strategic components, to the process design and the drafting of the document. Indeed, I am indebted to them for their invaluable contributions without which this piece of work would not have been achieved in the given timeframe,

At this juncture, I would like to underscore the special support and extensive assistance we receive from our partners on policy and strategy development, in creating an enabling environment and the capacity to develop programs that will provide a basis for funding sustainability, infrastructure development and service delivery. Based on this, the institutional, legal and regulatory frameworks will be prepared, to support development of working practices and procedures, as well as setting standards and specifications.

In coordinating the development of this WASH Strategic Framework, MWRI received technical and logistical support from UNICEF. In addition, technical contributions were also provided by MDTF, GIZ & USAID. These partners’ support has been invaluable in the development of this Strategic Framework and is highly appreciated.

In a commendable way, Honourable Paul Mayom Akec, Minister of Water Resources and Irrigation, provided an executive leadership that guided the strategy development process. He stressed the need to exert efforts in producing strategies and providing guidelines, regulations and standards for horizontal and vertical alignment and standardisation in the WASH Sector. Through the WASH Biannual Planning and Coordination Meetings, Hon. Paul Mayom appealed to representatives from relevant national, State and County level institutions, non-Governmental actors and development partners for their commitment in this regard.

Indeed, he reiterated that the strategies must also address priority issues related to the seasonal migration of our pastoral communities to other territories in search of water, triggering fatal conflicts among them and with those in neighbouring countries. Also, he urged that apart from limited grants and Government budgets, the strategy must devise alternative financing mechanisms, which satisfy the attainment of MDG targets in the WASH Sector. Hon. Paul further emphasised the need to create an effective working structure and environment for the sector. Finally, he provided guidance to address consequences of the South Sudanese people’s choice for separation, such as the needs of the returning population and other responsibilities associated with the achievement of the new nation.

Isaac Liabwel Chadak Yol
Undersecretary, Ministry of Water Resources and Irrigation and
Chair of the South Sudan Water Sector Steering Committee
The Republic of South Sudan, Juba

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AMA	Assistance Mission for Africa (NGO)
BCC	Behavioural Change Communication
BSWG	Basic Services Working Group
BSWGs	Budget Sector Working Groups
CBO	Community Based Organization
CHAST	Children's Hygiene & Sanitation Training
CLTS	Community Led Total Sanitation
CPA	Comprehensive Peace Agreement
CSO	Country Status Overview
DRC	Democratic Republic of Congo
EIA	Environmental Impact Assessment
EMIS	Education, Management and Information Systems
EP & R	Emergency Preparedness & Response
FAO	Food and Agricultural Organization
GIZ	German International Cooperation
GOSS	Government of Southern Sudan
HCA	Household Centred Approach
HIV	Human Immuno-deficiency Virus
H & S	Hygiene & Sanitation
HWTS	Household Water Treatment System
HWTSS	Household Water Treatment & Safe Storage
IDPs	Internally Displaced Persons
IAS	International Aid Services (INGO)
IEC	Information, Education & Communication
IFF	International Finance Facility
INGO	International Non-Governmental Organizations
IRC	IRC International Water and Sanitation Centre
IT	Information Technology
JICA	Japan International Cooperation Agency
JSR	Joint Sector Review
KAP	Knowledge, Attitude & Practice
LGB	Local Government Board
MAF	Ministry of Agriculture and Fisheries
MCA	Ministry of Cabinet Affairs
MCRD	Ministry of Cooperatives & Rural Development
MCII	Ministry of Commerce, Industry and Investment
MDGs	Millennium Development Goals
MDTF	Multi Donor Trust Fund
MED	Ministry of Electricity and Dams

ME&R	Monitoring Evaluation and Reporting
MGCSW	Ministry of Gender, Child and Social Welfare
MGEI	Ministry of General Education and Instruction
MHEST	Ministry of Higher Education, Science and Technology
MHLPU	Ministry of Housing, Lands and Public Utilities
MLPS&HRD	Ministry of Labour, Public Service & Human Resource Development
MHPP	Ministry of Housing and Physical Planning
MICS	Multiple Indicator Cluster Survey
MoEnv	Ministry of Environment
MoFEP	Ministry of Finance & Economic Planning
MoH	Ministry of Health
MoIB	Ministry of Information and Broadcasting
MoJ	Ministry of Justice
MoPI	Ministry of Physical Infrastructure
MoT	Ministry of Transport
MPM	Ministry of Petroleum and Mining
MRB	Ministry of Roads and Bridges
MWRI	Ministry of Water Resources and Irrigation
MWCT	Ministry of Wildlife Conservation and Tourism
NBI	Nile Basin Initiative
NETWAS UG	Network for Water and Sanitation Uganda
NGO	Non-Governmental Organization
OBA	Output Based Aid
ODF	Open Defecation Free
O & M	Operations & Maintenance
OVI	Objectively Verifiable Indicator
PACT	(INGO)
PBA	Programme Based Approaches
PHAST	Participatory Hygiene and Sanitation Transformation
RSS	Republic of South Sudan
RWS	Rural Water Supply
RWSN	Rural Water Sector Network
SIA	Social Impact Assessment
SDG	Sudanese Guinea (Commonly referred to as “Sudanese Pounds”)
SLTS	School Led Total Sanitation
SMART	Specific, Measurable, Attainable and Time-bound
SSDO	South Sudan Development Organisation (NGO)
SSDP	South Sudan Development Plan
SSHS	Southern Sudan Household Survey
UWC	Urban Water Corporation
SSWSSC	South Sudan Water Sector Steering Committee
SWAp	Sector Wide Approach

SWDS	Small Water Distribution Systems
UK	United Kingdom
UN	United Nations
UNICEF	United Nations Children Fund
UNJLC	United Nations Joint Logistics Centre
UNOCHA	United Nations Office for Humanitarian Affairs
USAID	United States Agency for International Development
UWC	Urban Water Corporation
UWS	Urban Water Supply
VIP	Ventilated Improved Pit-latrine
WASH	Water, Sanitation and Hygiene
WASH DoG	WASH Donor Group
WASH IMS	WASH Information Management System
WHO	World Health Organization
WRM	Water Resources Management
WSSP	Water and Sanitation Sector Programme

EXECUTIVE SUMMARY

This WASH Sector Strategic Framework is a major step for putting into practice the principles laid out in the Water Policy of 2007. It identifies priority areas for future interventions and spells out a number of approaches that these will have to use. The next steps to follow are the elaboration of sub-sector action plans to identify and sequence the needed activities, and development of investment plans that will project funding requirements.

The document, after a concise introduction to the country and the current state of affairs in terms of water resources and the provision of WASH services, provides a series of specific sub-sector chapters each spelling out the strategic approach proposed.

The structure of these chapters hence presents in the following sequence 'current situation & challenges'; 'goals and objectives'; 'a **priorities** based strategic approach' for each of the WASH sectors main sub-sectors:

- Water Resources Management (WRM)
- Sanitation & Hygiene (S&H)
- Rural Water Supply (RWS)
- Urban Water Supply (UWS)

Throughout the Strategic Framework the level of **priority** of a strategic element is indicated by H = High; M = Medium or L = Low. The actual strategic decision on when to address the strategic element will take place during the planning phase. Hence, it may well be that some L coded elements may be required in early years of development and H coded elements may have to be deferred to the future.

Besides the WASH sub-sectors, the Strategic Framework also presents a strategic approach for the overall governance and development of the sector. This chapter covers the following areas:

- Institutional and Legal Framework
- Information Management and Communication
- Sector Planning
- Performance Monitoring
- Financing and Investment
- Capacity Development

The document is enriched with a series of annexes, providing a glossary and definition of terms used, stakeholders involved in the formulation of the Strategic Framework and a rich set of references, which to a large extent can be accessed and downloaded as needed and on request.

Water Resources Management

Currently, neither interventions for water supply, nor activities carried out by other related sectors systematically take into account requirements of WRM (e.g. water needs and water pollution issues related to oil exploitation). Hydro-geological and related mapping is either outdated (from the 1980s) or not (yet) accessible. Water resources, however, are abundant in the country, not only along its main river, the White Nile and its tributaries. With the Republic of South Sudan (RSS) emerging as a sovereign State, WRM needs to be put high on the agenda in order to cater for the needs of the returning population; while at the same time developing water resources for economic use and providing water to preserve peace among pastoralist and sedentary communities. There is a need to work towards international best practices in terms of Integrated WRM.

The strategic approach proposes to put a high priority to assessing current and near future needs, update the knowledge about and mapping of water resources and introduce monitoring of water resources, starting with the areas where most pressure on the resources is presented. In parallel, important investments will need to be made in developing human resources, organizational capacities, water resources governance and legislation within the broader framework of the Nile Basin community with which the country is now joining.

Establishing watershed or sub-river basin management boards and similar institutions will be premature at this stage, but preparation towards their establishment should commence.

Sanitation and Hygiene

According to the 2010 South Sudan Health & Household survey, current access to sanitation is 14.6% while hygiene awareness is one of the lowest worldwide.

The strategic approach to S&H suggests incremental improvements based on demand responsiveness, combining sanitation infrastructure construction and the provision of sanitation and hygiene related products. The level of S&H promotion services will be raised, leading to improved hygienic practices. The approach is community based and follows an integrated approach to rural and urban sanitation and hygiene which seek to minimise subsidy levels for hardware inputs. The three strategic components for the sanitation and hygiene strategic framework include creation of an enabling environment, demand creation and accelerated provision of products & services.

Rural Water Supply

On average, rural water consumption is around 6 litres per capita per day and only 20% of the population contributes to operation and maintenance (O&M) of their water supply.¹ Existing data suggests that between 30 and 50% of water points are non-operational at any time in the different States. The precise number of boreholes yielding potable water in South Sudan is currently not known and this becomes a vital target for on-going water point inventory exercises across the country which seek to ascertain the “core asset value” required to plan continuous groundwater service expansion and upgrade in areas of higher population concentration. Similar challenges face the development of surface water sources, as very little data currently exists on stream flows and rainfall, which are key determinants of effective surface water system design. The strategic approach to rural water supply is based on demand responsiveness, targeting of priority areas, and combining water supply with sanitation and hygiene improvements. The approach recognises the important role of communities in the management of their water sources and ensures emergency preparedness and response. Service and support provision to consumers is strengthened through an integrated and incremental capacity development of State and local Governments. The strategy is geared towards the creation of an enabling environment; sustained services and provision of accelerated services.

Urban Water Supply

Piped water supply systems that can be considered as UWS technology only exist in some parts of Juba and a few regional capitals. By far the largest share of the urban population relies on supplies that could be typically considered rural by nature, ranging from (some fairly recent) water yards to (motorized) community and private hand-pumps and even basic unprotected wells.

The strategic approach contains elements of both, building infrastructure and developing an enabling environment to encourage the emergence of an efficient, effective and cost recovering urban water supply service in the medium and long term. Transitional and gradually incremental approaches will have to be developed based on pilots and proven best practices, which will have to include raising public and political awareness and advocacy, as well as hygiene promotion, especially in densely populated (low income) urban areas.

¹ UNICEF-WES/Nutrition South Sudan (2009). Knowledge, Attitudes and Practices Survey on Water, Sanitation, Hygiene and Nutrition South Sudan.

WASH Sector Overall Governance and Development

South Sudan is emerging from decades of civil war that destroyed most Government and other management structures and deprived people of basic education. Hence, there are a number of crosscutting issues that pertain to all the subsectors that need to be addressed in an integrated manner:

The existing legal and institutional framework is fragmented and incomplete. The strategic approach therefore outlines some steps towards comprehensive WASH legislations that will provide for an improved institutional architecture of the sector, as well as intervention areas for improved sector management. Recent discussions on how to strengthen governance, coordination and sector management have resulted in a draft governance and regulatory structure that is presented in Annex 1.5.2 of this document.

Information management will put priority on improving the gathering of relevant data and its communication among all parties and at all levels involved to ensure that related information and knowledge management tools provide the right information at the right time for each key player in the sector.

South Sudan is a federal state and is explicit about the need to plan for development in a participatory approach whereby top-down guidance meets bottom-up needs and initiatives. Sector planning will be based on guidance, formats and procedures as propagated by the Ministry of Finance and Economic Planning (MoFEP), criteria identified and agreed upon in the sector and best practices developed by some of the WASH implementing agencies on the ground.

To improve sector performance monitoring, the proposed strategic approaches include setting of agreed targets and indicators, preparation of performance reports based on progress monitoring of these indicators, and various ways of improving accountability among different levels of Government, development partners and private sector.

Current funding is unpredictable and insufficient to realise the MDGs for water and sanitation. Four strategic components to guide the sector in mobilizing adequate resources include: revenue generation; increased and timely Government funding; development partner financing support; and targeted private sector investments triggered by sound Government policy, strategy and investment plans.

Big challenges exist in terms of sector capacity development. The country is short of qualified people. Creative solutions are required to address the needs identified at national, State and local Government level. Recruiting the right kind of staff (based on a series of recent sector capacity studies undertaken) in combination with appropriate training, equipment provision and human resources management are key elements in the capacity development strategic approach.

1. INTRODUCTION

The historic Comprehensive Peace Agreement (CPA) provided a basis for the establishment of the Government of Southern Sudan (GoSS) at the time, and the outcome of the Referendum in 2011 finally culminated in the declaration of independence on 9th July 2011, with the Republic of South Sudan (RSS) becoming a sovereign nation. With the formation of GoSS in October 2005, the Ministry of Water Resources and Irrigation (MWRI) was created with the mandate is to safeguard and conserve fresh water systems; carry out and supervise hydrological studies, flood control works, irrigation and hydropower developments and water storage facilities. The mandate was expanded by GoSS Presidential Decree of July 2008, which reorganized the functions and duties of the Ministries. This required MWRI to ensure provision of safe drinking water and improved sanitation services to the people of South Sudan. On this basis MWRI set out its vision, mission and slogan.

1.1 Vision

Sustainable harnessing and accountable management of water resources that respond to water related public-health needs, livelihoods and development aspirations of the people of South Sudan in an equitable manner.

1.2 Mission

Drawing up of policies, standards, guidelines and plans for water resources management, development and utilization; and provision of sanitation and hygiene services.

1.3 Slogan

“Water for Life and Development; Sanitation and Hygiene for Healthy and Productive Citizens”

1.4 Context of the WASH Sector Strategic Framework

Under the decentralised Government, in a participatory and consultative manner that ensured inputs from various multi-sectoral stakeholders and partners, MWRI led the development of a Water Sector Policy. The Policy outlined how the water sector will evolve in South Sudan, including establishing basic principles with an aim to provide distinction to the broad sub-sectors of the sector, namely: Water Resources Management (WRM), Rural Water Supply and Sanitation (RWSS), and Urban Water Supply and Sanitation (UWSS).

Approved in 2007, the Water Sector Policy set out key issues and priorities for water sector development and linkages to the other sectors, and provided a basic framework to guide future detailed implementation strategies that would provide greater clarity to sector entities. Following approval of the Policy, MWRI and key GoSS sector stakeholders and partners identified the need for distinct sub-strategies to be prepared, including Water Resources Management (WRM); Rural Water Supply (RWS); Urban Water Supply (UWS) and Sanitation and Hygiene (S&H) sub-strategies; in addition to setting up of the Sector Institutions such as a Water Council and preparation of an Investment Plan. All these components of the strategy revolve around various aspects of water, sanitation and hygiene (WASH); hence the strategy document is entitled WASH Strategic Framework. In fact, it is worth noting that we are developing our strategy at the time when holistic and integrated planning processes such as Sector-wide Approaches (SWAPs) and Integrated Water Resources Management (IWRM) emerged within the sector. Hence, in our context, the usual acronym (WASH) that has been synonymous with Water Supply, Sanitation and Hygiene, is inclusive of all aspects of water.

1.5 Purpose and Scope

The purpose of this strategic framework is to operationalise the Water Policy of South Sudan and ensure its implementation through effective and technically sound strategic approaches, improved capacity and involvement of all stakeholders. The scope of this strategic framework includes WRM, S&H, RWS, UWS and the WASH Sector Overall Governance and Development with a time frame of up to 2015.

This framework points out the key strategic areas that need to be tackled within specific sub-sectors as well as major crosscutting issues for the whole sector. It provides direction for the overall (and sub-) sector development and prioritises in view of the limited resources available. However, sub-sector action plans defining annual targets and scheduling specific activities are yet to be developed.

1.6 Rationale

South Sudan emerged out of civil war after the signing of the CPA in 2005. Basic infrastructure, institutions of Government and WASH services were destroyed, non-functional or dilapidated. GoSS at the time was established under such circumstances; resulting in an impetus for the Water Policy of 2007 to be developed to address this inheritance. The implementation of the Water Policy required a systematic approach and development of a strategic framework for the WASH sector. This strategic framework has therefore been developed in order to attract investment, formulate priority action plans and create capacity in the WASH sector at all levels.

The strategic framework shall pave the way to move from ad-hoc emergency relief interventions to a holistic, Government-led planning and implementation of well-targeted interventions in order to gradually move towards achieving the Millennium Development Goals.

It is thus envisaged that within the overall South Sudan thematic plans, including the Growth Strategy; South Sudan Development Plan (SSDP); etc, MWRI and key RSS sector stakeholders and partners will have initiated an inclusive sector wide governance and development process. Specifically, they will have identified sources and mobilised resources for investment to address priority interventions required to achieve a more sustainable, equitable and publicly accountable response to water related public-health and livelihoods' aspirations in South Sudan.

1.7 Structure and Content

This strategic framework document contains seven chapters. The first two chapters introduce the background of the sector and the context within which the strategic framework has been developed. The next four chapters deal with sub-sector strategies, while the last chapter deals with overall governance and development strategy of the WASH Sector. Each of these strategies has been structured according to current situation and context, goals and objectives and the strategic approach/components.

The Strategic Framework distinguishes three levels of priority: High (H); Medium (M) and Low (L).
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The proposed priority setting shall guide future strategic development and investment planning according to the resources available.

2. SOUTH SUDAN CONTEXT

The recent political history in South Sudan is characterised by the circumstances of more than twenty years of civil war, gross underdevelopment, an acute lack of social services and instability caused by high population displacement and competing sedentary and pastoralist livelihoods. The CPA of 2005 allowed for a gradual transition from emergency to recovery and development phases in the region. After achieving independence and sovereign statehood on 9th July 2011, RSS is striving to unleash its full development potentials while establishing effective structures of Government. Hence, providing stability in rural and peri-urban areas, and allowing for establishment of new services and creation of development opportunities are major priorities in view of the high number of people returning.

The overall population density in South Sudan is low², though State/County administrative centres and emerging roadside settlements are experiencing rapid growth spurred by the return of an estimated 2 million South Sudanese from the North of Sudan and the Diaspora. In rural areas, people live in widely dispersed settlements and mostly depend either on rain-fed agriculture or livestock rearing.

2.1 Current Status and Challenges of the WASH Sector

After the GoSS Presidential Decree of July 2008, MWRI expanded its mandate to address all water related issues and activities by integrating the Rural Water Supply and Sanitation and Urban Water Programmes, through a collaborative planning and implementation with the States and Counties.

MWRI leads the development of policies, strategies, guidelines, regulations and standards; in addition to coordination of other regional, national, bilateral and donor group projects such as NBI, Egyptian Government, MDTF, UNICEF, JICA, FAO, Indian Government, USAID, BMZ/GIZ, etc. Thus, MWRI is to ensure coordinated development and management of water resources on the one hand, and provision and sustainability of safe water and improved sanitation services on the other. Overall, the responsibility for operating and managing the facilities and delivering of services lies with the State and County levels of Government. Urban Water Corporation (UWC) provides urban water services where it operates, while urban sanitation remains the responsibility of the Directorate of Urban Sanitation in the Ministry of Housing and Physical Planning (MHPP).

Indeed, development partners in the WASH sector are engaged in rehabilitation, upgrading and construction of critical water supply infrastructure, which will have an impact on improving availability of fresh water and provision of safe water and sanitation services to the people of South Sudan. Further, they are creating enabling environment for sustainable infrastructure development by providing extensive assistance to policy and strategy development, in addition to capacity building.

Notwithstanding the focus on development rather than emergency, the need to maintain life-saving humanitarian assistance to ensure access to safe water supply, improved sanitation and hygiene practices within zones of insecurity is essential. In this regards, the WASH Cluster partners are urged to coordinate their efforts more closely with MWRI and State level actors to ensure that longer term operational sustainability issues are addressed.

From a development perspective, there exist major challenges to improved performance, which is required to ensure effective development and management of water resources; and scaling up delivery of sanitation and safe water services. Therefore, close coordination between Government and partners at all levels is required through the existing fora. There is also a significant capacity deficit to develop plans and implement projects. Although there

² UNOCHA maps State population densities varying between 3.7 people/sqkm in Western Bahr el Ghazal and 25.6 people/sqkm in Central Equatoria.

are a number of efforts being undertaken to strengthen planning, priority setting and coordination, the existing mechanisms are still weak. Inadequate and unpredictable funding is another constraint for the development of this sector. High influx of returnees is causing additional pressure and challenges.

South Sudan is characterized by a seasonal climate with considerable annual variations, and the territory has substantial surface and ground water resources that are yet to be used for development. A proper water resources assessment, for the quantity and quality, is a prerequisite to water resources management, development and utilisation, whether for urban and rural water supply, agriculture, livestock, industry, energy and or for any other uses. Therefore, creation of a Hydrological Information System (HIS) for identification and subsequent addressing of gaps is necessary for realizing such needs. In the context of irrigation, it is worth noting that MWRI's mandate is to allocate and deliver bulk water to irrigated agricultural schemes. From that point onwards, it is the responsibility of the Ministry of Agriculture and Forestry (MAF) to distribute and manage that water on the farms. MWRI realizes that the shared responsibility between the two Ministries calls for a separate policy for irrigation to be enacted so as to fully realize the potential of this sector.

The programme area of Water Resources Management, Development, Utilisation and Provision of Sanitation Services is identified as one of the five priority programme areas of the economic development pillar in the SSDP. In his first speech to the National Legislature after independence, H. E. the President Gen. Salva Kiir Mayardit declared the delivery of basic services as the focus of his Government and in line with this, infrastructure as the number three priority³. Irrespective of these facts, it is acknowledged that political developments; the effects of worldwide austerity measures; and significant fluctuations in RSS revenues will have an impact on WASH sector allocations for both development and recurrent budgets.

2.2 Existing Baseline Data for the WASH Sector

The WASH sector situation in South Sudan was made worse by decades of war, leading to neglect and destruction of existing infrastructure. As per the 2010 South Sudan Health & Household Survey, the overall use of improved drinking water sources and improved sanitation facilities are 67.7 % and 14.6% respectively. The MWRI database of existing facilities for each County has currently identified approximately 10,000 water points in the country, of which 30–50% are non-functional at any time⁴. This translates to a “de-facto” low coverage rate of about 40% among the rural population of 7 million people. However, it should be noted that these figures do not take into account water quality impacts due to uncontrolled human excreta disposal and other bio-chemical factors. Furthermore, according to the WHO definition of access to improved sources of water, which recommends 30 minutes for a round trip to collect water, the level of access in rural areas decreases to approximately 34%.

On hygiene practices, the situation is equally alarming, as a high proportion of the population do not practice good hygienic practices. Improper disposal of human excreta and poor personal hygiene is the cause for a range of diseases including acute watery diarrhoea, polio and Cholera.

According to the Knowledge, Attitudes and Practices (KAP) Survey on Water, Sanitation, Hygiene & Nutrition in Seven States (Jonglei, Upper Nile, Warrap, North Bahr El Ghazal, Unity, Eastern Equatoria and Central Equatoria) conducted by NETWAS in 2009, only 5.5% of the respondents felt that it was important to wash hands with soap before eating. Only

³ H. E. Gen. Salva Kiir Mayardit, President of the Republic, Address to the first joint sitting of the National Legislature and to the Nation, 8th August 2011

⁴ MWRI is currently conducting an inventory of existing water supply facilities.

50% of respondents stated that they would wash their hands if a hand washing facility were placed near the toilets.

Consequently, diarrhoea prevalence was at 81.3% of the study population; with over 30% of mothers reporting incidence of the disease among their infant children. The same study indicated that mothers have very low awareness of the highly infective nature of infant and young child faeces and the acute health risks that poor related hygiene practices presents. Diarrhoea ranks second to malaria at 90% of the study population. South Sudan is one of the four countries globally still struggling with eradication of Guinea Worm. In 2010, South Sudan reported 1,686 cases of guinea worm, which is 94.4% of world cases.

3. WATER RESOURCES MANAGEMENT SUB-SECTOR STRATEGY

The purpose of the Water Resources Management (WRM) subsector strategy is to provide a prioritised outline of optimised water allocation measures on an equitable and sustainable basis as stipulated in Water Policy (2007). The WRM subsector strategy is in line with the SSDP whereby it clearly outlines the priorities of MWRI. These include construction of water harvesting and storage structures to avail fresh water for productive uses; management and development of river systems to mitigate conflicts and minimize flooding, and ensure sustainability through assessments and monitoring of water resources.

3.1 Current Situation and Context

WRM in South Sudan has not until recently been given the due attention it deserves. With the new dispensation, it is now more apparent that sustainable management of water resources is crucial in addressing the needs of the expanding population and developing economy. Of importance is to avail water of sufficient quantity and quality to sustain healthy standards of living and a robust economy, while at the same time ensuring the protection of the ecosystem, e.g. the Sudd as Ramsar site (wetland of international importance).

There presently is no comprehensive assessment of water resources quality, whether surface or groundwater, nor are adequate water quality monitoring systems established. The main sources of freshwater pollution in South Sudan include (i) oil exploration and extraction (ii) inappropriate solid waste disposal in urban areas and (iii) leaching of chemicals and toxic materials from un-controlled industrial and domestic waste sites found adjacent to large towns. There are also severe risks to sector personnel and civilian service users related to the legacy of the civil war, with unexploded ordinance stockpiles remaining in several remote areas.

In as much as South Sudan's economy is assumed to be largely agriculture-based, the agricultural sector is still rudimentary with practices of rain-based subsistence farming. This is neither sufficient to meet local needs nor diversified enough to ensure food security. The potential of irrigation-based agriculture is great and it will put an increasing demand on the available water resources in South Sudan. Partial rehabilitation of the largely dilapidated Northern Upper Nile and Aweil rice schemes were recent attempts of using water resources for agricultural and economic development. Such developments, rehabilitated or new, will place a greater stress on the available water resources and thus call for carefully planned Integrated Water Resources Management (IWRM). In both cases, MWRI is attempting to seek expertise to rehabilitate the infrastructure so as to reclaim the productivity of these schemes.

South Sudan would be well served by a permanent apparatus for regular monitoring of weather and water levels and flows in rivers, streams and lakes. This will contribute to a robust early warning system and be a basis for efficient design of surface water schemes serving farming, pastoralist and trans-human communities. Though WRM in South Sudan is faced by many challenges; numerous opportunities still exist as summarised below:

Opportunities

- Previous studies, dating back into the early 20th Century, have established significant hydropower potential. The potential for hydropower generation and transmission from four sites on the White Nile has been established to serve South Sudan and neighbouring countries. These projects may require joint ventures between South Sudan and countries such as DRC Congo, Tanzania, Uganda, Kenya and Ethiopia; and will be approached in collaboration with the power sector.
- Transboundary water resources projects promoted under the Nile Basin Initiative (NBI) such as Baro-Akobo-Sobat Multipurpose Project and Lau Fast-track Watershed Project will benefit communities across the South Sudan - Ethiopia border. Whereas Aswa Watershed Management Project, on Bahr el Jebel will promote the livelihoods of communities across the South Sudan - Uganda border. Permanent Nile Basin management institutions are being developed through the collaborative work of the ten Nile Basin countries under the umbrella of the NBI.
- There is a database system established to capture information related to management and use of water resources and related components in the sector. However, it has limited capacity in terms of equipment, technical staff and office space; and these need to be urgently addressed to strengthen capacity to generate reliable data to serve the overall planning process, resource management and service delivery.

Challenges

- There is an overly skewed emphasis on water supply and less on WRM associated with most donor driven projects. This has resulted in over-abstraction of groundwater in some urban areas such as Juba, duplication of projects, and less overall transparent governance.
- Although the water policy advocates for an integrated approach, the management and coordination institutions are not fully developed to undertake this task. There is a better level of coordination of domestic water uses than there is for uses by industry, agriculture, forestry, fisheries, livestock, wildlife, tourism and the natural environment. There are no WRM-based incentives and disincentives to ensure economic regulation of the resources development and use by these sectors.
- There are no permanent apparatus for regular monitoring of water levels and flow in rivers, streams and lakes and precipitation measurements, to collect baseline data necessary for any further calculations and modelling.
- Apart from the general constitutional provisions that established the basic institutions of the water sector, there is no legislation in place pertaining to water resources management.

3.2 Goals and Objectives

The **overall goal** of WRM policy is to promote sustainable management of quantity, quality and reliability of available water resources in order to maximise social and economic benefits while ensuring long term environmental sustainability.

The strategy builds on international best practice in WRM, focussing on the following priority areas:

- (1) Integrating water uses along the IWRM approach
- (2) Freshwater protection and pollution prevention and mitigation
- (3) Exploring the potential of trans-boundary water resources and identify existing opportunities for their exploitation
- (4) Floods and drought monitoring and disaster mitigation

- (5) Proactive and innovative research into impacts of climate change and variability on water resources
- (6) Establishment of WRM institutions based on the guiding principles of the Water Policy
- (7) Establishing database, data collection, modelling and knowledge management systems
- (8) Assess and appraise the existing needs and capacities for WRM
- (9) Stakeholders analysis and consultation
- (10) Identify all possible sources of financing WRM activities.

3.3 Strategic Approach

3.3.1 Assessment and Monitoring

Compiling historical and current water resources information pertaining to quantity, quality, location and mode of occurrence shall provide the basis for understanding the water resource potential and decision making at all levels in South Sudan. In addition, an appropriate monitoring system would ensure close observation of changes in the baseline trends and invoke prompt action:

- **(H)** Collect and analyse historic and recent data, information and knowledge on water resources to determine the priority areas to engage in IWRM scenarios, such as hydropower with irrigation, hydropower with domestic water, etc.
- **(H)** Identify and map potential pollution spots
- **(M)** Identify data gaps
- **(H)** Improve the capacity of the WASH Information Management System (IMS) to undertake the tasks of data management.
- **(M)** Design a concept for data collection and monitoring, then provide essential equipment for water flow and level measurement, water quality testing and other relevant data collection.
- **(M)** Provide regular in-house, local, regional and international training on state of the art of WRM and related technologies for assessment and monitoring, data collection and analysis, and general documentation and dissemination.
- **(M)** Provide regular in-house, local, regional and international training on data processing and hydrological modelling, including agricultural and economic modelling
- **(M)** Identify stakeholders, pressures on water resources and needs
- **(M)** Define preservation goals.

3.3.2 Planning and Development

The planning for management and development of water resources shall be pursued at the lowest possible level of Government and with involvement of all key stakeholders to ensure rational adoption of IWRM approach as stipulated in Water Policy. As an integral part of national plans, formulation of water resource programmes at the national level shall be directed towards supporting beneficiaries and appropriate implementation levels:

- **(H)** Plan WRM at the lowest appropriately identified and demarcated hydrological unit such as river basins, sub-basins, catchment areas, etc.
- **(H)** Plan focussed flood risk analysis and disaster prevention measures with clear terms of reference for the required capacity at all levels of Government on an annual basis.
- **(H)** Develop conflict prevention and mediation capacity as an important tool to pre-empt and offset problems arising from competition for scarce water resources by farmers; livestock keepers; domestic consumers; and other users and stakeholders.

- **(M)** Introduce environmental impact assessments as a requirement for large-scale projects, such as oil exploration and exploitation, dams, large-scale irrigation schemes and any other major infrastructure works.
- **(M)** Carryout cost-benefit analysis and impact analysis for all projects and design mitigation strategies.
- **(M)** Develop river basin master plans through stakeholder consultation, including identification of infrastructure needs for mitigation of water-related conflicts and protection of flood prone areas.
- **(M)** Continue the collaborations with Nile Basin institutions through existing projects, and exploring new opportunities for the purpose of understanding the regional development needs of South Sudan.

3.3.3 Regulation, Allocation and Use

To a large extent, South Sudan is endowed with abundant water resources with significant spatial and temporal variation. The Resources are substantial, but with competing demands for their use, including considerations of transboundary implications for upstream and downstream riparian countries. This entails that bulk water abstractions and diversions for large-scale farming, industrial purposes, water supply to larger urban centres, etc, will have to be regulated. Following are some of measures and steps to be undertaken in the medium to long term periods, in order to ensure equitable access to all uses including irrigation, hydropower, fisheries, etc.

- **(H)** Adopt legislation, supported by by-laws and enforcement mechanisms that will address priority access to water for domestic use, and clear allocation criteria for other uses;
- **(H)** Establish water allocation and reallocation tracking and monitoring systems through the issuance of water extraction licenses and to ascertain and monitor prescribed uses in a way that safeguards over extraction or depletion of ground or surface water;
- **(H)** Designate areas with localized pollution problems (e.g. near oil extraction facilities) and high competition for scarce water sources as high priority for water resources allocation and use;
- **(M)** Introduce zoning of water resources (both surface and ground) considered at risk, and apply strict by-laws for their protection, rehabilitation and use;
- **(H)** Designate areas with localized pollution problems (e.g. near oil extraction facilities) as high priority for control measures.
- **(M)** Gradually introduce and enforce “Polluter pays” principle commencing with the most blatant large scale polluters;
- **(M)** Gradually and incrementally allocate water to other users based on stakeholder negotiated economic, social and environmental values;
- **(M)** Introduce customer contracts for bulk consumers (agriculture, industry etc.);
- **(M)** Introduce incentives to minimise water wastage while at the same time promoting water recycling and reuse particularly to institutions extracting large quantities of water;
- **(M)** Institute an annual revision of all productive and environmental uses of water in order to set new benchmarks for attaining and sustaining efficiency in the use of allocated water;
- **(M)** Introduce technological/environmental tools (EIAs, SIA, etc.) to provide standard practice in WRM;

3.3.4 Research and Innovation

Effective and sustainable management, development and utilization of water resources call for increased investments in knowledge generation and its uptake. Interdisciplinary research will increase the understanding of and influence innovative thinking towards the way societies relate to their water resources. National academic and training institutions have to play a principal role in taking up the challenge to provide relevant training and research.

Research efforts geared towards solving the problems of WRM in South Sudan shall be crucial in ensuring sustainable management of these resources. Moreover, the search for new sources to supplement existing ones must continue. Indeed, understanding anthropogenic impacts and adaptation to climate change will require scientific and technological endeavors.

- **(H)** Identify/Encourage collaborative national, regional and international research to address crucial water resources management challenges e.g. control of alien vegetation, impact of climate change and variability on the existing water resources.
- **(H)** Promote a culture of learning, documentation and sharing of interdisciplinary knowledge on WRM for the purpose of generating increased awareness for the need of managing water resources in a sustainable way for current and future generations.

3.3.5 Setting up WRM Institutions

Coordination between different water users requires institutionalization of WRM. Hence, as prescribed by the Water Policy, there shall be established regulatory institutions for managing water resources. These institutions must allow for *horizontal* integration between sectors and *vertical* integration between local, national, regional, and international levels.

- **(H)** Establish a WRM regulatory authority at the national level to regulate water allocation and use, and enforce all water related legislation as required by law.
- **(M)** In line with the decentralized system of Government, establish appropriate WRM institutions at all levels of the Government (National, State and County levels), ranging from basins/sub-basins to watersheds.

3.3.6 Financing Water Resource Management

Water has to be seen as an economic good. Thus, the financial implications of managing the country's water resources should be recovered from the users, e.g. through abstraction tariffs of large-scale water users.

- **(H)** Introduce annual water abstraction permits, taxes and tariffs for agricultural and industrial bulk water users;
- **(H)** Allocate a prescribed proportion of these tariffs to support WRM initiatives.
- **(M)** Regulate private ownership of water sources and introduce appropriate charges to owners of boreholes and wells.
- **(M)** Allocate funds to support the establishment of management tools for sustainable WRM.

4. SANITATION AND HYGIENE SUB-SECTOR STRATEGY

The Sanitation and Hygiene (S&H) strategic approach is to provide a strong rationale for investment; define minimum standards; prioritize technical options and; propose methods to guide accelerated improvement in basic sanitation and hygiene services for all people. More focus is given on S&H by addressing the sub-sector independent of water supply. In the present South Sudan situation, urban and rural sanitation technologies are largely similar. This chapter therefore, provides a combined urban and rural strategy, even though some isolated large programmes may provide more urban wastewater treatment and management infrastructure in some parts of a few larger towns.

4.1 Current Situation and Context

A KAP Survey, carried out in seven States of South Sudan, established that⁵:

- Most communities in South Sudan do not use pit latrines because traditionally they are used to openly defecating in the bushes.
- Latrine coverage was 36%⁶, with 11.4% having a hand-washing facility and of the available toilet facilities; only 1.5% was ventilated improved pit (VIP) latrines.
- In communities that have overcome the traditional hurdle and are willing to use latrines, the lack of latrines is blamed on lack of finances.
- In some parts of the States, collapsing formations, and/or rocky grounds hampers construction of pit latrines.

Apart from the small systems covering the Ministries complex and Hai Amarat in Juba, there are no sewage systems in place in the whole of South Sudan. Presently, the majority of citizens use various types of latrines with seepage pits or septic tanks.

The allocation of institutional responsibilities for urban and rural sanitation between MWRI, MHPP and Ministry of Health (MoH) and the City Council/County (Local Government) has not been clearly determined. The responsibilities still need to be clarified and ideally aligned with the respective organisations in charge of water supply, both at the policy and the operational levels.

The long decades of war have seen a decline in sanitation services, and current capacities require substantial strengthening. Emerging urban centres may soon require sewerage networks and the Sanitation Departments in the MHPP and in the States will start to put in place a mechanism for operating de-sludging facilities or equipment for emptying septic tanks.

Overall the level of access to appropriate sanitary facilities is estimated to be 14.6% and much lower in remote rural areas. In reality, most of these facilities are in very poor condition due to lack of maintenance. The general level of hygiene awareness and of vectors of disease is very low. The incidence of waterborne and hygiene-deficiency diseases is widespread. Sanitation achievements are still very modest in South Sudan as there was previously not enough emphasis placed on it, largely due to long period of civil war. Concepts such as Community Led Total Sanitation (CLTS) need to be promoted alongside incremental improvements in latrine design which are commensurate with household affordability. The focus will continue to be on household, environmental and institutional sanitation such as in public places, including schools, health facilities, markets and bus parks, provision of products and services for household latrine upgrading and equipment for sewage removal and disposal. MWRI will work more closely with MoH and Ministry of

⁵ UNICEF 2009

⁶ This percentage is higher than assumed in the CSO2 report; this may be explained by the fact that household latrines are shared by up to five households.

General Education (MGE) before contracting institutional latrines at health centres and schools to ensure facilities are built where they are really needed and to avoid duplication. Unsustainable subsidies will be discouraged.

4.1.1 Existing Legislation and Policies

Although the Water Policy does not address S&H as an entity, the strategic framework clearly treats it as an independent sub-sector

In the Health Policy, the MoH and other relevant line Ministries will raise awareness of the potential health hazards due to lack of adequate sanitation and hygiene services. This policy ensures that all renovated and newly constructed health facilities have adequate sanitation and hygiene services.

In the Local Government Act, local Government councils are expected to enact by-laws to regulate and standardise sanitation and hygiene services.

S&H is not addressed in the Environmental Protection Bill or the Transitional Constitution.

In the draft Education Bill, there is currently no explicit provision that the MEST will ensure that S&H facilities are provided for both girls and boys at schools.

4.2 Goals and Objectives

The overall goal is to ensure progressive universal access to improved sanitation and hygienic practices for all people living in South Sudan through effective community mobilisation to address harmful current practices, hygiene promotion, and delivery of S&H products and services on a sustainable and equitable basis.

4.3 Strategic Approach

There is a need for two different strategic approaches for technical solutions for rural and urban sanitation.

In urban contexts where UWC operates, it should get the mandate to manage also urban sanitation (including sewerage systems). Alternatively, in areas where UWC is not operating, the mandate for sewage collection and disposal (from septic tanks and solid waste) will be with State Government Ministries responsible for housing and town planning or the local Government (municipalities). In such towns, urban water supply services will be aligned and synchronised with the provision of locally appropriate sewerage / sanitation facilities. As such, the institutional arrangements for the management and operation of sanitation facilities could be as follows:

- At the State level, urban sanitation falls under the Directorate of Water and Sanitation, within the Department of Urban Water Supply and Sanitation and at the County level; it is a shared responsibility between the Inspector for Water and Sanitation and the Department of Public Health.
- Local Governments will manage all the assets put in place. To ensure sustainability, Government will set service tariffs. The Federal Government will support the development of strategic management plans, capacity development and where required transitional subsidy schemes.

For the purpose of awareness raising and S&H promotion in rural and urban environments, a single strategic approach is possible and will include:

- An incremental approach: The focus is on moving communities from harmful traditional practices of open defecation to at the least introducing simple pit latrines. This also means that monitoring of progress will be done using various methodologies and indicators that focus on improved hygiene practices.

- A targeted approach. (i) Schools, (ii) clustered villages, small towns, (iii) peri-urban and urban centres, will be targeted as a priority when implementing S&H promotion. Schools are selected because children are considered as significant change agents within the community, and overall clustered communities because the chances of faecal-oral infection are greatest in areas with the highest population concentration. The inclusion of areas where cholera is recurrent will be given highest priority.
- A demand responsive approach. After receiving appropriate information, advice and awareness creation, users will decide on the type of facilities (not only pit latrines) they prefer, pay the construction costs, and manage the operation and maintenance of the facilities. Local Governments will be responsible for hygiene promotion and promoting demand by (a) campaigns, (b) assisting with designs and (c) developing S&H services and products, which are locally affordable to meet demand of even the poorest communities.
- A “package” approach. Rural and urban water supply development will in addition to construction and installation, include all soft components like community mobilization, community-based planning and monitoring, hygiene promotion (including maintaining a safe water chain and promotion of household sanitation), gender awareness creation and capacity building required at user level for continued use and sustainable operation of WASH facilities
- Community approach to sanitation. Selection of appropriate community based sanitation approaches, including, where feasible, CLTS, and adoption of the recommendations of the “Lusaka Declaration”⁷.
- Integrated approach to rural and urban S&H. In view of the rapidly increasing urban population. The fundamental difference in terms of sanitation between rural and urban areas in South Sudan is population density, hence space for latrines. Thus:
 - In rural areas, new latrines can be built when the existing pits are full. Other options include composting or Ecological sanitation latrine technologies which seek to make productive use of waste material.
 - A need to analyse urban situation scenarios, evaluation of technical solutions and soft components, including acceptability of technology used and design of master plan for urban sanitation.
 - Safe disposal and treatment facilities for sludge must be developed at specifically designated sites. Analyse different possibilities for disposal and/or treatment of sludge and plan such sludge treatments for the State capitals and big towns.
 - Upgrading of existing systems: Current technologies can be upgraded so that the collection chambers are lined and a more systematic sludge collection system is put in place. Possibilities include cesspool and septic tank emptying by private sector.
 - Improved designs: Basic pit latrines may be upgraded by making squatting plates more durable and easy to keep clean (either through locally adapted methods or providing water-resistant surfaces of concrete or high-density polyethylene slabs over the pits or trenches, providing privacy screens made of local materials to preserve the dignity of users and a means of fly control either through drop hole covers or ventilated pit arrangements. Generally, the “sanitation ladder” of incremental latrine improvement will guide the user to the most affordable and sustainable option).
 - Guidelines for the construction of appropriate household and institutional latrines have been developed by MWRI and can be accessed via the MWRI website (www.mwri-goss.org).

⁷ See also <http://www.communityledtotalsanitation.org/resource/africa-regional-clts-sharing-and-learning-workshop-zambia> visited 20101214

4.4 Strategic Components

Three strategic components are formulated: enabling environment; demand creation and; accelerated supply of products and services.

4.4.1 Component 1: Enabling Environment

4.4.1.1 Rational Planning

- **(H)** Validate the results of the recently completed baseline exercise (South Sudan Health & Household Survey, 2010) through localised data collection exercise, including the mapping of open defecation practices in the community prior to CLTS initiation and more school and other institutional centred sanitation and hygiene behaviour. Use these data to establish baseline indicator values;
- **(H)** Set objectively verifiable indicators (OVIs) for S&H coverage and behaviour change reflecting the interests of key stakeholders such as women, youth, faith-based and vulnerable groups, donors and authorities;
- **(H)** Establish realistic coverage increase as well as equity targets for both urban and rural sanitation and hygiene;
- **(H)** Plan a targeted approach to all S&H improvement programmes in Schools, (ii) clustered villages, small towns, (iii) peri-urban and urban centres.
- **(H)** Develop technical guidelines for appropriate S&H solutions for public places (e.g. markets, schools, clinics, and Government buildings) in rural and urban areas. (See link to technical guidelines above).
- **(H)** Adopt an integrated UWS and wastewater management system.
- **(H)** Adopt and operationalize MWRI criteria for mainstreaming S&H facilities in schools, health centres, markets and in IDPs settlements.

4.4.1.2 Legislation

- **(H)** Lobby for enactment of by-laws for the protection of the environment from sanitary waste. This includes demarcation, and where needed, the purchase of land for safe disposal of sludge for larger settlements and towns.
- **(M)** Empower States and localities to integrate sanitation regulation with housing development.

4.4.1.3 Efficient Institutional Set-up

- **(H)** Create an independent institutional mechanism for S&H to be monitored and coordinated between rural and urban centres, involving representatives of MWRI, UWC, MHPP, relevant Ministries at national and State level, civil society and the private sector (See also 4.4.1.5).

4.4.1.4 Political Commitment

- **(H)** Lobby for increased and sustained commitment of the political leaders in giving high priority to S&H promotion, which translates to increased resource allocation at all levels.
- **(H)** Formally adopt of the Global Sanitation & Water for All principles and progress markers to track public service budgetary practice and private sector investment in sanitation service reforms and related components of upgrading infrastructure.

4.4.1.5 Multi-Sectoral Partnerships

- **(H)** Establish an effective coordination mechanism of sanitation and hygiene subsector stakeholders at all levels;

- **(H)** Encourage partnerships and other informal affiliations of common interest groups to share resources, know-how and experienced personnel, drawing particularly upon the diverse expertise available among members of the WASH Humanitarian Cluster who seek to support transitional development across the WASH sector.
- **(M)** Establish procedures for collaboration with institutions responsible for education, environment, health, housing, physical planning and the local Government for integration of hygiene promotion and sanitation interventions at all levels.

4.4.1.6 Decentralisation

- **(H)** Provide technical and capacity development support to the Counties to take responsibility for sanitation and hygiene promotion.
- **(H)** Support County authorities to enforce local by-laws, which stipulate minimum service requirements for basic household sanitation services.

4.4.1.7 Performance Monitoring

- **(H)** Develop and implement sub-sector performance measurement mechanisms.
- **(H)** Develop and implement procedures for monitoring S&H sub-sector performance. Key indicators might include:
 - Reduced child infant morbidity/mortality attributable to diarrheal diseases;
 - Enactment and enforcement of S&H legal framework;
 - Sub-sector Cluster coordination forums active at State and local levels;
 - Government allocation of funds for S&H promotion in MWRI budget and other line Ministries;
 - Donors who dedicate WASH funds for S&H promotion;
 - Sustainable, ecological safe excreta management systems in place;
 - PHAST, CHAST, CLTS, SLTS, BCC toolkits and Information, Education and Communication (IEC) materials adapted and operationalized;
 - Advocacy campaigns developed, applied and tested for efficacy at different levels;
 - Private marketing and product/service companies contracted to conduct sanitation marketing campaigns;
 - Latrine options manual completed with regional variations developed and piloted;
 - Hand washing with soap and safe water chain are elevated to a priority status in planning WASH at all levels;
 - Number of households actually practising the full hygienic water chain;
 - Number of Open Defecation Free (ODF) communities.

4.4.2 Component 2: Demand Creation

- **(H)** Develop a strategy for adapting, standardising and operationalizing S&H promotion approaches, and related manuals, suitable to the South Sudan context such as CLTS and SLTS, PHAST, CHAST, school hygiene clubs, marketing of sanitary components, HWTSS, BCC and other proven S&H approaches;
- **(H)** Promote active participation of all community members including women, youth and children, in all aspects of planning, design, operation and maintenance of sanitation and hygiene facilities;
- **(M)** Develop tools for mainstreaming HIV/AIDS and gender vulnerability issues into the design of sanitation services (especially in schools and at health facilities).
- **(M)** Develop a plan for training community mobilizers at all levels in the use of the above-described sanitation and hygiene promotion approaches;
- **(H)** Actively promote S&H alongside water supply, targeting vulnerable groups, and more specifically women and children;
- **(H)** Adapt and standardise the World Health Organisation (WHO) water points inspection sheet for use during S&H promotion;
- **(M)** Include the media and private communication/advertising sector in promoting S&H behaviour change;
- **(H)** Adapt, translate and use IEC materials developed for S&H promotion, incl. for non-literate target groups;
- **(M)** Establish information sharing platforms to serve the sub-sector, building from the WASH IMS information hub.
- **(M)** Promote social marketing for S&H
- **(M)** Establish a national award/incentive scheme to reward open ODF communities

4.4.3 Component 3: Accelerated Supply of Services

4.4.3.1 Supply Chain Development

- **(H)** Establish supply chain mechanisms for S&H inputs, that involves the private sector and which generate livelihood opportunities related to the local manufacture of S&H products and services.

4.4.3.2 Affordability

- **(H)** Promote new innovation in the development of low cost S&H products and services for households and relevant institutions through engagement of the academic fora and Diaspora.

4.4.3.3 Private Sector Participation

- **(H)** Regulate collection of sludge and subsequent disposal at demarcated sites outside the urban centres;
- **(M)** Promote partnerships between international and South Sudan WASH actors, by putting it as an obligation in contracts;
- **(M)** Explore market-based and fiscal modalities, which would serve as an incentive to private actors and local entrepreneurs in supporting the expansion of public S&H services.

5. RURAL WATER SUPPLY SUB-SECTOR STRATEGY

The purpose of the Rural Water Supply (RWS) strategy is to provide a strong rationale for investment, minimum standards, prioritization of technological options, and to propose social mobilisation methods to guide accelerated improvement and sustainable management of safe water supply services for all people in South Sudan.

5.1 Current Situation and Context

A KAP Survey, carried out in South Sudan in 2009, established that on average, water consumption is about 6 litres per capita per day and only 20% of the population contributes to O&M of their water supply. In as much as data on functionality of water facilities is limited, the existing data suggests that between 30 to 50% of water points are non-operational at any time in the different States. Effective supply chain systems for water point maintenance have yet to be put in place and warehousing capacity and stock management capacity is still very limited at rural County levels.

The remaining Guinea worm endemic areas in the country are largely concentrated in five remote rural Counties where critical road access constraints, instability and hydrologically challenging conditions significantly increase the marginal cost of improving critical transmission-breaking safe water interventions. There is no baseline data on equity i.e. differences in water supply coverage across South Sudan other than the State level access to safe water summary tables published in the South Sudan Statistical Yearbook of 2010. On-going water point inventory exercises led by MWRI are progressively revealing the extent of safe water access gaps and providing proxies to determine service access levels.

5.1.1 Existing Policies and Legislation

The Water Policy provides the guiding principles, specific objectives and key priorities for RWS.

The Health Policy states that MoH, in collaboration with other relevant Government Ministries and departments, will raise awareness levels of the potential health hazards caused by unsafe water supply. In addition, MoH shall ensure that all renovated and newly constructed health facilities in particular have an adequate water supply and appropriate latrines.

The Local Government Act provides the Local Government Councils with the mandate for establishment and maintenance of water drainage systems and potable water facilities in the respective areas of jurisdiction.

5.2 Goals and Objectives

The overall priority is to increase sustainable access to safe water supply facilities for all people living in rural areas of South Sudan through:

- Construction of new water facilities
- Rehabilitation and maintenance of existing water points
- Establishment of community-based operation and maintenance structures

5.3 Strategic Approach

The approach will be demand responsive. Citizens will make an informed choice based on appropriate information and advice on technical effectiveness and institutional feasibility. They will decide on what type of facilities they want; pay their share of the construction costs and manage the operation and maintenance of the facilities. Local Governments (County and Payam levels) will be responsible for regulating the appropriate demand of the communities and ensure the right to access to the poor in particular. The State and County authority will do the yearly planning, identify gaps and consult with the citizens and their communities through information, advice and stakeholder consultation. Additionally a system is to be set up, whereby the communities can take initiative and ask for support from Government to realise water supply improvements at their own cost. The State authorities will advise to ensure that appropriate regulations are followed.

Technical guidelines relating to several types of rural water system design appropriate for South Sudan are available for download at the MWRI/IMS website: (www.sswich-mwrigoss.org)

- A Targeted approach:
 - Schools,
 - Clustered villages and small towns,
 - Guinea-worm endemic areas,
 - Cholera-prone areas
 - Areas with high returnee populations
 - Other appropriate water facilities such as haffirs, dams and rainwater harvesting systems will be developed to provide water for livestock and other agricultural purposes which might mitigate the potential for conflict over water access rights and otherwise stimulate local livelihood opportunities.
 - Underserved communities
- “Package” approach: Provision of RWS facilities include all awareness raising and education activities associated with water supply management.
- Community based water management: The O&M strategy will include strengthening of local institutions and good management of facilities, full involvement of users, community management of services, sense of ownership, and participation of women and children at all levels. Mechanisms will be established to develop local public and private capacities for promoting construction and O&M of facilities.
- Emergency Preparedness and Response (EP&R): In emergency situations, such as natural disasters, return to severe civil unrest leading to displacement and acute disease outbreaks, the EP&R approach will be put in place. State Governments have the responsibility for EP&R. Humanitarian agencies should collaborate closely with State authorities to fulfil their role in EP&R through existing WASH Cluster Coordination mechanisms.
- Capacity building of State Governments: As an interim measure, Technical Support Units will be put in place to provide capacity development support to State and County level Governments in the field of RWS. Support will be phased out once capacity benchmarks have been reached but this is not foreseen to occur within the timeframe of this strategic framework. All support provided will be closely coordinated with the respective State Ministries.

5.4 Strategic Components

The RWS strategy contains three components: (i) the enabling environment, (ii) sustained services and (iii) accelerated supply of services.

5.4.1 Component 1: Enabling Environment

5.4.1.1 Rational planning

- **(H)** Establish OVIs for safe water coverage, equity, functionality and per capita investment cost of rural safe water sources.
- **(H)** Accelerate Water point inventory efforts to establish the borehole “asset” base which will determine current service gaps and offer guidance on the potential for upgrading water systems to serve larger populations through small scale piped water schemes and water yards.
- **(H)** Fully operationalize the WASH IMS, furnished with geo-referencing tools capable of producing map(s) covering South Sudan. The emphasis being to encourage reporting and sharing of information, which is essential for knowledge based decision-making. Link the database to a GIS service able to provide needs based maps to relevant sector agencies at decentralised levels.
- **(M)** Design and implement a targeted approach to raising safe water coverage focusing on communities and public institutions – especially schools and health centres.
- **(M)** Set minimal standards for water points and capacitate monitoring system to provide quality assurance against these standards in the delivery of safe water supplies to the community.
- **(M)** Stimulate local improved water system design innovation and development and disseminate findings/practice among all key stakeholders.

5.4.1.2 Political Commitment

- **(H)** Lobby for increased and sustained commitment of the political leaders in addressing RWS improvements and sustainable management systems, translating to increase in funding and awareness creation at all levels.
- **(H)** Engage the political leadership at national and local levels to ensure that the rights of access of the people to safe water supplies are assured through appropriate regulatory reform. The emphasis being to preserve the role of Government in developing regulations and guidelines, which govern ownership and management of new and existing systems.

5.4.1.3 Multi-Sectoral Partnerships

- **(H)** Seek to more closely integrate the work of humanitarian WASH actors engaged through existing WASH Cluster mechanisms at national and State level in supporting and capacitating national and State level Government actors in planning, regulating and monitoring safe water supply developments in the rural areas.
- **(M)** Coordinate the needs assessment and budget allocation processes among the State Ministries in charge of RWS (largely MoPI) with the MoH and MEST, which also have accountability in terms of provision of water supply to health centres and schools, respectively. The line Ministries in charge of RWS will support the health and education Ministries in terms of construction of their facilities, supervision support and technical knowhow, but will not allocate part of their budget to these water sources.

5.4.1.4 Decentralisation

- **(H)** Focus capacity development, monitoring and sustainability (including supply chain) functions at County levels to create an enabling environment in which communities, local Government and private sector actors can effectively manage safe water supply services

- **(M)** Adapt selection of locations and technology types, design, operation and maintenance systems of new water facilities to local specific contexts, needs and customs.
- **(M)** Encourage and support co-financing initiatives of the communities to improve and build their own water supply.

5.4.2 Component 2: Sustained Services

- **(H)** The basis for sustainability in RWS services is the Community Based Management System (CBMS), which is based on the following principles:
 - Even when infrastructure is owned by local Government, user groups are responsible for O&M of facilities;
 - Initially, the Government will procure and provide spare parts as part of a revolving fund mechanism, which will generate cash for replenishing supplies by the local Government. The private sector will then ultimately provide all technical services for O&M – including the provision and distribution of spare parts on cost recovery and subsidies systems. This is an important decision and shouldn't be made upfront, but carefully addressed and evaluated. There are also options like "standard exchange approach" for O&M
 - The role of Government consists in regulating, monitoring, and facilitating support by private sector and user communities in operation and maintenance.

5.4.2.1 Community Ownership

- **(H)** Develop guidance to raise community water system ownership, describing mobilization methods and training processes, which are age/gender sensitive and well adapted to the South Sudan context, whereby the needs of both pastoralist and sedentary populations are met with equity.
- **(M)** Develop regulatory guidance for O&M and capital/recurrent cost contributions where appropriate⁸;
- **(M)** Provide on-the-job training of selected community mobilizers at County and Payam levels, in the use of the above-described manual, starting with the use of the manual for the implementation of new water sources and followed by progressively training of communities to manage their existing water sources.
- **(M)** Develop legal and financial guidelines on roles and responsibilities of providers and consumers in the design and implementation of new water supplies.

5.4.2.2 O&M and Supply Chain

(H) Explore public-private partnership potentials to support water system O&M and service demand. RSS and Partners may initially provide conditional grants to State level Governments to procure spare part inventories with the aim that revolving funds be

⁸ Including (a) practical guidelines how to develop a DRA for construction of new water points, and (2) train County officers to introduce the approach in the communities. The manual should include (3) procedures and strategies regarding handover of schemes to communities, (4) promotion and formalisation of capital contribution to construction works, tailored to the knowledge and expertise on water and sanitation, and specific varying cultures in Southern Sudan. The manual should also (5) link the construction of safe water points to improvement in sanitation and hygiene practices of the communities requesting for a water source, and should include (6) practical tips on how to maintain an improved water point. The manual should specifically address the active involvement of women, children, HIV/AIDS infected people, handicapped people and otherwise vulnerable groups in the planning and design of rural water schemes.

(WSP/RWSN, 2006; Spare Part Supplies for Hand pumps in Africa - Success Factors for Sustainability; Field Note).

generated through the sale of such parts to local communities. Spare parts will be sold at cost price and accounted for, so that the stock may be replenished regularly through purchases from the local suppliers.

(H) Analyse pros and cons of various supply chain models e.g. through market research and advocating technology standardization where appropriate, and considering the reduction of private sector constraints such as taxes.

5.4.3 Component 3: Accelerated Supply of Services

5.4.3.1 Affordability and Feasibility

The deciding factors for appropriate technologies will be affordability for the users or best use of project/ Governmental funds. Feasibility of the technology in the geographical area, in terms of aquifer types, rainfall characteristics etc. needs to be considered.

The Strategy will be to promote the introduction of feasible, affordable and otherwise appropriate technologies at State and County level, where applicable. This may be achieved through the following activities:

- **(H)** Establish, introduce and mainstream assessment of conflict potential at water points by creating conflict risk assessment maps for high risk areas with clashing water demands.
- **(H)** Provide RWS through an expanded programme of hand pump installations - largely standardised upon the India MkII standard or deep well pump type and integrated with a sustainable supply chain system for spare parts provision at the closest point to users.
- **(H)** Explore opportunities for construction of water yards for clusters of settlements where existing population concentrations provide an economy of scale and appropriate sustainability assurances.
- **(H)** Explore options of upgrading high yielding boreholes to water yards considering localised population density trends as well as the commitment and capacity of the users to sustain the facility.
- **(H)** Study all prevailing drinking water supply technologies used in South Sudan on a State by State basis, including documentation from all stakeholders, and compare with technologies used successfully in countries that are context-wise comparable.
- **(L)** Create/produce/update hydro-geological maps.
- **(M)** Establish, introduce and mainstream geophysical survey as standard in order to increase borehole success rates.
- **(H)** Establish a borehole “passport” featuring all important details on a borehole including the results of pumping tests and water quality.
- **(H)** Establish water quality check as part of water point commissioning e.g. all water supplies be analysed for water quality before installation and commissioning⁹.
- **(H)** Pilot and upscale rainwater harvesting.

⁹ Check UNICEF/GoSS water quality guidelines (2010).

⁷ Standard Exchange: Any damaged mechanical part of the pump like driving shaft, conduct pipes, pump stand, etc, are directly changed for new parts or replaced by refurbished parts. The broken parts are taken to a Mobile workshop, repaired or refurbished and then reused on the next pump.

5.4.3.2 Appropriate Technologies

In South Sudan there are variations in the hydrogeology profiles of the different States, which calls for different appropriate technology choices. The vast majority of hand pumps in use are India Mark II (>%80), followed by Duba pumps, Afridev and various other models.

- **(H)** Promote the introduction of affordable and appropriate technologies suited to local hydro-geological realities. The choice of appropriate technologies should be piloted and appraised to gauge their uptake.
- **(M)** Promote alternate geophysical exploration methods to ascertain groundwater access feasibility in challenging hydrogeological areas where the need for fresh water is a critical Government priority for stability and public health reasons.

5.4.3.3 Rehabilitation and Repairs

In view of the high number of broken down boreholes in South Sudan, the initial focus should be to:

- **(H)** Support technical innovation and capacity development to repair & rehabilitate existing boreholes with blocked or damaged downhole components (fishing tools and systems) as this is frequently the least cost option of bringing a borehole back into productive use.
- **(H)** Introduce routine reporting and response system related to the functionality of water points and link report consolidation at the national level with the WASH IMS.

5.4.3.4 Private Sector Participation

- **(H)** Lobby for an improved business environment for local civil society organisations, consultancy services and companies providing specialist water supply development and sanitation/hygiene services.
- **(M)** Reduce the use of NGO-owned and State-owned drilling rigs, and promote competitive contracting of private drilling contractors for quality service delivery;
- **(M)** Stimulate setting up an association of private water operators at State level and foster mechanisms for regular interaction with State level sector coordination actors.
- **(M)** Establish public-private-partnerships for operations and maintenance of RWS services including supply chains in terms of markets for spare parts and local production.

5.4.3.5 Water Quality Monitoring

- **(H)** Establish water quality testing laboratories in all 10 States, and hire and train required staff. Ensure testing of water samples for their physical, chemical and bacteriological quality as prescribed in the water quality guidelines for South Sudan for each new water point and for monitoring of existing facilities. The laboratories will be self-sustaining through the payment of laboratory services. Water quality data will be recorded at RSS level in the WASH IMS data warehouse system.
- **(H)** Institutionalise the use of standard designs that inhibit contamination of surface water or shallow groundwater by all implementers of borehole programmes. These include sanitary seals, sealed platforms and capturing water strikes that cannot be contaminated by surface pollution (latrines, dump sites, burial sites and animals).
- **(H)** Evaluate the outcomes of pilot studies on household water treatment and safe storage to come up with optimal guidance for the various States.

6. URBAN WATER SUPPLY SUB-SECTOR STRATEGY

The purpose of the Urban Water Supply (UWS) Strategy is to guide policy makers and service providers on how fast they could accelerate and increase water supply coverage efficiently in urban areas in all States of South Sudan so that disparities of services are addressed.

6.1 Current Situation and Context

Although statistics indicate slightly better living conditions in urban areas as compared to the rural areas; the largest share of the country's urban population is underserved and of low income. In most of the neighbourhoods where this segment of population lives, water supply is de-facto from public, communal wells or (privately built) boreholes or from informal sector distributors that operate donkey carts or motorized tankers.

UWC currently manages much of Juba's water supply and a number of urban centres (Wau, Malakal, and Renk), characterised by small water treatment facilities with little storage and distribution networks unable to cover major parts of these urban areas. UWC is partially managing Bor and Maridi stations.

UWC is collecting uneconomical tariffs that do not cover even basic operation and maintenance costs, let alone salaries of its employees. Cost recovery is one of the biggest challenges as there is no culture or strict and consistent enforcement for consumers to pay for the service. Pilots do exist on ad-hoc basis whereby local operators, NGOs and CBOs are involved in neighbourhoods to work towards cost recovery or at least operation and maintenance costs. In all States, other urban centres either have very small facilities funded by development partners with little or no local Government management capacity.

Various projects, mostly funded by external donors, aim for increased or rehabilitation of water supply coverage, particularly in large parts of Juba and some State capitals. So far none of these projects follow a deliberate integrated approach to address water supply, sewerage and drainage of storm or used waters.

Operation and maintenance of UWS facilities is poor due to lack of institutional capacity, skilled personnel and know-how in modern water management practice at all levels. Operational time of Juba water supply, for example, currently varies between six and twelve hours a day. While some equipment has been replaced in the past with support from aid agencies, regular (preventive) and routine maintenance has not been put in place as a result of a poor maintenance plan. Despite the construction of a new treatment plant and overhead reservoirs to increase production, losses by leakages in the old distribution networks are extremely high. In addition, records on the quantities of water production and distribution are not kept since flow/bulk meters are not available for measurement of inflows/outflows. At present, only few maps are available on UWS facilities, zoning, etc. and none of the data is digitised. The distribution networks are inadequate to cover rapidly expanding and new urban centres, and are in need of immediate rehabilitation and expansion.

User revenues are insufficient to cover costs of operation, maintenance and capital investments. UWC charges users organised in ten different user categories a flat monthly tariff for water supply services. Current tariffs vary from one station to another. For example, in Juba, UWC has a total of 2504 customers, each paying between SDG 9 (USD 2.5) and SDG 100 per month (USD 40) i.e. an average of SDG 21 per month (USD 8.4). In addition, UWC charges a connection fee of 255 SDG (USD 102).

At the State level, UWS Departments are housed under the Directorate of Water and Sanitation in different State Ministries responsible for water and sanitation.

6.2 Goals and Objectives

The overall goal is to ensure efficient rehabilitation, expansion, development and management of UWS services on a sustainable, equitable and cost recovery basis.

6.3 Strategic Approach

6.3.1 Technical Aspects

- **(H)** Use existing technical guidelines, manuals and develop others when required.
- **(H)** Carryout assessments or baseline studies related to renovation, rehabilitation and/or replacement and/or expansion of all kinds of existing (potentially old) assets (catchment facilities, treatment plants, distribution systems, storage tanks, house connections, etc.).
- **(M)** Prepare action plans for all kinds of assets by prioritizing the tasks for rehabilitation and/or replacement/expansion.
- **(M)** Use different technical options and innovations based on population size, ease of operation and maintenance, source of water, and affordability and cost recovery.
- **(M)** Establishment of archives for all assets and infrastructure planning marking of service lines and location of important appurtenances.

6.3.2 Operation and Maintenance

- **(H)** Develop guidelines, procedures, regulations and bylaws for involvement of Public Private Partnerships.
- **(H)** Carry out O&M surveys and prepare action plans including management mechanism for the O&M system.
- **(H)** Improve Service Providers' customer relations to increase collection rates.
- **(H)** Carry out regular Water quality monitoring to ensure safety of the services.
- **(M)** Involve the private sector in O&M of UWS services, incl. developing deliberate mechanisms to enable setting up of service providers and operators such as water vendors to supply water.
- **(M)** Support States, Counties and communities to develop their own sustainable solutions for service provision, e.g. through private service providers.
- **(M)** Computerise and update consumer database and billing.
- **(M)** Reduce non-revenue water e.g. through leak detection systems, regular rehabilitation/repair and replacement of pipes, metering and control of illegal connections.

6.3.3 Cost-Recovery Financing and Targeted Investment

- **(H)** Identify various types of costs and expenses.
- **(H)** Focus interventions on urban areas that have low coverage and constitute a broader customer base.
- **(H)** Review, propose and enforce appropriate tariffs, including a process for tariff calculation and approval for each town.
- **(H)** Establish a metering policy and carry out a full metering of customers where applicable.
- **(M/L)** Consider current rural type of water supply systems in some towns to be integrated to urban water supply utilities.

6.3.4 Governance and Institutional Aspects

- **(H)** Increase autonomy of the service providers, so as to manage and account for revenues.
- **(M)** Review, formulate and develop regulations, bylaws, procedures and guidelines for service providers.
- **(M)** Introduce performance/management contracts between service providers, operators and relevant Government/ institutions.
- **(H)** Assess, review and restructure public urban water entities.
- **(M)** Develop a water safety management plan.
- **(H)** Develop and implement a system for regulating small scale water service providers.
- **(H)** Develop and implement a coherent approach regarding services to the urban poor.

6.3.5 Integrated Planning

- **(H)** Incorporate Environmental Impact Assessment component in all UWS projects.
- **(H)** Adopt participatory planning approaches in all UWS projects.
- **(M)** Update and use baseline data from all States for planning and coordination purposes.
- **(M/L)** Liaise with other line Ministries developing major infrastructure including master plan to consider UWS facilities.
- **(M/L)** Enshrine in UWS plans pro poor approaches to accessing services.

7. WASH SECTOR OVERALL GOVERNANCE AND DEVELOPMENT STRATEGY

The strategy for overall governance and development of the WASH sector is guided by both sector specific policy and principles as well as by overarching RSS policies and principles. The SSDP will further inform and guide envisaged Actions Plans for implementing this WASH Sector Strategic Framework.

7.1 Institutional and Legal Framework

The purpose of this section is to outline cornerstones and the process towards the establishment of a sound institutional and legal framework, including establishment of a Water Council and enactment of WASH sector legislations.

7.1.1 Current Situation and Context

The lead Ministry of the WASH sector is MWRI. It is the central policymaking, management and coordinating body for the sector (see present MWRI Administrative and Operational organogram in annex 1,5.1), even though specific parts of subsectors remain under other Ministries (e.g. urban sanitation is under MHPP).

At the State level, the WASH Sector is not represented by a Ministry on its own, but specific Directorates of Water and Sanitation exist in all States, mostly in the Ministry of Physical Infrastructure (MoPI). State Ministries responsible for water and sanitation have the responsibility of coordinating water and sanitation affairs at State level. However, the proper establishment of these directorates remains a challenge. At County level, there usually is a Department for Water and Sanitation, headed by the Assistant Commissioner for Water and Sanitation. WASH staff in both the State Ministries and the Counties, are partly seconded from MWRI. Non-funded WASH positions are at Payam level (the WASH Committee) and Boma level (village water committees).

For now, the only institutionally recognised water “service provider” is UWC. There are other semi-formal WASH service providers like tanker trucks, sewerage trucks and donkey carts that currently operate under weakly enforced regulations. An association exists for private service providers (tanker trucks), but not for users.

Different fora coordinate the WASH sector. The South Sudan Water Sector Steering Committee (SSWSSC) will serve as the main technical advisory and coordinating body in developing an enhanced sector institutional setup that provides for the necessary governance and regulatory instruments needed to achieve the Government ambitions in terms of WRM and sustained provision of WASH services to its citizens. Annex 1 provides the initial outline of such a sector institutional setup with at its core the creation of a Water Council. The institution will provide coherence between WRM and allocation of water among its various users; and the provision of WASH services. In the interim, Annex 2 recommends an interim maintenance of the current SSWSSC with somewhat amended terms of reference.

The WASH Bi-annual Planning and Coordination Meeting serves as a multi-stakeholder forum for progress reporting by different levels of Government and stakeholders.

From development partner side, there are two main coordinating fora. On the one hand, the South Sudan WASH Cluster Forum, comprising UN partners and WASH sector implementing NGOs who support the Government in providing an enabling environment for the delivery of both humanitarian and recovery WASH services and in strengthening accountability systems which facilitate sector coordination and provide a platform for sharing experiences and best practices. The WASH Cluster Forum has established terms of reference to guide the exchange of information, the tasking of specialist working groups to devise technical guidance and describes the accountability of various actors in relation to the coordination of Cluster actor activities with local Government stakeholders.

On the other hand, the WASH Donor Group (WASH DoG) was formed by the major WASH sector donors to enhance complementarity of support, and harmonise reporting.

7.1.1.1 Existing Policies and Legislation

The existing policies and legislation within the current RSS legal and policy framework is still to some extent fragmented, contradictory and incomplete. There is no specific legislation to guide the whole sector and define roles and responsibilities of the different institutions and levels of Government. However, some guidance is provided by the following documents:

Local Government Act

The Local Government Act captures water supply and management of local water resources as part of the concurrent powers shared between different levels of Government. However, it provides the local Government councils with the mandate for establishment and maintenance of water drainages and potable water facilities in their respective areas of jurisdiction.

Water Policy

In November 2007, GoSS at the time adopted its Water Policy. This policy provides a corner stone for the development and management of water resources and the provision of water, sanitation and hygiene (WASH) services. The policy provides for guiding principles, key issues and objectives in the sub-sectors.

Presidential Decree

According to the Presidential Decree 2008, MWRI also has a regulatory mandate to oversee the performance of UWS services, to inspect rural water facilities and to set water tariffs for urban and rural water. It is also overseeing water resources development, conservation and management.

Provisional Order for UWC

According to the Provisional Order, UWC has been given the responsibility to manage water supply, but not urban sanitation or sewerage services.

7.1.2 Goals and Objectives

The overall goal of the strategy on institutional structures and legislation is to establish a sound institutional and legal framework that facilitates improved sector performance by providing clear roles and responsibilities and ensuring transparent, accountable and coherent governance.

7.1.3 Strategic Approach

7.1.3.1 Development of an Institutional Framework

There shall be established a Water Council with an overall mandate of WASH sector management.

- **(H)** Engage in a participatory process of assessing and validating different institutional set-ups to identify a feasible institutional framework for both, the transitional and long term phases.
- **(H)** Establish the Water Council and the regulatory bodies based on the legal framework.
- **(H)** Appoint a permanent core sector development advisory group that will be assisted by specialised expertise to propose institutional reforms and prioritise sector implementation.

7.1.3.2 Development of a Legal Framework

- **(H)** Appoint a permanent core sector development advisory group for the process of developing the legal framework.

- **(H)** Carry out a comprehensive inventory and analysis of all current old and new laws and acts that make reference to water or water related health matters;
- **(H)** Organize a multi-stakeholder driven consultation to identify key building blocks for new WASH sector legislations that:
 - Cater for the establishment of appropriate institutions with clearly separated mandates;
 - Provide a regulatory framework for extraction and use of water;
 - Clarify the responsibilities for provision and regulation of sanitation services;
 - Define the role of local communities and authorities;
 - Accommodate cross-cutting issues such as gender and human rights;
 - Enable private sector participation;
 - Recognise the status of NGOs within the sector and strengthen their collaboration with local authorities.

7.1.3.3 Improved Sector Management

Sector Management refers to all forms of organizational, human resources and coordination aspects, other than (sub)-sector governance and regulation.

- **(H)** Critically review and strengthen the existing WASH sector staffing capacities and accountability structures at all levels of Government.
- **(H)** Ensure a minimum level of working infrastructure at all levels of Government.
- **(H)** Develop job descriptions for MWRI, UWC and State Directorates and County level Departments for water and sanitation.
- **(H)** Prioritise middle management and technical positions in staff recruitment.
- **(H)** Promote secondments from international Agencies/UN/donor Governments into the State Governments for knowledge transfer and capacity development.
- **(H)** Enforce adequate and timely administrative actions to be taken against misuse of resources.
- **(H)** Develop and implement standard documents and procedures at State and County levels for tendering, awarding and contract documents for all WASH implementations, and train WASH officers to use them.

7.2 Information Management and Communication

The purpose of this section is to outline steps towards achieving a more inclusive, strategic and accessible information management system, which serves the interests of RSS and its wide spectrum of sector partners.

7.2.1 Current Situation and Context

One deficiency in terms of sector management is information and knowledge management and communication among all sector stakeholders across all management levels. Initiatives are therefore being taken to improve information management with the support of development partners. The most important of these is the GIS based WASH IMS, a web enabled database of water sector assets and data to guide planning priority setting processes and capable of capturing tactical knowledge and documentation generated by partners (www.sswich-mwrigoss.org).

Internet communication between national, State and County levels remains to be a challenge and will become of increased importance as the further decentralisation of services evolves. The MWRI website will be used as an information portal and the WASH IMS site will be accessible through this portal when the design is complete. Currently the WASH IMS site is directly accessed through the link above.

7.2.2 Goals and Objectives

The overall objective of the WASH strategy in information management and communication is to facilitate evidence-based policy initiatives that enhance rational decision-making and planning, incl. effective prioritisation and financing of sector projects. An emphasis will be given to provision of an inclusive, strategic and accessible WASH information management system.

7.2.3 Strategic Approach

- **(H)** Carry out a participatory needs assessment to identify appropriate information and communication formats and training needs.
- **(H)** Continue water point inventory activities and document existing initiatives of sector information management systems.
- **(M/L)** Institutionalise and formalise reporting from Boma, Payam, County up to State and WASH IMS.
- **(H)** Expedite operationalization of the WASH IMS to facilitate evidence-based planning.
- **(H)** Strengthen links between WASH IMS and other relevant mapping services.
- **(H)** Develop a data set for urban water supply in WASH IMS.
- **(H)** Upgrade the MWRI website to a wide information portal for the sector, including a GoogleGroup (or similar) as a platform and archive of relevant correspondence.
- **(M)** Establish two-way information flow mechanism between different levels of Government; as well as WASH sector stakeholders.
- **(H)** Acquire and finance the recurrent cost of the necessary means for enhanced communication (e.g. sms, internet, radio) between MWRI, State Ministries and actors at the local level.
- **(H)** Assign and capacitate staff at State level in core data gathering exercises (water point inventory, O&M functionality reports etc.) and the use of appropriate means of IT based communication.
- **(M)** Explore options of pooling of resources and facilities at State level (operating joint communication centres among various Government entities).
- **(M)** Agree on a coherent and common understanding of water sector terminology and sub-sector structuring across all (new) sector documents (e.g. Policy, Strategic Framework, Development Plans, Future Legislation).

7.3 Planning

The purpose of this section is to map out the planning and budgeting processes, in order to foster more inclusive, efficient, evidence-based, transparent and accountable plans for all stakeholders.

7.3.1 Current Situation and Context

MoFEP provides planning and budgeting guidance for all Government spending agencies. For the period of 2011-13, the SSDP serves as the principal national development guide for all sectors, fulfilling the requirements of an Interim Poverty Reduction Strategy Paper (I-PRSP). The SSDP is structured into 4 pillars; each pillar consists of a number of sectors. The infrastructure sector (which the WASH sub-sector belongs to) is part of the economic development pillar, alongside natural resources and economic functions. This newly introduced pillar level in general allows for exploring synergies and solving problems that cannot be dealt with at Sector level alone, and fosters inter-ministerial and inter-sectoral coordination. For the WASH sector in particular, it provides a forum to address inter-sectoral issues of WRM pertaining to bulk water use for agriculture and industry. The SSDP spells out sector outcome objectives, as well as targets and major activities for the specific programme areas. All other strategies and plans, including this document, shall contribute to the national policy goals and objectives of the SSDP.

In general, RSS uses the model of 3 year rolling sectoral plans, updated yearly. These set overarching strategic priorities and sector targets to guide the sectors in annual prioritization, planning and budgeting.

The main mechanism for planning at national level is the Sector Working Group (SWG); and the WASH Sector falls under the Infrastructure SWG. The Group includes relevant RSS spending agencies (MHPP, MWRI, MRB, MoT and UWC, sector compositions are currently under review) and development partners. Based on current sector ceilings, the SWGs develop Budget Sector Plans (BSPs) that entail objectives for sector performance monitoring and report on previous performance, guide budget allocations in the annual budget and provide an outline for broad planning in the following 2 years. In the future, the BSPs will become more elaborate: the broad planning outline will incrementally be developed into 3-year rolling investment plans and the BSPs will also serve as tool for increasingly reflecting donor contributions on budget. The process to develop them works as follows:

- **Step 1:** The sector reviews and agrees on its sector objective(s), taking into account any changes made for the RSS Expenditure Priorities documents.
- **Step 2:** The sector reviews and agrees on its major programme areas and main activities under each spending agency.
- **Step 3:** Each spending agency reviews its performance by programme area; allocates its current budget ceiling according to its activities; identifies overall allocations to programme areas over the medium term; identifies additional allocations and activities under the higher revenue scenarios; prepares a narrative explaining its performance, planned activities and allocations.
- **Step 4:** For each donor project in the sector, donors set out the actual activities completed and those planned for, as well as the expenditure each project is expected to realize.
- **Step 5:** Budget allocations to programme areas for each spending agency over the medium term are compiled alongside donor numbers, to derive the total level of sectoral allocations.

Once the budget ceilings have been finally decided by the Council of Ministers, all agencies finalize their budget. In addition to the actual allocation of funds to specific budget lines and activities, the budget also indicates the amount of funds that will be transferred to other levels of Government, expenditure outturn of the previous year, as well as past and projected future revenue collection.

The total GoSS budget for 2010 was USD1,724 million, out of which 46% was budgeted for the six priorities of production, basic education, primary health, roads, water and security. However, only 1.5% of the GoSS budget was allocated to the water sector, whereas 4% of the donor funding was budgeted for the latter. Including both, GoSS at the time and development partners budgets the total funding for the sector amounted to 3.8% of the total resource envelope. Indeed, Government allocations to the WASH Sector have increased since 2009.

The South Sudan Aid Strategy aims to establish a system for Aid Reporting and Evaluation, which is transparent, participatory, and pays adequate attention to the evaluation of outcomes. There are mechanisms established to align Development Partner contributions to Government planning (IMAC, AIMS). Adherence to these mechanisms is not consistent and partly inaccurate, as resources for programmes covering more than one year are not released on a yearly basis. The linkage between humanitarian and development budgetary planning remains a challenge.

The key baseline documents relevant to WASH development planning are the Joint Assessment Mission (JAM) studies, the GoSS Household Poverty Survey, the Sudan Health

and Household Survey, 2010 and the CSO2. Currently, initiatives are being undertaken to provide further baseline data and enable stronger evidence-based planning.¹⁰

The States receive funds from RSS through Block Grants and Conditional Grants and they send grants to the local Government. In 2011, MWRI will transfer a total of SDG, 5 million equally divided among the 10 States. These conditional grants are allocated for salary and operational costs of the Directorates of Water and Sanitation in the State line Ministries. Since State line Ministries have autonomy to decide on the allocation of funds from RSS block grants and State Treasury between its various directorates, adequate funding for the WASH sector on State level heavily depends on the priority setting within the line Ministry in charge. Following the decentralisation policy, increasingly, funds will be decentralised to States rather than to centrally managed projects. Geographical allocation is politically sensitive. The States plan through Budget Sector Committees in a process that mirrors that at national level. However, Development Partner and NGO participation in the Budget Sector Committees is less consistent than at national level. MoFEP demands to ensure that County plans are fully incorporated in the States' plans and budgets in a consistent manner across States. The State and County Planning Guidelines¹¹ state that plans should quantify outputs wherever possible.

7.3.2 Goals and Objectives

In line with the RSS planning framework led by MoFEP, the goal of the WASH strategy in planning is to strengthen mechanisms that provide direction for inclusive, transparent and accountable sector-wide planning.

7.3.3 Strategic approach

- **(H)** Develop formats and guidelines, coherent with MoFEP general planning and budgeting guidance, for (sub-) sector investment plans, including issues of aid coordination and alignment.
- **(H)** Proceed with a participatory development of WASH (sub-) sector investment and development plans at national and State level.
- **(H)** Link sector resource allocation more closely to overall sector targets e.g. MDGs.
- **(H)** Use available baseline data and mapping services for planning; if no data is available, conduct quick surveys to support the planning process.
- **(H)** Support and complement donor mapping exercises undertaken by MoFEP, including humanitarian interventions, focussing on a shift from humanitarian towards sustainable development and capacity building.
- **(H)** Broaden involvement and participation for a wider range of stakeholders including private sector, NGOs and civil society throughout the sector planning cycle, esp. at the local level.
- **(M)** Develop transparent criteria and guidelines at national and State level to address regional disparities in budget priorities (esp. State transfers), taking into account:
 - Access to WASH services;
 - Hydro-geological factors;
 - Socio-economic and cultural factors;
 - Gender Mainstreaming and water as a human right.
- **(M)** Develop and adopt guidelines for the choice of appropriate technologies taking into account hydro-geological, topographical, socio-economic and cultural factors, and gender and outcomes of piloted results.
- **(M)** Increase the predictability of donor contributions within the 3-year planning horizon.

¹⁰ SSWICH <http://www.bsf-south-sudan.org/content/south-sudan-water-information-clearing-house-sswich> (visited 01032011)

¹¹ GoSS, MFEP, May 2010. Guidelines for Integrated State & County Planning and Budgeting

- **(M)** Explore options for piloting the supported and supervised transfer of sector development budgets to those States that have demonstrated strong financial management capacity.
- **(M)** Harmonise planning processes for development and humanitarian sector partners.

7.4 Performance Monitoring

The purpose of a comprehensive sector performance monitoring system is to improve efficiency within the sector, including fiscal discipline, coherent planning, technical viability, and the overall impact in contributing towards results and development outcomes.

7.4.1 Current Situation and Context

RSS considers monitoring, evaluation and reporting (ME&R) as a key component of all national development programs. MoFEP measures performance of RSS and State institutions on a yearly basis in terms of expenditure and outputs achieved. The Government also aims at holding annual Public Expenditure Reviews and improving the capacity of the internal audit functions across Government institutions for effective internal control, reducing the incidence of misuse of funds and improving overall accountability through efficient public financial management.

Under the guidance of MoFEP, there are several ongoing activities to improve monitoring and evaluation of donor activities and develop a harmonised reporting system. Monitoring of donor projects implemented through development partners, NGOs, CBOs or private sector poses a particular challenge since there are no agreed standards for supervision and reporting in place yet.

Within the WASH sector, MWRI is in charge of overall supervision and monitoring of projects. MWRI as well as State performance reports typically do not include financial data. Therefore, it is not clear how the States are performing in terms of spending disbursed funds. M&E is still evolving and is mostly focussed on counting outputs rather than validating outcomes and cost-efficiency. Currently, there is no synchronised system or common set of indicators to monitor sector performance.

At national level, the WASH Bi-annual Planning and Coordination Meetings are the main mechanism for reporting. States provide records of physical outputs, not funding. Comprehensiveness of these reports is limited since the flow of information between State Ministries and implementing partners, including NGOs and other civil society actors varies.

At State level, monthly reports from the County are shared at sectoral meetings (e.g. State Budget Groups, State Coordination Meetings) 2-3 times a year.

7.4.2 Goals and Objectives

The overall goal of the WASH strategy for performance monitoring is to establish a standard-based sector-wide monitoring system that strengthens accountability and fosters sector learning towards a strong sector performance by all stakeholders and partners at all levels.

7.4.3 Strategic approach

- **(H)** Set realistic but ambitious sector targets and objectives for the strategic plan based on available baseline data as well as current financing and performance trends.
- **(H)** Select, refine and adopt a minimum set of properly defined SMART indicators to measure physical performance, financial efficiency and compliance for the whole sector.
- **(H)** Compile, analyse and disseminate annual sector performance reports based on agreed set of indicators.

- **(H)** Improve accountability through the establishment of a mechanism for an annual Joint Sector Review (JSR)¹² that builds on existing practises and other fora proposed in this document.
- **(H)** Incorporate key indicators to measure sector progress in national survey exercises (SSHS and MICS).
- **(H)** Carry out Value for Money audits and follow up on the findings and recommendations.
- **(M)** Support mechanisms at State and local Government levels to raise citizens' awareness of implementation and involvement in monitoring.
- **(M)** Prepare and implement procedures for private sector performance monitoring.
- **(M)** Introduce systems for independent evaluation of performance (e.g. through benchmarking with other WASH institutions/utilities) for sharing best practices as a means for exploring opportunities to create partnerships and to build capacity.

7.5 Financing and Investment

The purpose of the WASH strategy in investment and financing is to guide the sector in identifying funding needs and reaching out to funding mechanisms in order to mobilize adequate resources.

7.5.1 Current Situation and Context

Predictability of available funding is a particularly difficult challenge in South Sudan. This is due to the fact that 98% of Government revenues are generated from oil and therefore subject to highly volatile price fluctuations. In addition to that, South Sudan being a country emerging out of war, with myriads of competing needs, while transiting from emergency to development, makes the process of prioritization a significant challenge. Hence, the WASH sector heavily relies on donor funding which is difficult to predict in the medium term because gaps between donor commitments and disbursements have been substantial, and in recent years global austerity measures have caused a serious downward trend.

Regarding donors and development/implementing partners, only a small percentage of projects are funded through a harmonised mechanism coordinated by the MoFEP, and the remaining funds are managed on bilateral basis.

It is perceived that the sector has four main sources of funding: i) donor funding (grants); ii) Government funding; iii) internally generated funds, including service revenues and revolving funds from NGOs/CBOs/communities; and iv) private sector investment (loans).

For 2010, the total available funding for the WASH sector was approximately USD 80.6 million out of which development partners provided 68% and GoSS contributed the remaining 32%.

Current funding is not sufficient to reach the MDGs for water and sanitation. The infrastructure required for effective nationwide water and sanitation service delivery will demand investment on a scale beyond what South Sudan can begin to afford. Hence, besides Government budget allocations, it requires external financing mechanisms to fund large upfront investments. Given the high proportion of people that lack access to water and sanitation and survive on less than \$1 a day, it is not feasible to meet these upfront costs through user fees. However, limited capacities and inefficiency of systems on the ground, as well as time constraints need to be taken into account.

RSS funding for WASH, both at national and State level, is mainly for salaries, operating costs and limited capital investment for construction/rehabilitation of offices or purchase of equipment and furniture.

¹² The JSR will be a forum for performance assessment, budget and policy guidance, allowing a broad spectrum of stakeholders to discuss sector developments. Its role in relation to other existing and proposed multi-stakeholder advisory forums and decision-making bodies will have to be considered.

Disbursement of budgeted funds in the WASH sector has not been smooth; it has been slow in terms of donor contributions and low in terms of Government budget (31% in 2010). However, there have been significant improvements in Government disbursement and absorption capacity in MWRI (40% of the overall budget were disbursed in the first 6 months of 2011).

7.5.2 Goals and Objectives

The overall objective of the WASH strategy in investment and financing is to mobilize adequate and reliable funding resources to realize needed investments for socio-economic development.

7.5.3 Strategic Approach

There are four strategic components: Revenue generation, improved Government funding, development partner contributions and private sector investment.

7.5.3.1 Component 1: Revenue Generation

- **(H)** Develop, introduce and enforce guidelines for cost-recovery tariff-setting.
- **(M)** Establish a mechanism/independent body for setting and regulating tariffs for urban sanitation/sewerage, including optional subsidies/tax exemption policies for key sanitary products.
- **(H)** Explore options for retaining revenue generated in the sector by taxes, tariffs and fees within the collecting organisation in order to create incentives for collection and ensure re-investment within the sector.
- **(H)** Develop and establish mechanisms for limited subsidies within the sector, taking into account regional disparities and other WASH sub-sectors' ability to generate revenues.
- **(H)** Design appropriate mechanisms to charge for extraction and use of water .
- **(H/M)** Design appropriate mechanisms to charge for provision of WASH services (licensing, permits, water quality testing, service delivery, etc.).
- **(H)** Improve systems for billing and collection.
- **(M)** Develop and implement guidelines for recovering O&M costs.
- **(H)** Carry out wider awareness campaigns to improve willingness to pay, including at the level of local Government and communities e.g. Counties, Payams and Bomas to provide matching resources generated through local contributions and user fees to support O&M of WASH services.

7.5.3.2 Component 2: Improved Government Funding

- **(H)** Introduce the elaboration of 3-year rolling sector development and investment plans at national and State level, accompanied by monitoring and evaluation of outcomes and impacts that will contribute to gradual increase in sophistication and quality of planning and service provision.
- **(H)** Strengthen absorptive capacity.
- **(H)** Strengthen public financial management systems to ensure accountability and enhance transparency regarding the flow and use of Government and partners' funds at all levels.
- **(M)** Lobby for an increased Government share of the sector budget.
- **(M)** Prepare an action plan pertaining to discretionary WASH sector funding (loans, grants, micro-financing and insurance facilities) to promote development and management of WASH sector at all levels.
- **(M)** Draw up financial plans such as cost sharing and cost recovery mechanisms for different WASH service delivery options.
- **(H)** Develop criteria for providing subsidies in the WASH sector for the benefit of vulnerable groups (widows, orphans, disabled, IDPs etc).

7.5.3.3 Component 3: Improved Development Partner Contributions

- **(H)** Lobby for increased donor support and contribution to the WASH sector.
- **(H)** Gradually move towards the introduction of Programme Based Approaches (PBA) (basket funds, SWAps, budget support).
- **(H)** Explore options to seek support from national, regional and international banks and other potential funders such as, Global Water Partnership (GWP), Global Environmental Facility (GEF), European Water Facility, Water and Sanitation Programme of the World Bank (WSP), NBI, African Water Facility, etc.
- **(H)** Explore options to access innovative funding mechanisms such as the International Finance Facility (IFF) or Output Based Aid (OBA) from World Bank's Global Partnership for OBA.

7.5.3.4 Component 4: Private Sector Investment

- **(H)** Create an enabling environment for private sector, where appropriate, including identifying feasible modes of strengthening private sector participation/involvement in WASH projects e.g. through public-private partnerships.
- **(H)** Facilitate local private sector involvement through public procurement within the legal thresholds.
- **(H)** Create a regulatory framework pertaining to private service provision.
- **(M)** Make infrastructure, land and importation of materials affordable.
- **(M)** Realise social marketing for sanitation and hygiene and see how the concept can be commercialized.

7.6 Capacity Development

The purpose of this section is to articulate the needed capacity development within the sector at all levels so as to streamline roles and responsibilities effectively.

7.6.1 Current Situation and Context

Besides poor infrastructure and inadequate equipment, the WASH sector in South Sudan has a considerable shortage of skilled, experienced and knowledgeable personnel required to deliver adequate water supply, sanitation and hygiene services at national, State and local levels. At State and County levels, many positions are poorly or not at all filled. The Government establishment across all levels has been subject to various capacity assessment studies¹³, which revealed capacity gaps that so far have not been fully addressed. With the Government and development partners, training efforts pertaining to technical, administrative, ICT, accounting, Basic English, management and computer skills have been going on. However, technical assistance (including institutional development and strategic planning); in addition to provision of equipment and working spaces remain a big challenge.

Technical trainings in the sector are mostly carried out abroad. However, there are national training centres, including vocational training centres under the then Ministry of Cooperatives and Rural Development (now part of MAF); the Ministry of Higher Education, Science and Technology (MHEST); and Ministry of Labour, Public Service and Human Resource Development (MLPS&HRD). This calls for a comprehensive assessment of the physical and technical capacities required to enable these training institutions to serve the WASH sector.

In an attempt to consolidate decentralization of WASH services and management, MWRI and partners supported setting up and operations of Water and Sanitation Directorates in the States, including Departments of Water and Sanitation in Counties. Notwithstanding, it will

¹³ Nuffic, 2010, MottMcDonald 2009, Concepta 2009

only be possible to delegate some functions of WRM i.e. catchment areas, river sub-basins, once capacity gradually improves at State and local levels.

7.6.2 Goals and Objective

The overall goal of the WASH strategy in capacity development is to strengthen existing structures and capacities; and to improve sector learning. An emphasis will be given to creation of an enabling environment towards developing adequate capacities of the Government, communities and the private sector for drawing up plans and for implementing projects at all levels.

7.6.3 Strategic approach

- **(H)** Analyse and consolidate recent sector capacity development assessments carried out at all Government levels.
- **(M/L)** Draw up long-term capacity development plans at national, State and County levels on cost recovery basis.
- **(H)** Prepare budgets for capacity development based on capacity needs assessments and agree amongst RSS, State Governments and development partners what percentage of the country's WASH budget will need to be used for capacity building in the period of the strategic framework on a yearly basis.
- **(H)** Provide opportunities for on-the-job learning with technical assistance at all levels.
- **(M)** Introduce technical support units at all 10 State headquarters, to strengthen the capacity of local Government in planning, budgeting and accounting, supervision and contract management, O&M and gender aspects.
- **(H)** Establish/strengthen WASH services, management, training and research centres.
- **(M)** Introduce WASH sector related courses and specialisations in the academic institutions that will carry research enhanced innovation in the sector.
- **(H)** Encourage and support applied research and sharing of best practices within the sector.
- **(H)** Make for each State and at the level of MWRI an inventory of existing office space, furniture, IT, means of transport; and assess the budget implications and make available the required missing offices and equipment.
- **(H)** Proactively attract South Sudanese professionals from the Diaspora to the WASH sector.
- **(H)** Identify key short, medium and long-term human resources, organizational and institutional development needs to align with the strategic subsector priorities.
- **(M)** Develop and or harmonise training materials on safe water use, sanitation and hygiene promotion.
- **(M)** Establish safe water use, sanitation and hygiene demonstration centres initially at the State level and eventually roll out to the County, Payam and Boma levels.
- **(H)** Develop a capacity building plan for the indigenous private sector in the construction of appropriate WASH technologies.

ANNEXES

Annex 1: Sector Governance and Regulatory Framework

This annex reflects the outcomes of current discussions in the SSWSSC and provides a first outline scenario for the establishment of the water sector governance structure, including its comprehensive regulatory framework. (See draft organogram below).

Annex 1.1: Water Council

The core of the sector governance is the Water Council.

Roles and responsibilities

- Acts as the principal multi stakeholder advisory body of the WASH sector and advises the Cabinet on approval of new or amendment of legislation, policies and strategies;
- Acts as an appeal and arbitration body for resolving WASH disputes and other related issues;
- Oversees overall compliance with sector governance and coordination arrangements;
- Oversees, ensures coherence and advises on sector development and management plans;
- Advises the Cabinet on major WASH investments and any submissions by the WASH regulatory boards/Authorities;
- Recognizes and promotes good practices in the WASH sector through creation of medals and awards endowment; and
- Any other function or duties that may be assigned by the Cabinet.
- Issues guidance to the WASH Regulatory boards/Authorities;

Composition and Structure

- The Water Council is to consist of water related RSS institutions and representatives of civil society organisations, including MCA, MOJ, MWRI, MoH, LGB, MHPP, MEST, MoEnv, MED, MoI, Association of water sector entrepreneurs, Representation of relevant Research Institutes and Association of Consumers (e.g. women association, youth association, religious associations),
- Recommended size not to exceed 15 members;
- Chair (President/ VP/ Minister of Cabinet Affairs)
- Executive committee of 5 elected by the members on a rotating basis;
- Ex Officio members from partners such as the WASH Cluster Lead and Co-Lead agencies and WASH DoG Chair.

Technical Secretariat

The Water Council will be supported by a technical secretariat consisting of:

- Executive Secretary;
- Director for intergovernmental relations in the Office of the President;
- Director General of Planning and Programming, MWRI
- Legal Counsel;
- Communication Specialist;
- 3 support staff

Annex 1.2: Water Resources Management Authority (WRMA)

There shall be established a Water Resources Management Authority as an independent body under the supervision of MWRI. It shall consist of core competent staff and will promote creation of major water infrastructure for fresh water storage, hydro-power generation and irrigated agriculture. The authority will develop and enforce regulations for the management, use and consumption of water resources.

Annex 1.3: Water Supply and Sanitation Regulatory Board (WSSRB)

There shall be established a WASH (Service Delivery) Regulatory Board consisting of representatives of all RSS Ministries/Institutions that have a responsibility in the provision of urban and rural water supply and sanitation services; as well as representatives of the MOJ, LGB, and representatives of various consumer associations and private operators/entrepreneurs. It will include representation of development partners such as the WASH Cluster; WASH DoG, etc., to play an advisory role.

The Board members will assign a chair assisted by a secretariat consisting of a small number of WASH sector experts and support personnel. The Board shall develop and enforce regulations for the provision of water supply and sanitation services.

The Board shall meet on a bi-annual basis or on special request of a majority of its members or on request of the Water Council.

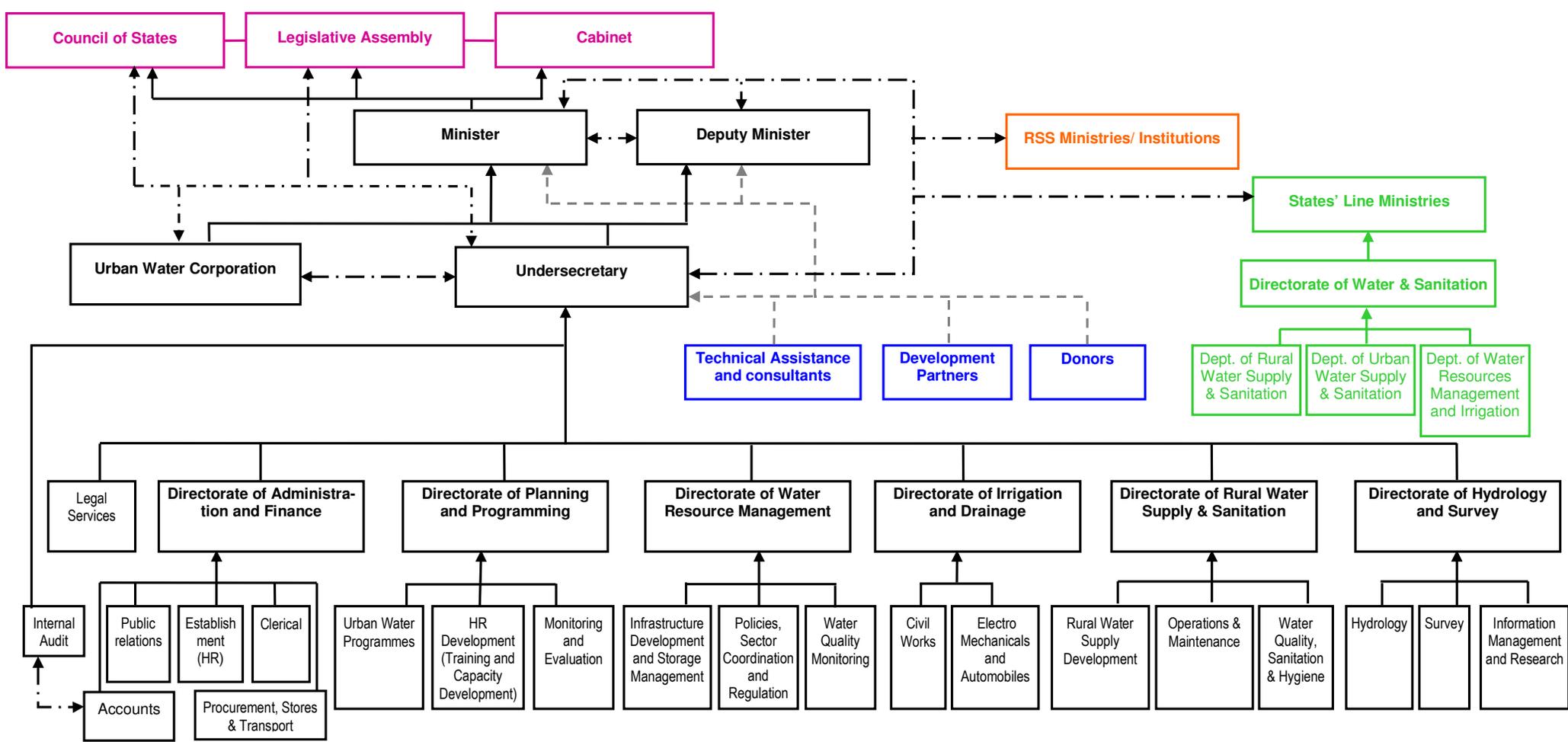
Annex 1.4: Cost of the WASH Sector Governance Bodies

The budgets of WASH sector governance bodies shall be financed through a percentage from the revenues within the sector, but until the sector becomes financially viable, it will need to be subsidised through RSS Budget and donor contributions

Annex 1.5: Roles and Responsibilities at Various Levels of Government

The roles and responsibilities of different levels of Government with regard to policymaking, regulation and service provision need to be clearly defined in the envisaged legal framework. In anticipation of the increased role of the subsequent levels of Government, robust capacity development at State and County levels needs to take place. At the same time, a gradual delegation of responsibilities to lower levels of Government is paramount.

Annex 1.5.1: Present Administrative and Operational Organogram MWRI



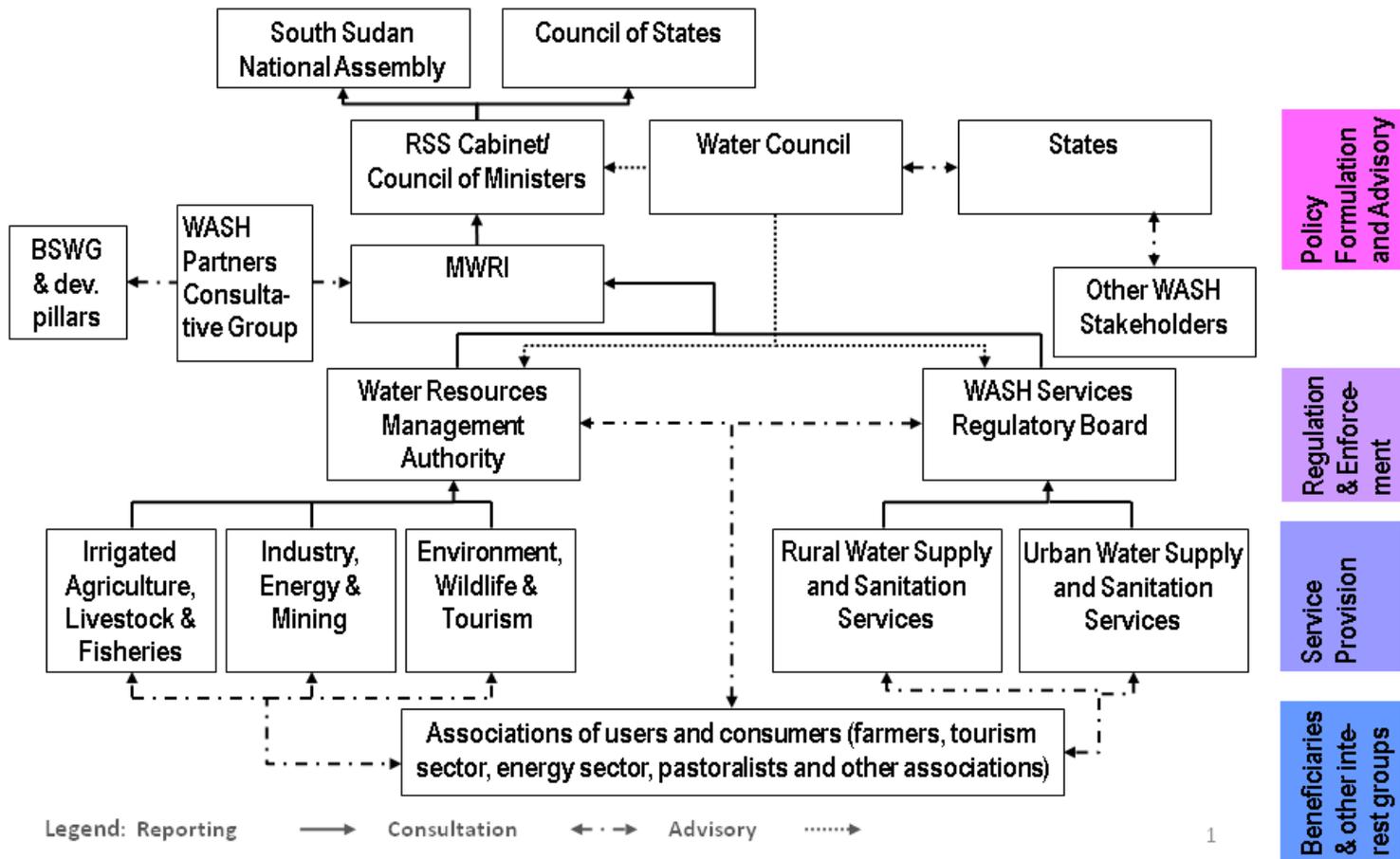
Legend:

Reporting \longrightarrow

Consultation \longleftrightarrow

Advisory Services \dashrightarrow

Annex 1.5.2: Proposed Governance and Regulatory Structure of the South Sudan WASH Sector



Annex 2: South Sudan WASH Sector Steering Committee (SSWSSC)

The SSWSSC is a temporary sector coordination arrangement that eventually will be replaced by a new governance and regulatory framework of the WASH Sector under the Water Council. Until such time, the SSWSSC will continue functioning as the main WASH sector steering body with the following updated Terms of Reference.

Terms of Reference

Mission Statement

To guide the process of policy, legal and institutional development within the WASH sector and to support integration and coordination of sector planning, ME&R, documentation, learning and sharing.

Objectives

Institutional Strengthening: led by MWRI, foster collaboration between RSS WASH sector related departments; partner agencies, key sector (I)NGOs and private sector to ensure sustained commitment to institutional development at all levels;

Policy Development: promote and support the development of coherent legislations, policies and strategies to guide future water sector development;

Sector Planning & Coordination: promote integration and coordination of sectoral and inter-sectoral planning, ME&R (incl. annual JSR), learning and sharing, documenting.

Activities

WSSC Meetings: organize regular meetings to discuss progress, identify priorities and advise on ways forward in addressing the above objectives;

Advisory Support: develop a framework to coordinate technical assistance to MWRI and the Directorates of Water and Sanitation in relevant State Ministries (MoPI, MHLPU, etc.);

Stakeholder Consultation: promote effective communication; overview, access and dissemination of information among different sector stakeholders, both Government and non-Government;

Coordination and Integration: maintain constant link with other sectoral and inter-sectoral planning and coordination mechanisms as appropriate (e.g. SWG Infrastructure).

Composition and Management Structure

The SSWSSC is chaired by the Undersecretary of MWRI; the Co-Chair is elected among the other Core-Group members

Core Group

A WSSC Core Group, consisting of four members (1 representative from MWRI; 1 representative from development partners; the chair of the WASH DoG; 1 representative from SWG Infrastructure) and a secretary, is elected for a period of 1 year, and given the responsibility to manage and coordinate SSWSSC activities. The core group will report on progress at each SSWSSC meeting.

RSS Ministries

MWRI, MHPP, UWC (Core Agencies)

MoH, MED, MPM, MRB, MoT, MGEI, MHEST, MAF, MARF, MWCT, MEnv, MCII, LGB, MoJ
MGCSW

Other Stakeholders

UN: Representatives of 2-3 relevant UN Systems, Organisations and Programmes

INGOs: WASH Cluster Co-Lead, Chair of the WASH NGO Forum and representatives of 2 other INGOs active in the WASH sector

Local NGOs: 2-3 representatives of local NGOs active in the WASH sector

Private sector: Representatives of the Chamber of Commerce and 1-2 private sector companies active in the WASH Sector

Donors/development partners: Representatives of the major donors and development partners in the WASH sector

Additional resource persons:

May be co-opted as proposed by the members.

Annex 3: Glossary of Terms and Definitions

This annex explains a number of terms used in the sector for gradual harmonisation and growing common understanding. The 'definitions' are not rigid but descriptions based on common understanding.

Access

This is the percentage of people within a defined radius of an improved water source or improved sanitation.

Advocacy

Is a continuous and adaptive process of gathering, organising and formulating information into arguments to be communicated through various interpersonal and media channels, with a view to raising resources or gaining political and social leadership acceptance and commitment for a development programme, thereby preparing a society for acceptance of the programme.

Basket/Pooled Funding

Aid modality in which a number of donors contribute funding into a pooled account for a set of activities, using one agreed set of procedures in the implementation.

Budget Ceilings

In South Sudan, within the forecasted Government resource envelope, each spending agency is allocated a budget ceiling as annual budgetary limit.

Capacity Development / Building

Is an ongoing learning process by which individuals, groups or organizations increase their abilities to perform core functions, identify opportunities, solve problems and define and achieve objectives in an effective, efficient and sustainable manner.

Community

A (rural or urban) community is a social group of any size whose members reside in a specific locality, share Government, and often have a common cultural and historical heritage.

Community Led Total Sanitation (CLTS)

Or Community approach to total sanitation (CATS), is an innovative methodology for mobilising communities to completely eliminate open defecation. Communities are facilitated to conduct their own appraisal and analysis of open defecation and take their own action to become ODF (open defecation free).

At the heart of CLTS lies the recognition that merely providing toilets does not guarantee their use, nor result in improved sanitation and hygiene. CLTS focuses on the behavioural change needed to ensure real and sustainable improvements – investing in community mobilisation instead of hardware, and shifting the focus from toilet construction for individual households to the creation of “open defecation-free” villages. By raising awareness that as long as even a minority continues to defecate in the open, everyone is at risk of disease. CLTS triggers the community’s desire for change, propels them into action and encourages innovation, mutual support and appropriate local solutions, thus leading to greater ownership and sustainability.

Community Mobilisation

The process of bringing together a community to identify needs and raise awareness of, and demand for, a particular development objective.

Consumers

These are the users of services, from both households and public (and private sector) institutions or organisations. They have a growing role in holding both the service provider and authority accountable (bottom-up accountability).

Deep Borehole

A deep borehole is a machine drilled (mud-drilling or down the hole hammer [DTH]) well with a depth greater than the maximum depth defined for a shallow borehole. It is installed with 4-8" PVC casing/screens. Usually deep boreholes have depths between 30 and 100 m, but greater depths are feasible depending on the drilling rig and formations.

Diesel or Electric Pump

These pumps are used in cases where there is high demand for water and/or the water table is very deep underground. These pumps are expensive due to the costs of fuel as well as the specialized labour needed to install and maintain the pumps.

Development Cooperation

Or development aid (also development assistance, technical assistance, international aid, overseas aid or foreign aid) is aid given by Governments and other agencies to support the economic, social and political development of developing countries. (http://en.wikipedia.org/wiki/Development_aid)

Development Partner

A bilateral, multilateral, an international organisation or any development agency providing support to the Government.

Dug Well

These are one of the oldest and most common forms of obtaining groundwater worldwide, though they are restricted to locations where the earth can be removed by hand. In their most basic form, dug wells are unlined holes in the ground, which reach the water table. Such wells should be upgraded wherever possible, usually by lining with concrete rings or lined with bricks in order to prevent pollution and increase stability, and also by adding a hygienic cover. The diameter is usually about 1 m. Depths range from 4-5 m in valleys to depths of 30 m further away from the valleys.

Effectiveness

The degree to which objectives are achieved and the extent to which targeted problems are resolved. In contrast to efficiency, effectiveness is determined without reference to costs and, whereas efficiency means "doing the thing right," effectiveness means "doing the right thing." (<http://www.businessdictionary.com/definition/effectiveness.html> visited 20101216)

Efficiency

Deals with a comparison of what is actually produced or performed with what can be achieved with the same consumption of resources (money, time, labour, etc.). It is an important factor in determination of productivity.

(<http://www.businessdictionary.com/definition/efficiency.html> visited 20101216)

Elevated Storage Tank

A storage tank that is fixed on a platform, a roof or on stands, in order for the water to flow by gravity to the abstraction point.

Environmental Health

Concerns the isolation of human excreta from the environment, maintenance of a safe water chain, the sustained practice of personal, domestic, public and food hygiene, safe disposal of solid and liquid wastes, drainage, and control of disease vectors and vermin.

Equity

Providing equal opportunities for the service and minimizing differences between groups of people. Inequity in service provision can therefore be defined as avoidable, and unfair differences. In the case of rural water supply, increased coverage in provision of safe water to rural communities is directly affected by the distribution of the water points. Equity is concerned with fair distribution of improved water facilities to communities.

Evaluation

Is the episodic assessment of the change in targeted results that can be attributed to the programme or project/project intervention. Evaluation attempts to link a particular output or outcome directly to an intervention after a period of time has passed. (http://www.theglobalfund.org/documents/me/ME_Concepts.pdf visited 20101216)

Faecal Contamination

Refers to traces of faeces (stools) coming into contact with areas of the body where they could potentially cause harm; for instance by drinking contaminated water.

Gender

Can be defined as 'the relations between men and women, both perceptual and material. Gender is not determined biologically, as a result of sexual characteristics of either women or men, but is constructed socially. It is a central organizing principle of societies, and often governs the processes of production and reproduction, consumption and distribution' (FAO, 1997). Despite this definition, gender is often misunderstood as being the promotion of women only. However, gender issues focus on women and on the relationship between men and women, their roles, access to and control over resources, division of labour, interests and needs. Gender relations affect household security, family well being, planning, production and many other aspects of life (Bravo-Baumann, 2000). (<http://www.fao.org/docrep/007/y5608e/y5608e01.htm> visited 20101217)

General Budget Support

Financial support given directly to the Government budget, with no earmarking of funds but accompanied with dialogue with the Government.

Haffir

A sub surface open reservoir, a dug out basin in the clay plains excavated by earthmoving machinery (formerly by hand) to store run-off water (nzdl.sadl.uleth.ca/cgi-bin/library.cgi; visited 16.12.2010).

Hand Augured/Hand Drilled Well¹⁴

A hand-augured shallow well is a well, drilled with human power down to a specified depth. In reality typical depths are between 4-5 m in valleys and 10-15 m further away from the valleys. It is usually installed with 4" PVC casings / screens

Hand Pump

Hand pumps operate using a piston or a plunger to pull water up the well. They should be cost-effective, reliable, and easy to maintain.

Household Water Filter/Jar

Is a technology at household level that can be kept in the home, containing substances (such as charcoal) or fine membrane structures used to remove impurities from water (http://en.mimi.hu/environment/water_filters.html; visited 20101216)

Humanitarian Aid

Material or logistical assistance provided for humanitarian purposes, typically in response to humanitarian crises. The primary objective of humanitarian aid is to save lives, alleviate suffering, and maintain human dignity. http://en.wikipedia.org/wiki/Humanitarian_aid

Hygiene

Behaviours, practices and routines such as safe collection, storage and use of water; hand-washing; and proper use of sanitary facilities, to break the chain of contamination and infection at personal, household and community levels.

Hygiene Deficiency Diseases

These are diseases caused and transmitted by poor hygienic conditions and practices, e.g. intestinal worms and other diarrheal incidences due to lack of hand washing (especially after defecating) or infection of wounds due to poor personal hygiene. Hygiene deficiency related diseases can be prevented through behaviour change and creation of an environment that allows for good hygiene.

Improved Haffir

A Haffir with a water treatment system that can provide drinking water primarily for human consumption. A Haffir without a water treatment system that is used for purposes other than drinking may not be classified as 'improved haffir' (http://www.bsf-south-sudan.org/sites/default/files/SS+Tech+Guide--Improved+Hafir_0.pdf visited 20101612).

Indicator

A measurable characteristic or variable, which represent project progress.

http://www.theglobalfund.org/documents/me/ME_Concepts.pdf visited 20101216

¹⁴ Technical guidelines for construction of described water sources as developed by UNICEF for Southern Sudan can be found in <http://www.bsf-south-sudan.org/content/bsf-guidelines>.

Integrated Water Resources Management (IWRM)

Emphasizes that the various water resources are used and their quality and quantity affected by those various uses in a way that creates a wide spectrum of interactions and interdependencies among the water resources and the water users. IWRM is an advanced form of WRM that takes into account both the various sources and uses and aims at developing equity and sustainability based multi-level, multi-sectoral and multi-stakeholder management approach. For this IWRM proposes the development of a wide variety of rules, regulations and procedures (e.g. legislation, regulation, setting of bulk water tariffs, mediation, equitable allocation, etc.).

Information Management

Is the collection and management of information from one or more sources and the distribution of that information to one or more audiences. It usually involves those who have a stake in, or a right to that information.

Institutional Framework

Institution can be defined as systems of formal laws, regulations, procedures, and informal conventions, customs, and norms, that broaden, mould, and restrain socio-economic activity and behaviour; or it can be defined as organisations that in one way or another influence regulate or determine how people, groups or organisations relate to each other. Institutional framework as used in this document emphasises on organisations, their functions and internal procedures, and their relation to each other. For the RSS WASH sector, it entails how the management, development and utilisation of water resources; and sanitation services will be organised, regulated, coordinated and governed at all levels.

Jetted Well

A shallow well constructed by directing a powerful stream of water. The jetted well is fitted with a hand pump.

Knowledge Management

Comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences.

Management

Is dealing with individuals, groups or organizations in guiding their activities and using their abilities to perform core functions, identify opportunities, solve problems, define and achieve objectives.

Monitoring

The routine tracking of the key elements of programme/project performance, usually inputs and outputs, through record-keeping, regular reporting and surveillance systems.

(http://www.theglobalfund.org/documents/me/ME_Concepts.pdf visited 20101216)

Monitoring and Evaluation

Fundamental aspect of programme management at all levels (national, regional, local) that:

- Provides data on programme progress and effectiveness;
- Improves programme management and decision-making;
- Allows accountability to stakeholders, including funders;
- Provides data to plan future resource needs;
- Provides data useful for policy-making and advocacy.

(http://www.theglobalfund.org/documents/me/ME_Concepts.pdf visited 20101216)

On-site Sanitation

Non-piped infrastructure and services required for safe management of human excreta.

Oversight

Is mostly used when referred to the body that has end responsibility for the daily operations of a service provider, for example the Board of a water company that holds the management of the company accountable (top-down accountability). But it is also used in the context of a Ministry that supervises the whole sector.

Participatory Hygiene and Sanitation Transformation (PHAST)

Is an approach designed to promote good hygiene behaviours, sanitation improvements and community water management. Community groups discover for themselves the faecal-oral contamination routes of disease, then analyze their own hygiene behaviours and plan how to block the contamination routes. The underlying basis for this approach is that no lasting change in people's behaviour will occur without understanding and believing. (WHO, UNDP)

Per Capita Investment Cost

The average cost per beneficiary of new water and sanitation schemes.

Piped Gravity-fed Water Supply

A distribution network of pipes from a protected spring or a stream flowing by gravity to abstraction points (e.g. tap stands).

Program-Based Approach (PBA)

PBAs are often equated with general or sector budget support and sector-wide approaches (SWAPs). Although these modalities certainly are PBAs, the term includes a broader range of funding modalities, including projects at a cross-sectoral, sub-sectoral or regional level.

The OECD-DAC definition of PBAs is aid that shares the following features: (i) leadership by the host country or organisation; (ii) a single comprehensive programme and budget framework; (iii) a formalised process for donor coordination and harmonisation of donor procedures for reporting, budgeting, financial management and procurement; and (iv) efforts to increase the use of local systems for promoting design and implementation, financial management, monitoring and evaluation. (<http://www.aideffectiveness.org/Tools-Aid-modalities-PBAs-SWAPs.html>)

Protected Spring

Technology that captures water naturally flowing out of a hill by gravity over an impervious layer, consisting of an improved catchment and a supply pipe. (For more information is referred to http://waterwiki.net/index.php/Protected_Springs; visited 20101216).

Rainwater Harvesting Tank

A storage tank collecting rainwater from a permanent roof, e.g. of a school or health centre, by means of a guttering system.

Regulation

Regulation of water supply incorporates aspects of water quality regulation, environmental regulation, particularly of water abstraction and wastewater discharge, and (economic) regulation to oversee service providers. The function is important to hold the service authority and service provider accountable. Often one finds the different regulatory tasks carried out by different institutions. For example, the Ministry of Water normally sets standards and gives out licenses for water abstraction while Ministry of Health monitors the quality of drinking water provided. Often the Ministries delegate these functions to a

commission or a (semi-) Government body. An independent regulator is mostly referred to in the context of (private) service providers. The *regulatory practices* are the rules, guidelines, licenses or permits required, and monitoring and enforcement practices and penalties used by the regulatory bodies to carry out their responsibilities.

Roof Catchment

That part of the roof from which water runs off towards a guttering system leading into a rainwater storage tank.

Rope Pump

This is a simple pump using a continuous rope fitted at intervals with discs or washers and pulled upwards through a pipe. The rope is pulled in a loop around a wheel, often a bicycle wheel, to bring water up from the well and out through the discharge outlet.

Safe Water Collection and Handling

Means preventing contamination of water when it is collected from the source, transferred from one receptacle to another and when it is extracted before drinking, and preventing further or re-contamination of treated water. Much can be done to prevent contamination through the use of safe containers and treatment processes, but without proper hygiene practices in place the benefits of the hardware are negated. This reinforces the need to address water quality as part of a holistic intervention that focuses on creating an enabling environment to practice safe hygiene.

Key principles include:

- Ensuring hands are clean before collecting or handling water and that they not come into direct contact with the water – this is facilitated through pouring rather than scooping, and having a tap structure on the container
- Use of clean cups and mugs for drinking
- Training on the safe water chain
- Regular cleaning of containers
- Children’s activities on the safe water chain

Safe Water Sources

There are three main sources of drinking water: groundwater, surface water, and rainwater. Depending on local geography, topography, climate, and needs, each of these may require different technologies and different levels of treatment in order to ensure the water is clean and accessible in a way that allows for it to be considered as safe for human consumption.

Sanitation

Physical interventions, e.g. construction of barriers and facilities that ensure safe management of wastes, and prevent human contact with wastes’ hazards. However, many terminologies have evolved in this regard, including “environmental sanitation”, “basic sanitation” and finally “improved sanitation”, which is now adopted in South Sudan. All of which are synonymous to the definition by the MDG Task Force on Water and Sanitation as: the lowest-cost option for securing sustainable access to safe, hygienic and convenient facilities and services for excreta and sludge disposal.

Sector Earmarked Budget Support

Financial support, channelled through Government Budget that is notionally earmarked to a specific sector or sub-sector.

Sector performance

It refers to the fiscal and physical effectiveness of the sector in carrying out its functions, tasks, duties, roles and responsibilities.

Sector-Wide Approach (SWAP)

A SWAP is a programme-based approach operating at the level of an entire sector. It is a mechanism whereby Government, civil society and development partners support a single policy, development plan and expenditure programme, which is under Government leadership and follows a common approach. It de-emphasizes donor-specific project approaches but promotes funding for the sector through general, sector earmarked budget support or through basket funding.

Service Authority

Service authority is always held by a Government body that is mandated and obliged to organise the provision of drinking water to the public, including to public institutions. This is often a local Government body, like the municipality or State, but it can also be centralised, directly under a Ministry. The water service authority is often also the owner of the assets. The service authority may provide services directly or mandate a utility or an operator (public or private) to do so on its behalf, usually through a performance or management contract.

Service Provider/Operator

The service provider/operator is the entity responsible for supplying water to the consumers. It manages the services, including: operating the facilities and managing the assets; the collection of revenues; and maintaining communication with the clients/customers. Some of these functions may sometimes be subcontracted. In general, a service provider/operator can be a public corporation or a private company.

Especially in small systems where for example the service provider is the village water committee, the daily operations are subcontracted to a caretaker or operator. In other cases the service provider subcontracts specific tasks, e.g. revenue collection or water quality tests.

Shallow Drilled Well

A shallow borehole is a borehole drilled with a drilling machine to a shallow depth. It is installed with 4-6" PVC casing/screens. It can either be drilled with the mud rotary method or DTH. If the machine is only equipped with the mud drilling equipment, hard rock cannot be penetrated as this can only be done by using the DTH equipment. Depths are usually between 10 and 30 m.

Slow Sand Filter

Or large size water filter is a technology used in water purification for treating raw water to produce a potable product. They are typically 1 to 2 metres deep, can be rectangular or cylindrical in cross section and are used primarily to treat surface water (en.wikipedia.org/wiki/Slow_sand_filter visited 20101216)

(http://www.bsf-south-sudan.org/sites/default/files/SS+Tech+Guide--Slow+Sand+Filters_0.pdf visited 20101216).

Social Marketing

Is the systematic society wide application of advertising and promotion.

Social Mobilisation

Emphasizes the establishment of partnerships across sectors to assist with the generation of resources, services, knowledge sharing and community participation and contributions.

Support Services

It is very common that both the service authority and the service provider have certain capacity gaps that cannot be overcome overnight or that it would not be cost-effective to build those capacities in all the service providers (e.g. water quality monitoring). In such cases support needs to be provided. The first and most logical option would be to contract such support services from the market, but often the private sector (including CSOs) lack part of the required capacity. In this case the support needs to be organised by making use of the expertise available in the Ministries and their semi-autonomous agencies, along with other concepts and techniques, to achieve specific behavioural goals for a social good. This may include for example marketing for the use of improved latrines

Surface Water Treatment System

A water supply system that treats water from streams, rivers, dams and haffirs to make it suitable for human consumption. Most common treatment is through slow sand filters, flocculation and chlorination, depending on the initial water quality and the affordability.

Target

An objective, which is time-limited and can be measured. Targets are set for a baseline and successive measurement over a period of x years.

(http://www.theglobalfund.org/documents/me/ME_Concepts.pdf visited 20101216)

Total Sanitation

Or sanitation for all, or 100% adoption of improved sanitation and hygiene, refers to the process where people demand, develop and sustain a hygienic and healthy environment for themselves by erecting barriers to prevent the transmission of diseases, primarily from faecal contamination. This process ultimately leads to zero open defecation and 100% of excreta to be hygienically contained.

Unit Cost

The average cost for a specific item or activity.

Urban Area

The term is used as defined in the Local Government Act of 2009, according to which an urban area is one where more than sixty percent of its economic activities are non agricultural, with considerable level of urban infrastructure and public utilities.

Value for Money Audits

Studies that monitor and analyse unit costs and processes of special interest (e.g. procurement).

Village Level Operation and Maintenance

Is a technological concept relating specifically to hand pumps for rural water supply. It refers to simple pumps that can be maintained at village level in Africa.

WASH

For the purpose of this Strategic Framework, WASH refers to Water, Sanitation and Hygiene. Specifically, water denotes all its aspects of utilisation, development and management e.g. including the capturing, conveyance, treatment, distribution, protection, etc; whereas sanitation refers to the evacuation, collection, transport, and treatment of human excreta. Hygiene on the other hand, includes the promotion and education of the population on hygienic practices.

Water Use

Refers to the number of litres of water used per person, including water for drinking, cooking, cleaning, sanitation, and other uses.

Water-borne Diseases

These diseases are caused by pathogenic microorganisms, which are directly transmitted when contaminated fresh water is consumed. They can be caused by protozoa, viruses, or bacteria, many of which are intestinal parasites. Even for clean water, contamination can still occur principally during storage or due to poor household water handling. The transmission of water-borne disease is minimized through safe water collection and handling.

Water Resources Management (WRM)

Apart from hygiene, sanitation and drinking water supply; for the purpose of this Strategic Framework, WRM refers to the other aspects of water resources management, development and utilization. These include information management; productive uses; transport; monitoring; allocation; regulation; conservation and protection; and trans-boundary implications.

Water Pumps

Devices that bring water to the surface of a well while allowing the well to remain sealed and covered, usually with a concrete slab. This is the preferable alternative to the traditional uncovered bucket and rope system in which water could easily be contaminated by things falling into the well.

Water Treatment

To remove substances which may be dangerous to human health, such as pathogens (disease causing microbes) or other sources of contamination such as excess minerals or toxic substances. Treatment may also include adding specific substances to the water in order to prevent and eliminate bacteriological contamination, e.g. through chlorination.

Water Yard

A small water supply system consisting of a borehole with a submersible pump, (supplied by diesel or solar energy), an elevated storage tank and a distribution system consisting either of spot distribution without a distribution network or a combination of spot and a small distribution network. It is considered to serve on average 1,400 to 2,800 people with 20 litres per person per day. (http://www.bsf-south-sudan.org/sites/default/files/SS+Tech+Guide--Mini+Water+Yards_0.pdf Visited 16.12. 2010).

Annex 4: List of Main Contributors

No.	Name	Role	Institution	Title
1	Isaac Liabwel C. Yol	Chairperson WSSC	MWRI	Undersecretary
2	Alier B.N. Oka	Team Leader WRM	MWRI	Director General of Water Resources Management
3	Peter Mahal Dhieu	Team Leader Sanitation	MWRI	Director General of Rural Water Supply & Sanitation
4	Lawrence L. Muludyang	Team Leader UWS	MWRI	Director for Urban Water Programmes
5	Manhiem Bol Malek	Team Leader Water Supply	MWRI	Director for Rural Water Development
6	Lotte Feuerstein	Consultant	GIZ	Financial Planning and Governance Consultant in MWRI
7	Maryam Said	Consultant	EMM TAST Member	Water Resources consultant in MWRI
8	Eshetu Abate	Consultant	MWRI	Program Support consultant in MWRI
9	Mary Benjamin	Representative	MAF	Director of Post-Harvest and Home Economics
10	Morris Lomodong	Representative	MHPP	Director General for Urban Sanitation
11	Silver Nyarsuk	Representative	MoH	Environmental Health Officer
13	Martin Manyang Mamur	Representative	MoEd	Director for Planning
14	David Batali	Representative	MoEnv	Deputy Director for Environment
15	John Pangech	Representative	MCRD	Director for Planning
16	Anatolio Wani	Representative	MARF	Deputy Director for Range Management
17	James Pal	Representative	MoT	Deputy Director for Ports Development
19	Isaac Lwale	Representative	LGB	Commissioner
20	Moses Malek	Representative	MGCSW	Director for Religious Affairs
21	John Ariki	Representative	MED	Director for Research
22	Kwai Malak Kwai	Representative	Dr. J. Garang University	Senior Lecturer in Environmental Sciences
20	David Lomeling	Representative	University of Juba	Associate Professor of Natural Resources
21	Ken Maskall	Representative	UNICEF	Chief of WASH
22	Tameez Ahmad	Representative	UNICEF	WASH Specialist

23	Rose Tawil	Representative	UNICEF	WASH Specialist
24	Patrick Okoni	Representative	UNICEF	WASH Specialist
25	Peter Bury	Lead Consultant	IRC	RSS WASH Strategy Process
26	Clarissa Moulders	Regional Consultant	IRC	RSS WASH Strategy Process
27	Abdelaziz James Festus	National Consultant	IRC	RSS WASH Strategy Process
28	Leonard Logo	National Consultant	IRC	RSS WASH Strategy Process
29	Alfred Günther Gutknecht	Representative	WB-MDTF	Senior Water and Sanitation Specialist
30	Tesfaye Bekalu	Representative	WB-MDTF	Task Team Leader for WSSP
31	Teffera Wondwossen	Representative	USAID/MSI	Water and Sanitation Advisor
32	Charles Lerman	Representative	USAID	Health Team Leader
33	Norbert Hagen	Representative	GIZ	Urban Water and Sanitation Program Director
34	Brigitta Grosskinsky	Consultant	KfW	Focal Point for MDTF and WASH
35	Jesse Pleger	Representative	MEDAIR	WASH Officer
36	Jason Walter	Representative	PSI	WASH Officer
37	Anthony Badha	Representative	Joint Donor Office	Policy Officer
38	Geerte van Meyden	Representative	BSF	Monitoring Officer

Annex 5: References

This annex provides references that provide further background to a strategic framework element and provides references to relevant practice elsewhere that could inspire the South Sudan WASH Sector Strategic Framework and sector development in general.

For ease of access a number of relevant reference documents have been uploaded to a freely accessible collection of Google Docs at this address <http://goo.gl/SqGWz>. These downloadable documents have been organized in several folders as follows:



Next to downloadable documents on Google Docs, a collection of relevant websites has been created at this address: <http://www.delicious.com/tag/GoSSwash>. Further filtering of relevant documents may be achieved by combining sets of available tags listed on the righthand side.

For any query or exchange of thoughts about the RSS WASH Sector Strategic Framework and related planning process, readers may write to gosswash@googlegroups.com or subscribe to the following Google Group: <https://groups.google.com/group/GoSSwash/about?hl=en>.

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