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ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

SUMMARY

SUSTAINABLE RURAL WATER SUPPLY AND SANITATION PROJECT IN NORTH AND SOUTH KORDOFAN



THE GOVERNMENT OF THE REPUBLIC OF THE SUDAN

MARCH 2019

Table of Contents

LIST OF ACRONYMS	iii
1. GENERAL INFORMATION	4
2. INTRODUCTION	4
2.1. Background	4
2.2. The ESMP	5
2.3. The purpose of the ESMP and its objectives	5
2.4. Preparation and use of ESMP	6
3. ADMINISTRATION, POLICIES, LEGAL AND REGULATORY FRAMEWORKS	6
3.1. Background	6
3.2. Legal, Policies and Regulatory Frameworks in The Sudan	7
3.2. International Regulations and Conventions	9
4. WATER SUPPLY AND SANITATION PROJECT IN NORTH AND SOUTH KORDOFAN STATES FOR LIVELIHOODS IMPROVEMENT	10
4.1. Project components and their anticipated activities	10
5. PROJECT ALTERNATIVES	11
5.1. The “No Project” Alternative	11
5.2. Alternative Locations	11
6. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS OF THE PROPOSED PROJECT	12
6.1. Positive environmental, social and economic impacts	12
6.2. Project beneficiaries	12
6.3. Gender and youth Aspects	12
6.4. Involuntary resettlement and Land Tenure Systems	12
6.5. Climate Change and Green Growth:	12
6.6. Negative impacts	13
7. MITIGATION/ENHANCEMENT MEASURES	13
8. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN AND MONITORING	14
8.1. Environmental and Social Management Plan (ESMP)	14
8.2. Environmental and Social Management Plan Monitoring	14
9. CONSULTATIONS AND PUBLIC PARTICIPATION	15
10. INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN	15

11.	COMPLIMENTARY INITIATIVES	15
12.	ESTIMATED COSTS TO IMPLEMENT THE ESMP.....	16
13.	CONCLUSIONS AND RECOMMENDATIONS	16
13.1.	Conclusions.....	16
13.2.	Recommendations.....	16

LIST OF ACRONYMS

AfDB	: African Development Bank
CPA	: Comprehensive Peace Agreement
CSS	: Climate Safeguard System
EIA	: Environmental Impact Assessment
ESIA	: Environmental and Social Impact Assessment
ESMP	: Environmental and Social Management Plan
ESR	: Environmental and Social Reviews
DWSU	: Drinking Water and Sanitation Unit
GDP	: Gross Domestic Product
GHG	: Greenhouse Gas
GoS	: Government of Sudan
HCENR	: Higher Council for Environment and Natural Resources
HIV/AIDS	: Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HIV	: Human Immuno-Deficiency Virus
MDG	: Millennium Development Goal
MEPD	: Ministry of Environment and Physical Development
MoWRIE	: Ministry of Water Resources, Irrigation and Electricity
NCS	: National Comprehensive Strategy
NGO	: Non-Governmental Organization
NSP	: National Strategic Plan
NWC	: National Water Corporation
RAP	: Resettlement Action Plan
OS	: Operational Safeguards
PAPs	: Project Affected Persons
PIU	: Project Implementation Unit
RAP	: Resettlement Action Plan
RDGE	: Regional Directorate for Eastern Africa
SWC	: State Water Corporation
UNCCD	: United Nations Convention to Combat Desertification
UNCBD	: United Nations Convention on Biological Diversity
UNFCCC	: United Nations Framework Convention on Climate Change

1. GENERAL INFORMATION

Project Title: Water Supply and Sanitation Project in North and South Kordofan
Project Number: P-SD-E00-004
Project Category: Category 2
Country: Sudan
Department: Water and Sanitation
Division: RDGE.2

2. INTRODUCTION

2.1. Background

Sudan is located in the Greater Horn of Africa and forms boundaries with Egypt to the north, Red Sea to the north-east, Eritrea and Ethiopia to the east, South Sudan to the south, Central Africa Republic to the south-west, Chad to the west, and Libya to the north-west. It is Africa's largest country with a surface area of 1,862,905 km² of which less than 10% is arable under rain-fed agriculture. The River Nile and the Sahara Desert are the main dominant features of The Sudan.

Petroleum remains one of the major natural resources driving the economy of The Sudan. The country, however, has some quantities of deposits of chromium ore, copper, iron ore, mica, tungsten, and zinc. Agriculture contributes significantly to the Gross Domestic Product (GDP) of Sudan at about 40% and employs about 80% of the country's labour-force. The GDP of Sudan is estimated at between US\$95 – US\$115 billion per year. Besides agriculture, other contributors to the GDP are services (39%) and industry (29%). The per capita GDP is estimated at US\$2,400, although the population of Sudan remains largely poor. Currently, the GDP growth rate (2018) is estimated at 3.6% although the country has had a slow-down in economic growth during the last decade, coupled with high inflation rates estimated at between 30% and 40%. Sudan's economic growth has been adversely affected by a number of factors, among which are the decline of revenues from the oil sector because of low export quantities due to aging oil fields and reduced inflows of oil transit fees from South Sudan. In the short and medium terms, growth will be determined by developments in the agricultural and mineral sectors, skills development and prudent macroeconomic policies and structural reforms aimed at improving the business climate.

Key environmental challenges in The Sudan are (1) water scarcity; (2) land and resources degradation and soil erosion; (3) periodic and most recently very regular droughts; (4) desertification; (5) deforestation and extensive tree cutting; (6) over-grazing. The prolonged armed conflicts in Sudan in the 1970s, 1980s and the 1990s had negative impacts on economic development as well as environment and natural resources and social development. The country has been identified to suffer from many negative impacts of climate change such as

decline in rainfall amounts greatly affecting agricultural and pastoral livelihoods. A World Bank study in 2009 assessed Sudan to be one of the countries that are most at risk from the effects of climate change on agriculture.

The study entitled “*Southern Shiekan Livelihood, Peace and Youth Empowerment Project*” conducted by the Government of Sudan (October 2017) under the auspices of drought recovery project (MFED, Sudan) identified shortage of water and sanitation as some of the key factors that affect the livelihood and socioeconomic conditions of the population in the two adjacent localities of Sheikan in North Kordofan and Algoz in South Kordofan. The study particularly identified Alloba, Al Birka and Kazgail in Sheikan Locality and Al Mazroub area of west Bara locality of North Kordofan State and Al Debibat and Al Hamadi in Algoz Locality of South Kordofan State as some of the most affected areas in Sudan. Despite having high potential agricultural land, seasonal streams, huge numbers of livestock, gum Arabic, and fairly good road linkages to both El Obeid town (the capital of North Kordofan State) and down to Kadugli town (the capital of South Kordofan state), the project area constitutes one of the poorest and food insecure areas in Sudan due to low rainfall, shortage in water supply sources, drought, desertification and man-made environmental degradation. The project area also suffers from natural resource use conflicts especially between settled farmers and nomadic pastoralists, particularly during the drought periods. It is in view of the above challenges that the Government of Sudan (GoS) and the African Development Bank (AfDB) have identified and proposed this Water Supply and Sanitation Project to be implemented in Sheikan and West Bara Localities in North Kordofan State and Algoz Locality in South Kordofan State.

2.2. The Environmental and Social Management Plan (ESMP)

This ESMP has been prepared based on an overall environmental and social assessment, which included (i) analysis of the general information in project localities in the two States of Sudan; (ii) evaluation of potential environmental and social impacts of the project components and subcomponents; (iii) assessment of environmental requirements and practices in different ongoing and completed projects; (iv) national requirements by the Government of Sudan for implementation of similar projects; (v) African Development Bank Safeguard requirements before implementation of any development project, and, (vi) consideration of several other international and regional regulations for implementation of development projects. The ESMP has identified various impacts, both positive and negative and provides the guidelines for the mitigating the impacts.

2.3. The purpose of the ESMP and its objectives

It is a requirement by both the Government of The Sudan and the African Development Bank (AfDB) that environmental and social assessments are carried out at the identification, preparation or appraisal stages of any development project. The main objective of this ESMP is to ensure that the implementation of the Sustainable Rural Water Supply and Sanitation Project in North and South Kordofan meets the requisite environmental and social impacts

legal, regulatory and policy frameworks and, is implemented with the environmental and social sustainability in mind and are determined well in advance. The ESMP provides the plan that will enable project implementers to mitigate potential environmental and social impacts of the project activities. The specific objectives of ESMP are: (i) To establish clear procedures and methodologies for the environmental and social screening, planning, review, approval and implementation of sub-projects to be financed under the Project; (ii) To identify potential and possible environmental and social impacts associated with the proposed project components and propose appropriate mitigation measures for the impacts caused by implementation of the project activities; (iii) To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to the project; (iv) To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMP; (v) To propose and establish the funding required to implement the ESMP and subsequent environmental and social assessments, monitoring and management; (vi) Provide support to relevant implementing local authorities to review plans and determine if additional, more detailed environmental or social planning is required before applications can be approved; and, (vii) To provide practical information for implementing the ESMP.

The Project Implementation Unit (PIU) under the federal Ministry of Water Resources, Irrigation and Electricity (MoWRIE) will be based in El Obeid and is expected to work in joint collaboration with the State Environment Council and other relevant authorities in both North Kordofan State and South Kordofan State and will ensure compliance with this ESMP.

2.4. Preparation and use of ESMP

This ESMP was prepared by the federal MoWRIE. The ESMP provides a guide to be used within existing Government Policy regulations for environment and social processes and other international legislation by donor organizations. This ESMP will be a living document that will be subject to periodic reviews to address specific concerns raised by stakeholders, and emerging policy requirements.

3. ADMINISTRATION, POLICIES, LEGAL AND REGULATORY FRAMEWORKS

3.1. Background

Sudan is one of the first African countries that passed sectoral laws for the protection of the environment. These laws have been further supported by an umbrella law enacted in the Environmental Conservation Act of 2001. The Act includes general principles and guidelines to in the implementation of development projects and makes it the responsibility of the project proponents to carry out an environmental impact assessment (EIA) prior to project implementation. The Act provides definitions and clarifications regarding natural resources management, pollutants and sources of pollution and specifies issues to be considered in EIAs

(Article 18). To implement the provisions of the Act, a Higher Council for Environment and Natural Resources (HCENR) was established in 1991 and a Ministry for Environment and Physical Development (MEPD) in 1995 which has since been reformed to a National Council for Environment. The Interim National Constitution of the Republic of The Sudan (2005) provides for the protection of the environment through the Comprehensive Peace Agreement (CPA) 2005, and relevant articles of the 1998 Constitution of the Sudan. The Constitution endorses the rights of citizens to live in a clean environment (Article 11) and directs attention to the protection and conservation of natural resources while Article 43 (2) allows the Government to expropriate land for developmental purposes and compensate the owners. According to the Constitution, the States manage State lands that are not under the National control. Under the new government restructuring at federal and state levels environment (Department of Environment) is under the auspices of Ministry of Production and Economic Development (encompassing Agriculture and livestock) in North Kordofan and South Kordofan States.

In general, in Sudan, the Environmental Management and Regulations are vested in the National Council for Environment. The Higher Council for Environment and Natural Resources coordinates and supervises environmental issues. The Council is mandated to provide policy and technical back up to the responsible ministries as required by law. It is responsible for enforcement and compliance with Environmental Assessments. The Environmental Protection Act of 2001 defines the environmental governance arrangements in the country and provides for the environmental management structures. The Act strives to bring on board as many stakeholders as possible in the management of environmental issues.

3.2. Legal, Policies and Regulatory Frameworks in The Sudan

3.1.1. Legal Framework

The following laws will be applicable to the management and implementation of the project: (i) The Constitution of The Sudan, 1998; (ii) The Environmental Protection Act of 2001; (iii) The Laws and Acts dealing with Land Tenure such as the Title to Land Act of 1899; The Registration Ordinance Act of 1925, Civil Transaction Act of 1984 and the Local Government Act of 1998 which addresses land management and administration at the local level.; (iv) The Laws dealing with Water among them: (1) Nile Pumps Control Act of 1939; (2) Civil Transaction Act of 1984; (3) Irrigation and Drainage Act of 1990; (4) The Water Resources Act of 1995; (5) The Groundwater Regulations Act of 1998; and, (6) The Public Water Corporation Act of 2008; (7) Unregistered Land Act of 1970 which deems any unregistered land, before the enactment of this law, as being registered in the name of the government; (8) Land Acquisition Act 1930 gives the government the power to appropriate lands for development purposes in accordance with the provision of the Constitution and Civil Transaction Act 1984.

In carrying out ESMP and EIA, the legal requirements to be considered are not confined to the above-mentioned Acts. There are more than 150 sectoral laws, orders and related regulations addressing environmental issues and the enforcement of these laws being entrusted to over 30 institutions. Legislations of particular relevance to the project activities and concerns will include: (i) The National Water Policy, 2001 (draft) and other water – related legislations; (ii) Groundwater Act (2017); (iii) Water Supply, Sanitation and Hygiene Policy 2018 (draft); (iv) Agricultural Pest Control Act, 1936; (v) Investment Promotion Act, 1999 amended (2015); (vi) Sudan Antiquities Act, 2002; (vii) Forest Act, 1989, which identifies three types of reserved forest: National, Regional, and others that may belong to communities, local institutions or individual citizens; (viii) Wildlife Protection Act, 1936.

Beside these sectoral laws implemented by Federal Institutions, there are also state level laws based on national laws with emphasis on particular local or state problems. However, most of these are considered local orders issued by localities to address problems such as those related to pasture and grazing which are based on customary tenure to specify corridors to be followed by nomads.

3.1.2. Customary Land Tenure

The formal legislations presented were passed by the government to organize land tenure. However, most of Sudan's lands are organized by customary and traditional rules and regulations. Private ownership is found only in areas along the Nile or in urban areas where land registration was carried out according to the Land Registration and Settlement Act of 1925. Most of the areas away from the Nile are under traditional communal tenure where rights over land ownership are recognized with four forms of land tenure systems: (i) government lands with community rights; (ii) government lands with no community rights (unoccupied lands, wetlands, water catchments, etc.); (iii) Hawker (land recognized as tribal homeland – Dar, or areas granted to individuals by previous Sultans controlled by the Nazir or Omda (in the clan land where land is controlled by the local or village Sheikhs)); and (iv) Lease (license) where land is granted by the government to investors for a limited number of years.

3.1.3. Policies and Regulatory Frameworks

The following policies and regulations will be useful: (i) The First National Ten Year Development Planning (1960 – 1970); (ii) The Decentralization of Natural Resources Management Policy declared by the 4th Constitutional Decree of 1991 which made Sudan a Federal Country and gave the States the responsibilities over their lands and management of natural resources; (iii) The National Comprehensive Strategy (NCS) of 1992 – 2002 which has a section dedicated for environmental management; (iv) The National Action Plan to Combat Desertification of 1998 which provided a description and analysis of the scale and management of desertification in Sudan; (v) The Five-Year National Strategic Plan (NSP) (2007 – 2011) recognised environment as being cross-cutting and focused on promoting sustainable economic development, poverty reduction and the attainment of the Millennium Development

Goals (MDGs); (vi) The National Water Policy (amended) 2006, especially the section on Water and Environment; and, (vii) The National Water Supply and Sanitation Policy of 2009 which focuses on equitable and sustainable utilisation and provision of safe water and sanitation

3.1.4. The African Development Bank (AfDB) Environmental and Social Safeguards

The AfDB and other donor’s commitments to environmental and social protection are reflected in their safeguard policies. The safeguards particularly the AfDB and other financial institutions which are of relevance to this project include, Environmental Assessment, Natural Habitats, Physical Cultural Resources, Indigenous People, and Involuntary Resettlement. This ESMP has been prepared to forestall environmental and social impacts that will arise during the development and operational implementation of the project based on AfDB’s 5 Operational Safeguard Policies besides the applicable environmental policies, laws and regulations of the states and national laws of the Government of Sudan. The 5 Operational Safeguard Policies that will be triggered include: (1) Environmental and Social Assessments (OS1); (2) Biodiversity and Ecosystem Services (OS3); (3) Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource efficiency (OS4); and, (4) Labour Conditions, Health and Safety (OS5).

Table 1: Operational Safeguards triggered

OPERATIONAL SAFEGUARDS TRIGGERED BY THE PROJECT(FOR THE MOMENT)	YES	NO
OS1 -Environmental Assessment	x	
OS2 Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation		x
OS3 Biodiversity and Ecosystem Services	x	
OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials	x	
OS 5 Labour Conditions, Health and Safety	x	

3.2. International Regulations and Conventions

The project will also take cognisance of the international conventions and Multilateral Environmental Agreements signed and ratified by Sudan. Some of these will include are: (i) The Stockholm Conference of 1972; (ii) Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar Convention), 2001; (iii) The International Convention on Biological Diversity (UNCBD) of 1994; (iv) The Earth Summit of 1992 and the subsequent United Nations Framework Convention on Climate Change (UNFCCC), 1992; (v) the Kyoto Protocol to the UNFCCC; (vi) the Montreal Protocol on Substances that Deplete the Ozone Layer; (vii) The Vienna Convention for Protection of the Ozone Layer; (viii) The United Nations Convention to Combat Desertification (UNCCD); (ix) the Convention Concerning the Protection of the World Cultural and National Heritage (World Heritage

Convention), Paris, 1975; (x) The Convention on the Conservation of Migratory Species of Wildlife Animals, 1979; and, (xi) the African Convention on Conservation of Nature and Natural Resources, 1968.

4. SUSTAINABLE RURAL WATER SUPPLY AND SANITATION PROJECT IN NORTH AND SOUTH KORDOFAN

In 1994, the National Water Corporation (NWC) was established by merging the National Rural and Urban Water Corporations. In 2012, it was reformed to Drinking Water and Sanitation Unit (DWSU) under the MoWRIE with the responsibility for planning and implementation of national water supply projects, provision of technical and financial support to national investment projects, up-keeping of standards and training of state water corporations and development of the sector polices. At state level, State Water Corporations (SWCs) are responsible for water supply, and operation and maintenance of water infrastructure.

Sudan as a country faces many environmental, ecological challenges. Some of the challenges are (1) general water scarcity; (2) land and resources degradation and soil erosion; (3) periodic and most recently frequent droughts; (4) desertification; (5) deforestation and extensive tree cutting; (6) over-grazing; and, (7) the prolonged armed conflicts that the country experienced in the 1970s, 1980s and the 1990s which had negative impacts on economic development as well as environment and natural resources and social development. The water sector in particular faces many challenges that include: 1) Inadequate sector funding; 2) Limited managerial, technological and implementation capacities coupled with poor coordination; 3) Absence of or inadequate approved water and sanitation policies and strategies; 4) Low coverage of safe water supply (in quantity and quality) and improved sanitation facilities; and 5) Unclear delineation of mandates/coordination among different sector institutions. The sector challenges 3), 4), and 5) above are being addressed under the ongoing *Water Sector Reforms and Institutional Capacity Development Program* funded by the African Development Bank that was approved in 2015.

In view of the above, the Government of Sudan with funding from the AfDB has proposed for implementation the Water Supply and Sanitation Project in North and South Kordofan States for Livelihoods Improvement

4.1. Project components and their anticipated activities

The proposed project components and activities are as given below.

- 4.1.1. Component 1: Development of Water Supply Infrastructure whose activities will include:
 - (i) rehabilitation of water storage reservoirs in seasonal rivers;
 - (ii) construction of water storage reservoirs across seasonal rivers;
 - (iii) construction of hafirs;
 - (iv) construction of solar powered water yards;
 - (v) development of water distribution networks to water kiosks.

- 4.1.2. Component 2: Development of sanitation and hygiene facilities. The activities will include: (i) construction of WaSH facilities in public places (schools, markets, health centres); (ii) Hygiene promotion and training.
- 4.1.3. Component 3: Capacity development. The activities will include: (i) establishment and training of community water users association; (ii) training community members in alternative income generating activities; (iii) establishment of tree nurseries; (iv) carry out hydrological studies; (v) procurement of monitoring equipment; (vi) gender equality review on effects of water infrastructure in the two states.
- 4.1.4. Component 4: Project Management. In this component activities will include: (i) project implementation; (ii) procurement of equipment and facilities; (iii) managing the operational costs; (iv) monitoring and evaluation

5. PROJECT ALTERNATIVES

This ESMP study sought to consider possible alternatives to the proposed project. Two alternatives were considered. They included the “No Project Alternative” and the Alternative Locations.

5.1. The “No Project” Alternative

The “No Project” alternative implies no project at all and means foregoing all the environmental, social and economic benefits that include: (i) increased water supply for domestic, crop production and livestock production; (ii) improved hygiene and health conditions and standards among targeted project communities; (iii) improved agricultural production and food security; (iv) improved health standards through provision of clean water and reduced waterborne diseases; (v) improved school enrollment, especially of girls who spend long hours to collect water; (vi) improved environmental conditions and water management systems; (vii) improved standards of living through increased economic and livelihood activities as well as savings from health and water purchases; (viii) reduced resource use conflicts especially between nomadic pastoralists and farmers; and, (ix) employment opportunities during both the construction and operational phases of the project.

5.2. Alternative Locations

The selected project areas have high potential agricultural land, seasonal streams, huge numbers of livestock, gum Arabic, and fairly good road linkages to both El Obeid and Kadugli towns yet the project area constitutes one of the poorest and food insecure areas in Sudan due to low rainfall, shortage in water supply sources, drought, desertification and man-made environmental degradation. The project area also suffers from natural resource use conflicts especially between settled farmers and nomadic pastoralists, particularly during the drought periods. As such the project will address these challenges. Selecting a different locality for the project, means leaving the challenges unaddressed.

6. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS OF THE PROPOSED PROJECT

6.1. Positive environmental, social and economic impacts

The project has many positive environmental, social and economic impacts. These positive impacts include among others: (i) increased water supply for domestic, crop production and livestock production; (ii) improved hygiene and health conditions and standards among targeted project communities; (iii) improved agricultural production and food security; (iv) improved health standards through provision of clean water and reduced waterborne diseases; (v) improved school enrollment, especially of girls who spend long hours to collect water; (vi) improved environmental conditions and water management systems; (vii) improved standards of living through increased economic and livelihood activities as well as savings from health and water purchases; (viii) reduced resource use conflicts especially between nomadic pastoralists and farmers; and, (ix) employment opportunities during both the construction and operational phases of the project.

6.2. Project beneficiaries

The project will directly benefit approximately 400,000 people and a huge population of livestock hence will have a huge impact in the two states from this project

6.3. Gender and youth Aspects

The proposed Project will ensure and contribute to active gender equality and will not allow unintended negative gender impacts, such as exclusion. Gender perspectives have been integrated into project formulation in line with the National Gender Strategy and policies while taking due cognizance of the Bank's Gender Policy. The PIU will also ensure development of a Gender Action Plan that will drive the real engagement of men, women and the youth to fully engage during the implementation of the project in both states.

6.4. Involuntary resettlement and Land Tenure Systems

The project is not expected to have any involuntary resettlement of the population hence no Resettlement Action Plan is required.

6.5. Climate Change and Green Growth

The project was screened using the Climate Safeguards System (CSS) of the African Development Bank and was classified as a **Category 2 Project**. In terms of climate change and green growth, the project will contribute to climate change resilience through increased availability of water and improved catchment management activities.

6.6. Negative impacts

The proposed project is expected to have a number of environmental and social impacts including: (i) loss of flora and fauna as well as biodiversity loss through vegetation clearing and destruction of natural habitats during construction of water storage infrastructure and water pipelines; (ii) soil compaction and some destabilization of the geological balance during excavations and construction; (iii) possibilities of over-abstraction of groundwater resources; (iv) increased environmental damage through excavations and creation of burrow pits to get construction materials; (v) chemical pollution from the drilling fluids and petroleum products spillage as well as dust and air pollution during construction works and transportation of construction materials; (vi) occupational health hazards; (vii) possibilities of water contamination from poor water collection systems and free access to water points; (viii) increase in occurrence of water related diseases such as malaria, bilharzia and other water-borne diseases; (ix) increased possibilities of human (especially children) and livestock drowning in the water harvesting structures; and, (x) high potential for increased human/livestock concentrations which might lead to land degradation. It is important to note that this ESMP will be updated and adjusted for site-specific activities by the individual contractors under the supervision of the Executing Agency in consultation with other relevant environmental authorities in The Sudan. The Bank as the financing entity will ensure compliance with its environmental and climate change safeguards

7. MITIGATION/ENHANCEMENT MEASURES

The overall responsibility of the environmental and social monitoring will lie with the PIU at El Obeid that will report to the MoWRIE under the direct supervision of the DWSU. The proposed mitigation measures to address the negative impacts include: (i) reduced and targeted clearance of vegetation; (ii) avoiding haphazard and uncoordinated movement of vehicles and machinery; (iii) good assessment of the groundwater levels and quantities to minimize over-abstraction; (iv) excavation activities will be limited to designated areas only identified and marked; (v) controlled use of chemicals and proper management of all possible pollutants; (v) protection of water sources and water transmission infrastructures; (vi) ensure good working environments, with all the necessary equipment and facilities as well as provision of requisite protection gears; (vii) ensure protection of water sources through fencing, development of water use regulation and enforcement of the water sources access rules; (viii) public education about waterborne diseases, use of mosquito nets and treatment of water to control disease; (ix) protection of water sources through fencing coupled with public education and awareness; and, (x) strategic location of water sources to prevent over concentration of people and livestock in one or just a few areas.

8. ESMP AND MONITORING

8.1. ESMP.

Detailed plans to implement the ESMP are elaborated in the main report.

8.2. ESMP Monitoring

The overall objective of environmental and social plan monitoring will be to ensure that mitigation measures are implemented and are effective. Environmental and social monitoring will also enable response to new and developing issues of concern during the project implementation hence ensuring that project activities comply with and adhere to environmental provisions and standard specifications of the Bank and those of the Government of The Sudan. The overall responsibility of the environmental and social plan monitoring will lie with the Project Implementation Unit under the DWSU in the MoWRIE in conjunction with the district and regional environmental units and working in close collaboration with the authorities responsible for the management of environment and environmental issues.

The whole exercise of ESMP monitoring will involve monitoring compliance with regulations, managing worksites, executing specific environmental and social works and seeking solutions to emerging environmental problems. The ESMP monitoring team will ensure regular reporting, which will be on a monthly, quarterly, biennially or annually depending on the aspects being monitored to avoid any serious environmental consequences. Among the key issues to be monitored will be: (i) the status of the biological conditions; (ii) status of the physical works; (iii) the technical and environmental problems encountered; (iii) proposed solutions to the problems encountered; and, (v) the effectiveness of environmental and social measures adopted.

The ESMP monitoring programme is proposed for implementation at two-levels – the supervisory activity carried out by the control or supervision missions of the African Development Bank in conjunction with ministry officials and the regular monitoring by the Environmental and Social Safeguards Officer who will ensure that site activities are conducted in compliance with agreed upon local environmental standards under the laws of Sudan. The supervisory or control missions may be once every six months and their role will include: (i) reviewing the contractor's detailed worksite ESMP or ESIA and its specific procedures; (ii) ascertaining mitigation of the negative impacts identified; (iii) ascertaining the effectiveness of proposed measures; (iv) studying specific applicability conditions for the proposed measures; (v) monitoring the implementation of measures during the works; (vi) monitoring the recommended measures; (vii) proposing remedies in the event of occurrence of major impacts; and (viii) conducting environmental compliance and assessment at the end of the project.

9. CONSULTATIONS AND PUBLIC PARTICIPATION

Consultations and public participation is a requirement by law in many countries and it is purposed to generate concerns about environmental impacts of any development project or programme. During the preparation of this ESMP, significant consultations and public participation was carried out. Further consultations are anticipated during the subsequent parts of the project development and implementation, especially during the preparation of site-specific environmental and social impact assessments. The list of the people consulted during the assessments to prepare this ESMP is given as an annex in the main report. The objectives of the stakeholders and public participation include among others: (i) to provide an opportunity for the Project Affected Persons (PAPs) to get clear, accurate and comprehensive information about the project and its anticipated impacts; (ii) to provide an opportunity for the PAPs to give their views and raise their concerns regarding the project and its impacts; (iii) to provide the PAPs with the opportunity of suggesting ways of avoiding, reducing, or mitigating the negative impacts and enhancing positive impacts; (iv) to enable the project proponents to incorporate the needs, preferences and values of the project as seen by the stakeholders into the proposed project/programme; (v) to provide opportunities to avoid and resolve disputes and reconcile conflicting interests by the stakeholders of the project; and, (vi) to enhance transparency and accountability in decision making.

10. INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The overall implementation responsibility of this ESMP will lie with the Environmental and Social Safeguards Officer at the PIU who will work closely with experts from the National Council for Environment, Department of Environmental Affairs as well as the Higher Council for the Environment. These experts are well-trained and highly qualified staff who have the capacity to implement the ESMP. There is need, however, to identify development experts such as the gender expert, social development expert, youth empowerment expert, etc. that can be incorporated to address key social aspects of the project. Monitoring, evaluation and reporting on environmental issues will be part of project implementation processes and reporting systems. There might be need for capacity development in to empower the relevant officials with technical skills in environmental assessments and management.

11. COMPLIMENTARY INITIATIVES

The key complementary initiatives of this project will include: (i) good and complementary relationship among different players participating in the implementation of the project; (ii) capacity building initiatives; (iii) improved land, water and sanitation management practices; (iv) mainstreaming HIV/AIDS and other communicable diseases during project implementation may be necessary even though HIV/AIDS remains an insignificant challenge in The Sudan.

12. ESTIMATED COSTS TO IMPLEMENT THE ESMP

No	Activity	Cost (US\$)
1.	Preparation of site specific ESIA reports	80,000
2.	Mitigation costs associated with contractor to address identified critical gaps and mitigations including catchment management activities	270,000
3.	Cost incurred in the project (PIU) operation cost/Institutional strengthening and capacity building	163,000
4.	Environmental and Social Reviews (ESR) of project activities/ESMP Monitoring	100,000
5.	General capacity building including public awareness and education	65,000
6.	Technical and financial assistance to develop guidelines and studies	60,000
7.	Detailed ESMP/ESIA training for state environmental office staff	15,000
8.	Awareness raising of local government NGOs, and community representatives	65,000
9.	TOTAL	818,000

13. CONCLUSIONS AND RECOMMENDATIONS

13.1. Conclusions

This ESMP has been prepared based on environmental and social assessments conducted to equip the AfDB and relevant authorities of the Government of The Sudan and especially the MoWRIE at the Federal Level and the State Ministries responsible for water resources as well as several other interested agencies, local administrative agencies plus all stakeholders with relevant and sufficient environmental information about the proposed project. The project will have environmental and social impacts but which do not have long term and cumulative and significant impacts.

13.2. Recommendations

Even though the project focuses on water and sanitation, it is a multi-sectoral and a multi-disciplinary project. As such, it is important that during the implementation, relevant line ministries and other stakeholders, especially the private sector with entrepreneurial interests in the water sector, are actively drawn in to address some of the cross cutting issues such as land and water management. The multi-disciplinary approach will ensure that emerging issues and challenges are not only adequately addressed but the addressing is done timely and appropriately. The contractors and the project proponents should take into consideration all the legislative measures put in place so as to ensure the due process is followed. The mitigation measures provided are based on the recommendations of this ESMP and they should be followed so as to address the environmental issues that may arise in the course of the implementation of this project.

14. References and contacts

This ESMP summary was prepared based on information contained in the detailed project documents provided by the client, MoWRIE, Government of Sudan

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