ENHANCING COMMUNITY RESILIENCE AND LOCAL GOVERNANCE PROJECT PHASE II (ECRP II)

Generic - Environmental and Social Management Plan (G-ESMP) for the Rehabilitation and Drilling of 70 Boreholes and Construction of 6 Water Yards in Twic and Gogrial West Counties, Warrap State, South Sudan

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Executive Summary

This Generic Environmental and Social Management Plan (G-ESMP) has been prepared for the rehabilitation and drilling of 70 boreholes and construction of 6 water yards in Twic and Gogrial West Counties, Warrap State implemented by World Vision South Sudan. It serves as a standard guide for preparing contractor-specific ESMP (C-ESMP) at each borehole or water yard site and will ensure that distinct local conditions and risks are systematically assessed and managed throughout planning and implementation, thereby enhancing compliance with E&S risk management and contributing to the overall effectiveness and safety of the 76 sites/sub-projects.

The G-ESMP outlines the potential environmental and social impacts associated with the rehabilitation and drilling of borehole and water yard construction and proposes mitigation measures to ensure compliance with national regulations, donor requirements, and World Bank Environmental and Social Standard (ESS), and international best practices. The G-ESMP is aligned with the World Bank Environmental and Social Framework (ESF) for moderate-risk sub-projects and has been developed following meaningful stakeholders' consultations, with the document to be publicly disclosed in accordance with ESS10 requirements. The key considerations include:

Environmental Impacts:

- Soil erosion from exposure to rain and wind as a result of vegetation clearance
- Potential groundwater contamination risks
- Waste management (drilling mud, construction debris)
- Noise and air pollution as a result of dust and gaseous emissions from construction equipment

Social Impacts:

- Land disputes arising from disagreement over donated land and its ownership which would delay implementation.
- Insecurity arising from inter-communal conflicts and cattle raids may considerably interfere with access to sites and progress of work
- Preparing for and drilling works may destroy key community cultural heritage sites such as burial grounds and sacred items such as trees which may cause conflict between community members and local authorities who donated the land on their behalf
- Increase in the risk of GBV/SEA, including sexual harassment and rape due to labor influx in the project areas.

Mitigation Measures:

- Site selection based on hydrogeological surveys and community consultations
- Proper waste disposal and pollution prevention practices
- Implementation of occupational health and safety protocols
- Community sensitization and establishment of Water Management Committees
- Gender-sensitive approaches to ensure inclusive participation and benefit-sharing, including prohibition of child and forced labor and codes of conduct
- Establishment and implementation of a Grievance Redress Mechanism (GRM) accessible to all stakeholders

Monitoring & Evaluation:

- Regular inspection of borehole drilling and water yard construction activities
- Tracking of environmental compliance indicators (waste, noise, water quality)
- Social monitoring through community feedback mechanisms
- Reporting aligned with World Bank and Government of South Sudan standards

The G-ESMP emphasizes capacity building, community ownership, and sustainability as critical components for long-term success. By integrating environmental safeguards and social inclusion measures, the project will not only provide safe water but also strengthen resilience against climate variability and reduce the burden of waterborne diseases.

In conclusion, the G-ESMP provides a framework to guide environmentally sound and socially responsible implementation of the ECRP II water infrastructure activities in Warrap State. It ensures that the benefits of improved water access are maximized while minimizing adverse impacts on people and the environment.

Table of Contents

LIST OF ABBREVIATIONS AND ACRONYMS

BDC	Boma Development Committee
CI	Community Infrastructure
CoC	Code of Conduct
ECRP	Enhancing Community Resilience and Local Governance Project
ESCP	Environmental and Social Commitment Plan
ESA	Environmental and Social Assessment
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
EHS	Environment, Health and safety
IP	Implementing Partner
G-ESMP	Generic Environmental and Social Management Plan
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GII	Gender Inequality Index
GRM	Grievance Redress Mechanism
GRS	Grievance Redress System
HSSE	Health, Safety Social and Environment
HSSE	Health, Safety, Social and Environment
LGSDP	Local Governance and Service Delivery Project
LMP	Labor Management Procedures
MoE	Ministry of Environment
MoH	Ministry of Health
NGO	Non-Governmental Organization
PPE	Personal Protective Equipment
PMU	Project Management Unit
PDC	Payam Development Committee
SEP	Stakeholder Engagement Plan
SEAH	Sexual Exploitation, Abuse and Harassment
SH	Sexual Harassment
SOP	Standard Operating Procedure
UN	United Nations
UNDSS	United Nations Department for safety and Security
WV	World Vision
WVSS	World Vision South Sudan
WB	World Bank
WBH	Water Boreholes

CHAPTER 1

INTRODUCTION

1.1 Background

The South Sudan Enhancing Community Resilience and Local Governance Project (ECRP) fills the critical gap between emergency response and recovery by addressing immediate service needs in areas with a high concentration of returnees while strengthening local institutions to better manage their own development in the future. The project activities are expected to have an impact on the country's socioeconomic and natural environment. While the holistic impact is expected to be overwhelmingly positive, risks of negative environmental and/or social impacts may arise due to the complexities of this project. To address these risks, an Environmental and Social Management Framework (ESMF) has been developed, which details the requirement for subproject-specific Environmental and Social Management (ESMP).

Project Description

The Project Developmental Main Objective (PDO) is to improve access to basic infrastructure and strengthen community institutions in selected counties through five key components. The project's five components are.

1) . **Component 1: Infrastructure and Services for Community Resilience** supporting eligible investments in community-level infrastructure and services as well as physical investments for flood risk reduction.
2) **Component 2: Institution Strengthening** supporting the participatory planning process for the identification of subprojects to be financed under Component 1, monitoring of the construction of subprojects, as well as capacity building of relevant national and local institutions.
3) **Component 3: Emergency Flood Response** providing emergency flood response activities in selected flood-affected vulnerable areas including areas experiencing a large inflow of displaced population in Northern Bahr el Ghazal (NBeG) and Warrap States.
4) **Component 4: Project Management and Learning** providing the overall project management support, including fiduciary management, monitoring and evaluation (M&E), grievance redress mechanism (GRM), third-party monitoring (TPM), and environmental and social (E&S) risk management among others; and
5) **Component 5: Contingent Emergency Response Component (CERC)** allowing for rapid reallocation of uncommitted project funds in the event of a natural or manmade crisis in the future, during the implementation of the project,

to address eligible emergency needs under the conditions established in its Operations Manual

1.2 Environmental and Social Risk Classification and Rationale for Preparing a G-ESMP

As part of the Health, Safety, Social and Environment (HSSE) Compliance Commitment Agreement and in compliance with the project ESMF, all proposed sub projects should be subjected to the environmental and social screening process to determine their environmental and social risks and the corresponding risk management strategy to be adopted. The screening result (see Appendix V for details) shows that this cluster of sub-projects (Water Boreholes (WBH) have moderate environmental and social risks and impacts resulting from Borehole rehabilitation and Drilling activities. But these impacts are site specific and are limited in scope and can be readily addressed through mitigation measures outlined in the G-ESMP. This G-ESMP is therefore prepared to set out mitigation, monitoring and institutional measures to be taken during implementation to avoid adverse environmental and social impacts, offset them or reduce them to acceptable levels whilst enhancing the positive impacts.

1.3 Objectives of the Generic ESMP

The Generic Environmental and Social Management Plan (G-ESMP) is a mandatory requirement covering the rehabilitation and drilling of 70 boreholes and construction of 6 water yards. It serves as a standard guide for preparing contractor-specific ESMP (C-ESMP) at each borehole or water yard site, all based on the G-ESMP. This ensures that distinct local conditions and risks are systematically assessed and managed throughout planning and implementation, thereby enhancing compliance with E&S risk management and contributing to the overall effectiveness and safety of the 76 sites/sub-projects.

The development of this Generic ESMP specifically seeks to serve the following key objectives:

- Establish standardized procedures for E&S risk identification, assessment, and mitigation: Typical risks from borehole drilling and related construction may include groundwater contamination from poor sitting or drilling fluids; bacterial/chemical pollution; over-abstraction/salinization; noise/vibration/dust; soil erosion/sedimentation; community health/safety hazards like open wells or labor influx-related GBV/SEA among others

- Ensure full compliance with WB Environmental and Social Framework (ESF), project ESMF, and national requirements aligning with the relevant Environmental and Social Standards (ESS) on assessment/management of risks;

labor/working conditions; resource efficiency/pollution prevention; community health/safety; land acquisition and others

- Provide a practical, adaptable template for site-specific C-ESMPs and contractor implementation thus Serving as the basis for WVSS and contractors to prepare tailored C-ESMPs post-screening

- Facilitate effective monitoring, reporting, and adaptive management, defining clear, measurable indicators (e.g., water test results, abstraction logs, incident reports), responsibilities of the contractors, and WVSS which would enable the PMU to provide oversight and ensure compliance

- Promote stakeholder engagement, grievance redress, and social inclusion through the embedded requirements for community consultations, vulnerable group considerations (such as women, IDPs, refugees, youth), voluntary land donation processes and accessible and clear GRM/SEP.

- Support capacity building, sustainability, and climate resilience by outlining training needs for contractors, communities, and WVSS staff on ESMP implementation, O&M, emergency response, and climate adaptation

- Enable efficient project implementation while minimizing adverse impacts by allowing subprojects to proceed only after screening, G-ESMP approval, and disclosure

1.4 Methodology Used

The G-ESMP covers the rehabilitation and drilling of 70 boreholes and construction of 6 water yards in Twic, and Gogrial West Counties in Warrap State. The document serves as a standard guide for preparing contractor-specific ESMP (C-ESMP) at each borehole or water yard site. It will ensure that distinct local conditions and risks are systematically assessed and managed throughout planning and implementation, thereby enhancing compliance with E&S risk management and contributing to the overall effectiveness and safety of the 76 sites/sub-projects.

The development of the G-ESMP was preceded by various activities including County, Payam and Boma entry meetings which resulted in the longlisting, shortlisting, validation and screening of all priority needs for the selected communities in both Counties. The key steps undertaken are summarized below:

Community Meeting/Stakeholder Consultations

Community engagement meetings were conducted between 12th – 24th May 2025 during the screening process of the sites that were proposed by the communities for the rehabilitation and drilling of boreholes and water yards. The participants included

women, and men, youth and elderly, people with disabilities and special needs. During the meetings, the community were consulted on the ownership of the land for the proposed project, procedures for voluntary land donation for development of subprojects, presence and proximity of sites of cultural significance, presence of restricted/protected areas near the project locations, community structures for receiving and addressing project related grievances, and engagement on the possible environment and social risks and impacts that may arise from the activities of borehole drilling and rehabilitation including their available respective mitigation measures.

Field observations

In addition to the rapid community mobilization and stakeholder engagement meetings, the teams concurrently made environmental and socio economics field observations to complement the baseline information provided in the ESMF. The screening team visited the proposed sites for the construction and rehabilitation of the boreholes and water yards and ensured that these sub projects were screened using the project Environment and Social Screening Checklist to identify the potential environmental and social impacts and risks the sub project poses to the community. Following the screening exercise, all the proposed subprojects were assigned a “moderate” risk rating, leading to the need for the development of the G-ESMP and additional C-ESMP once contractors had been hired and on ground.

Desk Review

A comprehensive desk review was conducted to establish the policy and legal framework guiding the project. Key documents reviewed included the *ECRP II Project Appraisal Document*, The Environmental and Social Management Framework (ESMF), the Grievance Redress Mechanism,(GRM), Stakeholder Engagement Plan (SEP), Environmental and Social Commitment Plan (ESCP), and GBV Action Plan. South Sudan’s Environmental Protection Act (2001), the Draft Environmental Protection Bill (2023), the Draft Water Bill (2015), the Land Act (2009), the Labour Act (2017), and the World Bank’s Environmental and Social Framework (2017). This provided the foundation for identifying applicable safeguards, national requirements, and institutional responsibilities.

This process enabled the team to assess potential positive and negative impacts of project activities, and the development of generic mitigation measures. This document will further inform the development of site-specific ESMP for each site.

CHAPTER 2

POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1 Introduction

This chapter presents an overview of applicable national and international policies and other regulations which will guide the implementation of the G-ESMP during the execution of the ECRP activities.

2.2 National Regulatory and Policy Framework

Since attaining Independence in July 2011, the Government of the Republic of South Sudan has adopted a new constitution, as well as policies and legislation related to environmental and social standards. Some legislation from Pre-independence time 'Southern Sudan' remains in place. At the same time, other laws and regulations are still being drafted, with the aim of enhancing sustainable socio-economic development. The policies and laws provide procedures to be followed in the planning and implementation of activities to utilize resources and execute programs to maximum benefit.

Transitional Constitution of the Republic of South Sudan of 2011: The Transitional Constitution of the Republic of South Sudan of 2011 includes numerous provisions that have a bearing on the environment. Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment and (2) that every person shall be obliged to protect the environment and (3) that future generations shall have the right to inherit an environment protected for the benefit of present and future generations.

South Sudan Draft Environmental and Protection Bill (2013) is to protect the environment and to promote ecologically sustainable development that improves the quality of life for both the present and future generations. Section 18 of the South Sudan Draft Environmental and Protection Bill introduces the requirement for Environmental Impact Assessments. This bill is vital since it requires involvement of communities in decision-making and to anticipate and avoid, minimize or offset the adverse significant biophysical, social and other relevant effects of development proposals , among others.

In addition, Section 32, Cap 5, intends to introduce the requirement for Environmental Audits. An Environmental Audit is defined as the systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing in conserving the environment and its resources. The main

objectives of an Environmental Audit are to: Assess how far project activities and programs conform with the approved environmental management plans as well as with the required environmental quality standards. To provide mechanisms for coherent implementation procedures of a project so as to mitigate adverse environmental impacts and provide regulatory bodies with a framework for ensuring compliance with, and the performance of an environmental management plan.

Section 20, Cap 5, intends to introduce the requirement for Environmental Monitoring. Which is defined as the continuous determination of actual and potential effects of any activity or phenomenon on the environment, whether short or long term. The bill mandates the line ministries to: Monitor environmental phenomena with a view to assessing possible changes in the environment and their possible impacts. In addition, they must monitor the operations of any industry, project or activity with a view to determining its immediate and long-term effect on the environment. They need to compel the proponent to carry out a baseline survey to identify basic environmental parameters in the project area before implementation (except where a baseline survey has been carried out) Finally, they have to determine the parameters and measurable indicators to be used in monitoring of projects and conduct measurements of environmental changes that have occurred during implementation.

The Land Act of 2009 (State of Southern Sudan): One of the key objectives of the Land Act is to promote a land management system, which can protect and preserve the environment and ecology for the sustainable development of South Sudan. It also provides for fair and prompt compensation to any person whose right of occupancy, ownership or recognized long-standing occupancy or customary use of land is revoked or otherwise interfered with by the Government.

The Land Act reinforces the Government's recognition of customary land tenure: Customary land rights including those held in common shall have equal force and effect in law with freehold or leasehold rights.' Community land can be allocated to investors as long as investment activity 'reflects an important interest for the community' and 'contributes economically and socially to the development of the local community. It also requires that state authorities approve land acquisitions above 250 feddans (105 hectares) and create a regulated ceiling on land allocations.

The Land Act requires the Government to consult local communities and consider their views in decisions about community land. The Act also gives pastoralists special protection: 'No person shall without permission to carry out any activity on the communal grazing land which may prevent or restrict the residents of the traditional communities concerned from exercising their grazing rights'.

The Land act is applicable to this project since there is acquisition of land through voluntary donation process for the implementation of project activities.

The Wildlife Conservation and National Parks Act (section 5) recognizes that wildlife constitutes an important national natural wealth and is part of the heritage of South Sudan and therefore needs to be conserved, protected and utilized for the benefit and enjoyment of all its people. Section 6 vests the administration and execution of the policy to the Secretariat headed by the Director General of the Secretariat of Wildlife Conservation, Environment Protection and Tourism. The Secretariat's objectives and functions are as follows: The conservation, management and administration of parks, controlled areas and other protected game reserves. The development, in cooperation with other competent authorities, of Tourism (based on the wildlife in South Sudan) and the development of other forms of rational utilization of the wildlife and environment resources. The control of hunting and management and preservation, conservation and the protection of wildlife and environmental resources along with the control of trade in protected animals and trophies. The promotion of education and dissemination of information about wildlife resources in South Sudan (In cooperation with competent authorities). The training of wildlife officers, non-commissioned officers and game scouts and other personnel of the Secretariat. The development and carrying out of research on wildlife and environmental resources with a view to their optimum preservation, conservation, management and protection. The management and administration of zoological gardens. Finally, the administration and enforcement of the provision of this Act and the attainment of its objectives.

The Public Health (Water and Sanitation) Act (2008) emphasizes the prevention of the pollution of air and water and encourages improvement in sanitation. Key provisions include the protection of the sanitation of the environment, and they encompass the measure to address the pollution of water and air. The following are measures geared towards control of pollution of water: Measures to prevent pollution of water for consumption; Measures destined to prevent pollution of potable water; Anyone who offers the public water to drink or human food, and which includes frozen food should ensure that the water conforms to the portability regulations; Management and disposal of hazardous wastes; and storage of wastes on the premises of waste generators. The Public Health Act (2008) also provides the need for the protection of pollution of water through the enforcement of regulations and measures necessary to combat all elements of pollution and protect the natural level of the environment and public health.

The Child Act (Act No. 10 of 2008): The Child Act regulates the prohibition on child labor, the protection of children and young people and hazardous child labor.

T**he Labour Act (Act No. 64 of 2017):** The Act establishes a legal framework for the minimum conditions of employment, labor relations, labor institutions, dispute resolution and provisions for health and safety in the workplace. It further reinforces the right to equal remuneration for work of equal value as guaranteed by the constitution. Section 6(1) of the Labour Act provides that 'No person shall discriminate, directly or indirectly, against an employee or job applicant in any work policy or practice'. Section 6(2) also forbids discrimination by any Trade Union, Employers Association or Federation. Section 6(3) defines discrimination as 'any distinction, exclusion or preference with the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation' based on a series of grounds including sex and pregnancy or childbirth.

While the Labour Act provides additional protection for children, it lacks clarity on prohibitions on the worst forms of child labor. The national army continues to recruit, sometimes forcibly, children to fight opposition groups. Children are further engaged in other worst forms of child labor, including in commercial sexual exploitation. The government has failed to bring any perpetrators to justice.16 Children between the ages of 10 and 14 are further employed in agriculture and industry and services, including in rock-breaking, construction (building and transporting materials) and brickmaking.

2.3 International Conventions Signed and Ratified by South Sudan.
The following are some of the international conventions signed and ratified and South and may be of importance to the successful implementation of this G-ESMP.

ILO Convention 138, Minimum Age. The convention provides for the possibility of initially setting the general minimum age at 14 (12 for light work) where the economy and educational facilities are insufficiently developed. South Sudan has informed the ILO that it has set the general minimum age at 14 years. South Sudan ratified the convention in 2012.

ILO Convention 100 on Equal Remuneration. The convention aims at equal remuneration for work of equal remuneration between men and women. South Sudan ratified the convention in 2012.

ILO Convention 111 on Discrimination. The convention calls upon states to enable legislation prohibiting all forms of discrimination and exclusion on any basis, including race, sex, religion, etc. South Sudan ratified the convention in 2012.

Convention on the Elimination of all forms of Discrimination against Women. CEDAW places explicit obligations on states to protect women and girls from sexual exploitation and abuse. South Sudan ratified the Convention on 3 September 2014.

Convention on the Elimination of all forms of Discrimination against Women. CEDAW places explicit obligations on states to protect women and girls from sexual exploitation and abuse, among other issues. South Sudan ratified the CEDAW in 2014. The accession to CEDAW enabled the country to address issues of customary law involving women's right to inherit and own productive assets, as well as their lack of voice and decision making in family and community matters and the denial of their right of choice to found a family especially in rural settings.

2.4 World Bank Environmental and Social Management Framework and Relevant Standards (ESS)

The Environmental and Social Framework (ESF) sets out the World Bank's commitment to sustainable development through a Bank Policy and a set of Environmental and Social Standards that are designed to support borrowers' projects with the aim of ending extreme poverty and promoting shared prosperity. A short summary of several relevant Environmental and Social Standards (ESSs) from the Bank's latest Environmental and Social Framework are presented below.

The Environmental and Social Standards set out the requirements for borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The Bank believes that the application of these standards, focusing on the identification and management of environmental and social risks, will support borrowers in their goal to reduce poverty and increase prosperity in a sustainable manner for the benefit of the environment and their citizens. The standards will:

(a) support borrowers/clients to achieve good international practice relating to environmental and social sustainability.
(b) assist borrowers/clients to fulfil their national and international environmental and social obligations.
(c) enhance nondiscrimination, transparency, participation, accountability and governance.
(d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.
The ten Environmental and Social Standards establish the standards that the borrower and the project will meet through the project life cycle, as follows:

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts. ESS1 sets out the client's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).

The environmental and social assessment will be based on current information, including a description and delineation of the project and any associated aspects and environmental and social baseline data at an appropriate level of detail sufficient to inform characterization and identification of risks and impacts and mitigation measures. The assessment will evaluate the project's potential environmental and social risks and impacts, with a particular attention to those that may fall disproportionately on disadvantaged and/or vulnerable social groups; examine project alternatives; identify ways of improving project selection, siting, planning, design and implementation in order to apply the mitigation hierarchy for adverse environmental and social impacts and seek opportunities to enhance the positive impacts of the project. The environmental and social assessment will include stakeholder engagement as an integral part of the assessment, in accordance with ESS10.

According to ESS1 the client will manage environmental and social risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project and the potential risks and impacts. The client is therefore responsible for cascading compliance with standards along the chain of implementing partners, contractors and subcontractors.

ESS 2 – Labor and Working Conditions. ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions. ESS2 applies to project workers including full time, part-time, temporary, seasonal and migrant workers.

The Borrower will develop and implement written labor management procedures applicable to the project. These procedures will set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS. The procedures will address the way in which this ESS will apply to different categories of project workers including direct workers, and the way in which the Borrower will require third parties to manage their workers in accordance with ESS2. ESS2 also requires a grievance redress system which allows workers to raise their grievances.

ESS 3 – Resource Efficiency and Pollution Prevention and Management.
ESS3 recognizes that economic activity and urbanization often generate pollution to air, water and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with GIIP.

The ESMF should include sections on resource efficiency and pollution prevention and management. Assessment of risks and impacts and proposed mitigation measures related to relevant requirements of ESS3, including raw materials, water use, air pollution, hazardous materials and hazardous waste are included within scope of the ESMF, and G-ESMPs as relevant.

E**SS 4 – Community Health and Safety.** ESS4 recognizes that project activities, equipment and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience acceleration or intensification of impacts due to project activities. ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable. While not explicitly mentioned, prevention and mitigation of different forms of gender-based violence, specifically Sexual Exploitation and Abuse, is being covered by ESS4.

ESS 5 – Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement. ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and people. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

Experience and research indicate that physical and economic displacement, if unmitigated, may give rise to severe economic, social and environmental risks: production systems may be dismantled; people face impoverishment if their productive resources or other income sources are lost; people may be relocated to environments where their productive skills are less applicable and the competition for resources greater; community institutions and social networks may be weakened; kin groups may be dispersed; and cultural identity, traditional authority, and the potential for mutual help may be diminished or lost. For these reasons, involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.

Voluntary Land Donation (VLD): Under the Emergency Crisis Response Project II (ECRP II), limited land requirements for small-scale community infrastructure (such as water points, access paths, classrooms, or health posts) may be met through Voluntary Land Donation in accordance with World Bank ESS5. VLD will only be applied where land is donated freely and without coercion, based on informed consent, and where refusal does not affect access to project benefits. Donation shall not result in physical displacement, loss of shelter, significant livelihood or food security impacts, or disproportionate effects on vulnerable households, and will not be accepted where land rights are unclear or disputed. Donated land must constitute only a minor portion of the donor's holdings, with consent obtained from all legitimate rights holders, including for family or communal land. All VLD cases will be transparently documented through signed and witnessed agreements, donors will have access to the Project Grievance Redress Mechanism (GRM)nd the Project Coordination Unit will monitor compliance and take corrective action if voluntariness or safeguards requirements are compromised. During the community mobilization meetings, the World Vision (WV) team sensitized community members on the ECRP II Projects GRM framework including GBV prevention, and zero tolerance to SEA/ Sexual Harassment (SH). GRM reporting mechanisms were communicated and the community identified their preferred reporting channel, which is through community meetings. However, GRM focal point persons were identified per County, and mobile phone numbers for reporting shared with the community and on visibility materials. WVSS continues to explore possibilities for obtaining a toll-free number for the community to utilize moving forward.

Additionally, the project conducted a GBV referral mechanism functionality assessment in the two counties whose findings were jointly validated with the PMU, the State Ministry of Gender, and other GBV humanitarian partners in Warrap State. Through additional engagements, the Warrap Referral pathways were updated, and efforts are

underway to increase awareness on this, especially for the handling of SEA/SH cases. While this may not be practical in this context, WVSS nonetheless has included whistleblower email and websites for reporting SEA/SH, fraud and other incidents.

ESS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources. ESS6 recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services.

ESS6 recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. Habitat is defined as a terrestrial, freshwater or marine geographical unit or airways that support assemblages of living organisms and their interactions with the non-living environment. All habitats support complexities of living organisms and vary in terms of species diversity, abundance and importance. This ESS also addresses sustainable management of primary production and harvesting of living natural resources.

ESS6 recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, whose access to, or use of, biodiversity or living natural resources may be affected by a project. The potential, positive role of project affected parties, including Indigenous Peoples, in biodiversity conservation and sustainable management of living natural resources is also considered.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. This ESS applies to distinct social and cultural groups. The terminology used for such groups varies from country to country and often reflects national considerations. ESS7 uses the term “Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities,” recognizing that groups may be referred to in different countries by different terms. Such terms include “Sub-Saharan African historically underserved traditional local communities,” “indigenous ethnic minorities,” “aboriginals,” “hill tribes,” “vulnerable and marginalized groups,” “minority nationalities,” “scheduled tribes,” “first nations” or “tribal groups.”
ESS7 contributes to poverty reduction and sustainable development by ensuring that projects supported by the Bank enhance opportunities for Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

to participate in, and benefit from, the development process in ways that do not threaten their unique cultural identities and well-being.

Key requirements under ESS7 include that the World Bank determines whether indigenous peoples/Sub-Saharan African historically underserved traditional local communities are present in or have collective attachment to the project area; and that the borrower develops a rigorous consultation strategy and identifies means through which the borrower undertakes effective consultation with people identified for purposes of ESS7. on the project design and implementation. Furthermore, in circumstances where the project has adverse impacts on land, natural resources, as well as tangible and intangible cultural heritage, causes relocation of indigenous peoples, or has other significant impacts on them, free, prior and informed consent (FPIC) from the affected groups is required. The ESS proposes different methodologies for obtaining such consent.

ESS 8 – Cultural Heritage. ESS8 recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.

The requirements of ESS8 apply to cultural heritage regardless of whether or not it has been legally protected or previously identified or disturbed. The requirements of ESS8 apply to intangible cultural heritage only if a physical component of a project will have a material impact on such cultural heritage or if a project intends to use such cultural heritage for commercial purposes. The borrower will implement globally recognized practices for field-based study, documentation and protection of cultural heritage in connection with the project, including by contractors and other third parties.

A chance finds procedure is a project-specific procedure which will be followed if previously unknown cultural heritage is encountered during project activities. It will be included in all contracts relating to construction of the project, including excavations, demolition, movement of earth, flooding or other changes in the physical environment. The chance findings procedure will set out how chance finds associated with the project will be managed.

The procedure will include a requirement to notify relevant authorities of found objects or sites by cultural heritage experts; to fence-off the area of finds or sites to avoid further disturbance; to assess found objects or sites by cultural heritage experts; to identify and implement actions consistent with the requirements of this ESS and national law; and to train project personnel and project workers on chance find procedures.

ESS 10 – Stakeholder Engagement and Information Disclosure. This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance and make a significant contribution to successful project design and implementation. The client will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. When properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.

OP 7.50 Projects in International Waters: This is not an ESF standard but part of the safeguards policies. The objective of this policy is to ensure that Bank financed projects affecting international waterways would not affect: (i) relations between the Bank and its borrowers and between states (whether members of the Bank or not); and (ii) the efficient utilization and protection of international waterways. The policy applies to: (a) Hydroelectric projects, irrigation, flood control, navigation, drainage, water and sewerage, industrial and similar projects that involve the use or potential pollution of international waterways; and (b) Projects that support detailed design and engineering studies of projects under (a) above, include those carried out by the Bank as executing agency or in any other capacity. This policy is triggered if (a) any river, canal, lake or similar body of water that forms a boundary between, or any river or body of surface water that flows through two or more states, whether Bank members or not; (b) any tributary or other body of surface water that is a component of any waterway described under (a); and (c) any bay, gulf strait, or channel bounded by two or more states, or if

within one state recognized as a necessary channel of communication between the open sea and other states, and any river flowing into such waters. This policy is triggered because Component 1 of the project may include rehabilitation and/or drilling of new community boreholes within the Nile basin catchment and the rehabilitation of existing community irrigation schemes with sources of water sought from water supply schemes already developed. Notifications to all riparian countries have been sent.

CHAPTER 3

SUBPROJECT DESCRIPTION

This chapter presents a detailed description of the Rehabilitation and drilling of 70 boreholes and construction of 6 water yards in Twic, and Gogrial West Counties, Warrap State. Based on this information, The WV Environmental and Social Safeguards team will support Contractors to: Prepare a site-specific C-ESMP for each site prior to mobilization; Assess site-specific environmental and social conditions; Adapt and supplement mitigation measures from the Generic ESMP as necessary; and submit the C-ESMP for review and approval by the Project Management unit (PMU) and supervising engineer. .

3.1 Locations of Subprojects covered under the G-ESMP

The information below presents the environmental and socioeconomic conditions of the selected sites in the two counties, the geographical position systems coordinates for the 70 boreholes and 6 water yard sites, technical drawings of the boreholes work, type of work and raw materials and equipment to be used, and water installation plans. Also, the environmental and socioeconomic baseline conditions of the sites have been described.

Table 1. Showing Locations for the subprojects – 70 Boreholes and 6 Water Yards in Twic, and Gogrial West Counties

Location	Number of Boreholes	Number of Water yards
Gogrial West	16	4
Twic	54	2

Name of County	Name Proposed Borehole/water yard Site	Location GPS Coordinates
	Awiny ESS 44	Longitude 27.83261 Latitude 8.9341
	Doong ESS 50	Longitude 27.9102

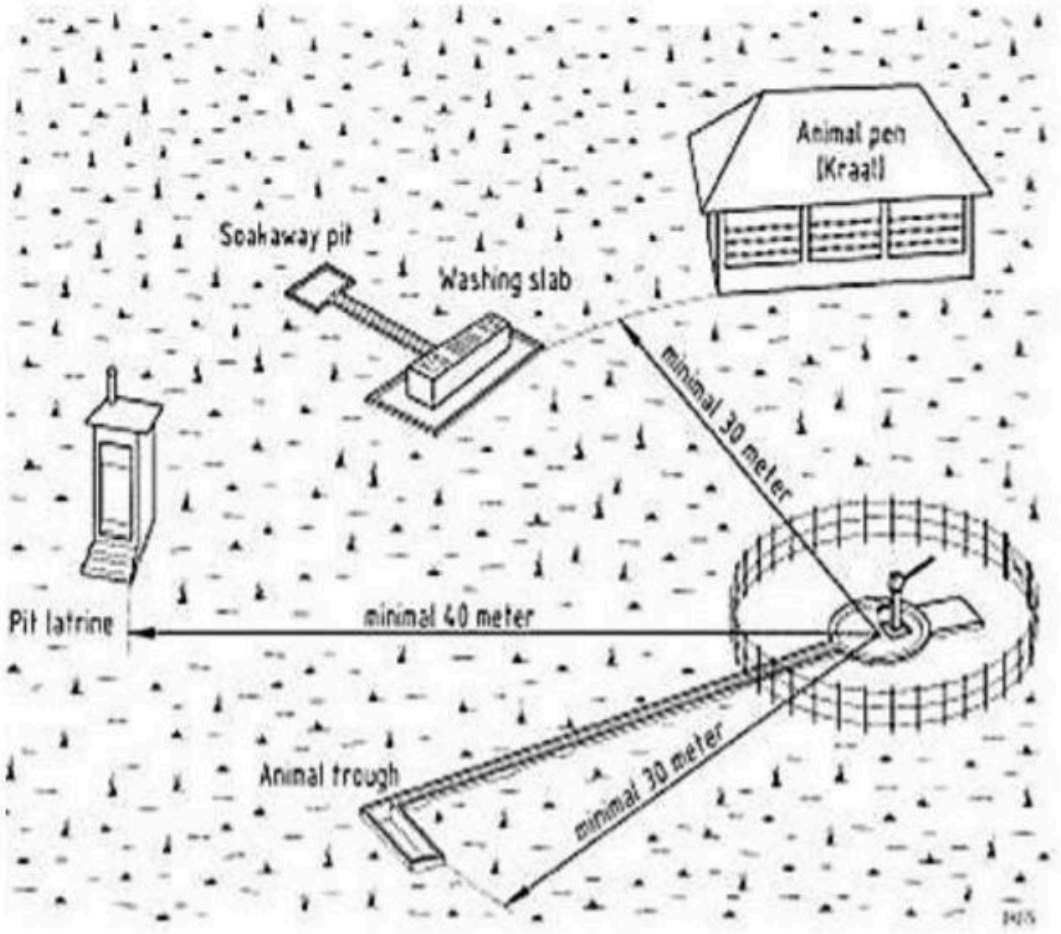
Name of County	Name Proposed Borehole/water yard Site	Location GPS Coordinates
Gogrial West		Latitude 8.5447
	Liap ESS 49	Longitude 27.855185 Latitude 8.53290
	Madul ESS 11	Longitude 27.9102 Latitude 8.5447
	Marial Giir ESS 12	Longitude 27.9300 Latitude 8.4464
	Pan-Ameth ESS 30	Longitude 27.995559 Latitude 8.67660
	Riang Dau ESS 27	LO27.9752:LA8.66695:AL411
	Winy ESS 20	Longitude 28.06736 Latitude 8.94197
	War-Kuach ESS 19	Longitude 28.108438 Latitude 8.910418
	Atheet ESS 51	Longitude 27.9022 Latitude 8.5112
	Pandou ESS	Longitude 28.049566 Latitude 8.49167
	Akucjong ESS 006	Longitude 28.0130 Latitude 8.5094
	Pagai ESS 48	Longitude 27.85337 Latitude 8.47963
	Mabuok ESS 25	Longitude 28.0083 Latitude 8.6961
	Rum Ayok ESS 32	Longitude 27.9875 Latitude 8.660598
	Rehabilitation of Water Yard in Gogrial town-ESS 03	Longitude 28.0965 Latitude 8.5363
	Construction of water Yard in Milo Market, Akon Town-ESS 46	Longitude 27.97995 Latitude 8.90114
	Construction of Water Yard in Anyieny Agaal-ESS 36	Longitude 27.97302 Latitude 8.784345
	Construction of Water Yard in Ariang-ESS 43	Longitude 27.8667 Latitude 8.93694
	Keet ESS 23	Longitude 28.069992 Latitude 8. 817756
Twic	Yoou ESS 22	Longitude 28.2389

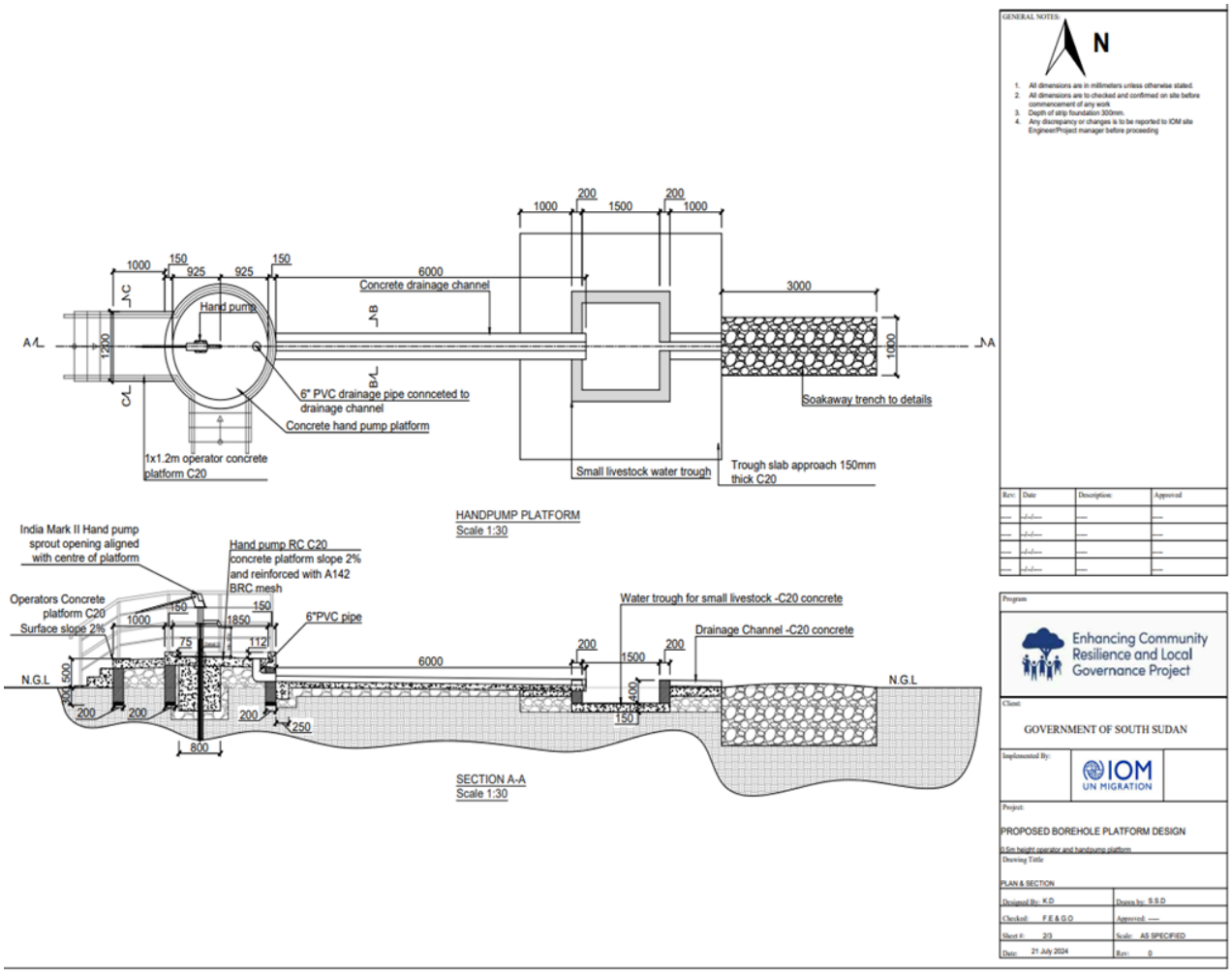
Name of County	Name Proposed Borehole/water yard Site	Location GPS Coordinates	
		Latitude	9.22369
	Taam Thok ESS 21	Longitude Latitude	28.23821 9.26569
	Paan Baai ESS 20	Longitude Latitude	28.102512 9.091379
	Malek -Aruet ESS 19	Longitude Latitude	28.23821 9.26569
	Majak Pagai ESS 16	Longitude Latitude	28.331515 9.106087
	Dokol ESS 15	Longitude Latitude	28.2299 9.22369
	Chiwieu ESS 14	Longitude Latitude	28.2299 9.22369
	Guokarot ESS 09	Longitude Latitude	28.102512 9.091379
	Magak ESS 12	Longitude Latitude	28.102512 9.091379
	Achuaak ESS 01	Longitude Latitude	28.16274 9.01524
	Laach Akak- ESS 02	Longitude Latitude	28.13741 9.0231
	Makeer ESS 03	Longitude Latitude	28.14373 9.07398
	Banya ESS 06	Longitude Latitude	28.14373 9.07398
	Jong-Mangol ESS 07	Longitude Latitude	28.12502 9.02498
	Ajiing Arop ESS 73	Longitude Latitude	28.575567 9.110877
	Ameth Chech ESS 74	Longitude Latitude	28.568599 9.124909
	Malual Gom ESS 76	Longitude Latitude	28.598720 9.134937
	Pangop ESS 77	Longitude Latitude	28.628801 9.093027
	Majook-Thony ESS 60	Longitude Latitude	28.57201 9.186874

Name of County	Name Proposed Borehole/water yard Site	Location GPS Coordinates
	Awielo ESS 59	Longitude: 28.57069 Latitude: 9.18687
	Apaping primary ESS 54	Longitude 28.102512 Latitude 9.091379
	Mayom ESS 57	Longitude 28.60056 Latitude 9.16245
	Atong ESS 62	Longitude 28.50887 Latitude 9.12680
	Diey ESS 63	Longitude 28.331515 Latitude 9.106087
	Malual -Ayiet ESS 64	Longitude 28.331515 Latitude 9.106087
	Maper Market ESS 66	Longitude 28.331515 Latitude 9.106087
	Wunkiel ESS 67	Longitude 28.50335 Latitude 9.10607
	Makuach Gumal ESS 68	Longitude 28.52356 Latitude 9.14741
	Mangok-Rual ESS 69	Longitude 28.51519 Latitude 9.14741
	Konkoch ESS 70	Longitude 28.53887 Latitude 9.1223
	Taath-nyieth ESS 71	Longitude 28.57634 Latitude 9.23492
	Gaiyuom ESS 72	Longitude 28.6085 Latitude 9.19397
	Aguer Achimau ESS 01	Longitude 27.93897 Latitude 9.24474
	Aluel ESS 02	Longitude 27.946139 Latitude 9.114926
	Rom-Agok ESS 03	Longitude 28.002543 Latitude 9.1134299
	Mabiel-Riel ESS 04	Longitude 27.95463 Latitude 9.18875
	Mior ESS 05	Longitude 27.98445 Latitude 9.08872
	Dimo ESS 08	Longitude 27.995841

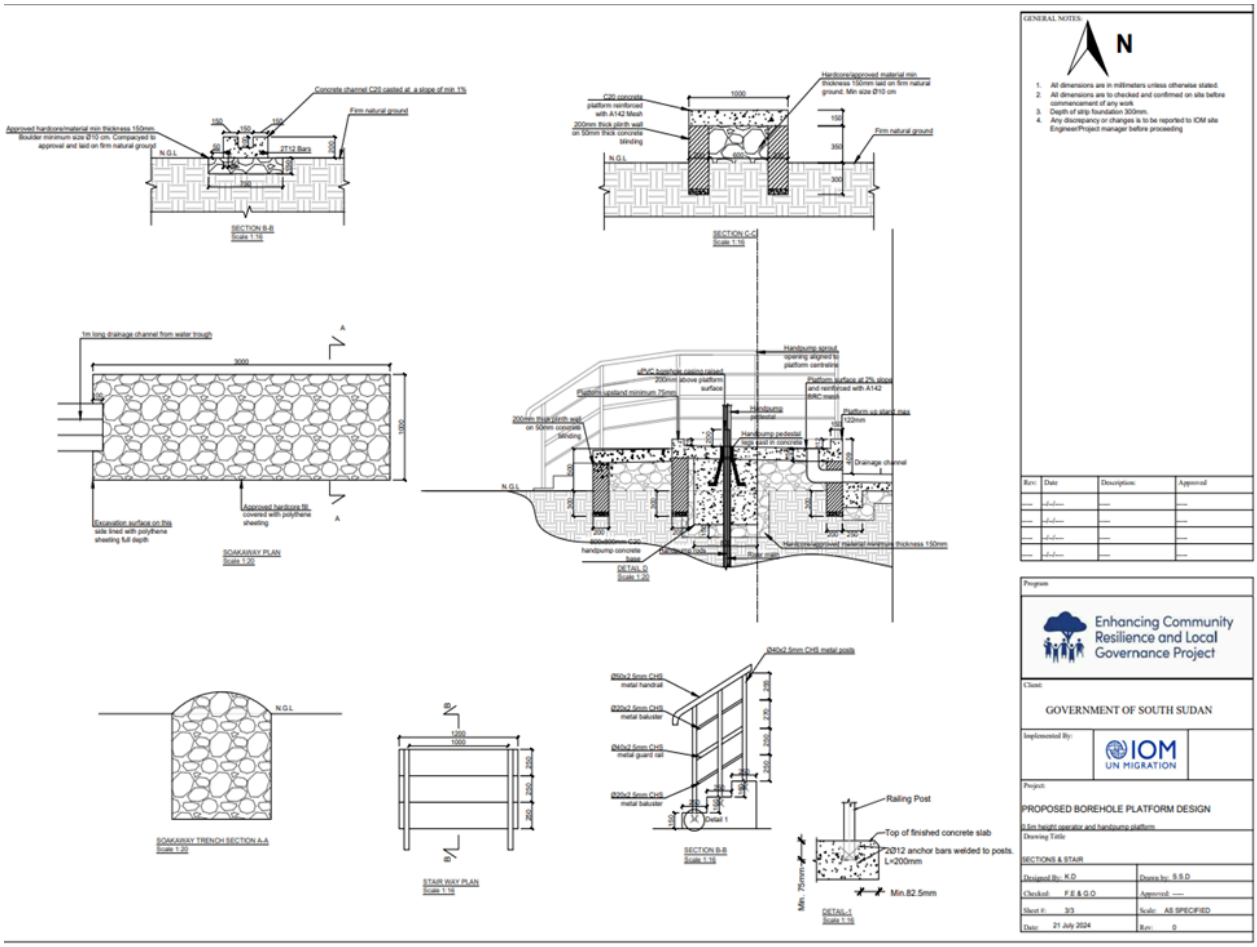
Name of County	Name Proposed Borehole/water yard Site	Location GPS Coordinates
		Latitude 9.119748
	Mading ES 35	Longitude 28.03636 Latitude 9.22548
	Rook- Thok ESS 36	Longitude 28.01279 Latitude 9.18471
	Rum- Aook ESS 37	Longitude 27.98662 Latitude 9.29476
	Rum -Akoon ESS 38	Longitude 28.00453 Latitude 9.20374
	Wiel ESS 39	Longitude 28.02727 Latitude 9.19122
	Amiet-Thon ESS 41	Longitude 28.03652 Latitude 9.29322
	Atuel-Lek ESS 42	Longitude 28.03652 Latitude 9.29322
	Mangar ESS 43	Longitude 28.10718 Latitude 9.2203
	Wangchuk Primary ESS 44	Longitude 28.102512 Latitude 9.091379
	Deng-Anyuob-Bek ESS 45	Longitude 28.046366 Latitude 9.133533
	Makuei-Abek ESS 46	Longitude 28.082950 Latitude 9.129842
	Mayen village ESS 47	Longitude 27.995841 Latitude 9.119748
	Manyuar Primary-ES 49	Longitude 28.102512 Latitude 9.091379
	Rehabilitation of Water Yard Majook Noon-ESS 053	Longitude 28.589320 Latitude 9.203378
	Construction of Water Yard Jaathzoom-ESS 07	Longitude 27.94766 Latitude 9.29632
	Yiik Thin Primary ESS 50	Longitude 28.024640 Latitude 9.125021
	Construction of a Borehole in Paduel-ESS 058	Longitude 28.59622 Latitude 9.19872
	Construction of a Borehole in Achiir-ESS 51	Longitude: 28.07624 Latitude: 9.24618

3.2 Description of the proposed subprojects - rehabilitation and drilling of 70 boreholes





Construction design for a protected borehole handpump platform, complete with drainage, soak away pit, and stair access.



3.2.1 Preconstruction

Resource mobilization

This involves the organization of both human and physical resources before the kick of the construction activities. The human resources involve the workers which consist of skilled, semiskilled and unskilled labour, Preparation of work schedules and timelines, acquisition of permits and approvals before commencement.

The physical resources involve mobilization of machinery, tools, construction equipment and raw materials to be used during construction.

Type of work	Raw materials and Source	Tools/Equipment
New Borehole Drilling	Sand- Locally sourced Water- Locally sourced Aggregate/Gravel-Locally sourced Cement- Locally sourced Bricks- Locally sourced Chlorine	● Drilling machine/rig. ● Air compressor. ● Generator; - ● Formwork ● Standard toolbox ● Special toolbox ● PVC pipes ● GI pipes ● Indian Mark II
Borehole & water yard Rehabilitation	Sand- Locally sourced Water- Locally sourced Aggregate/Gravel-Locally sourced Cement- Locally sourced Bricks- Locally sourced Chlorine	● Air compressor. ● Formwork ● Standard toolbox ● Special toolbox ● PVC pipes ● GI pipes ● Indian Mark II ● Welding machine ● Generator
Motorized Water Yard	Sand- Locally sourced Water- Locally sourced Aggregate/Gravel-Locally sourced Cement- Locally sourced Bricks- Locally sourced Poles, Pipes, Taps	● Air compressor. ● Formwork & Ladders ● Standard toolbox & Special toolbox ● PVC pipes & GI pipes ● Indian Mark II ● Welding machine

Borehole Siting

Choosing a borehole site is a critical part of the process of providing a safe and reliable supply of groundwater. The best sites are those in which catchment (natural water input) may be maximized.

Another aspect of borehole sitting that demands careful consideration in populated areas is the potential for contamination by cattle and pit latrines or other waste disposal facilities. Because near-surface groundwater migrates downslope, a borehole tapping shallow groundwater should be sited as far away as possible (while bearing in mind the human need for proximity to a source of water) and upslope of potential sources of pollution (latrines or sewage pipes, for instance).

Geophysical/hydrogeological survey

The survey can only give an indication of where groundwater may be found and how much there might be. Hydrogeological surveys will include the review of the hydrogeological setup of the area, examination of the outcropping rocks, detection of suitable geological structure, availability of exposed/buried channels etc.
There are a number of choices for geophysical surveys where the choice or combination of is determined by hydrogeological conditions. These include electromagnetic surveys, grounded electrical resistivity surveys, seismic refraction surveys, magnetic surveys etc.

3.2.2 Construction stage (New Borehole drilling and installation of Hand pump)

The Scope of work will include Borehole drilling and hand pump installation process which will involve the following:

Hydrogeological/geophysical survey, drilling of a borehole, developing of a borehole, pumping test (if required), water quality testing, installation of casings/screens, gravel packing (if required), sanitary sealing of a borehole, platform and drainage apron construction, disinfection of the well and finally hand pump installation will be carried out during the project implementation processes as described below.

ECRP shall provide the plans and Contractor's documents specified in the contract, detailing all the Contractor's personnel level of experience, materials, consumables, and services required, whether of a temporary or permanent nature, required in and for the execution, completion and remedying of defects during project execution.

1. Site setting
This includes the process of marking the position for the drilling machine, shape and size of a construction site.

2. Site Clearance
This involves the removal of vegetation to pave way for the start of construction activities. The size of land usually required for the construction is approximately about 5x5m

3. Hydrogeological/Geophysical Survey: The survey can only give an indication of where groundwater may be found and how much there might be. Hydrogeological surveys will include the review of the hydrogeological setup of the area, examination of

the outcropping rocks, detection of suitable geological structure, availability of exposed/buried channels etc.
There are a number of choices for geophysical surveys where the choice or combination of is determined by hydrogeological conditions. These include electromagnetic surveys, grounded electrical resistivity surveys, seismic refraction surveys, magnetic surveys etc.

4. Drilling of a borehole: Taking into consideration the formations identified by the hydrogeological/geophysical survey and understanding the hydrogeological conditions of the area, the next step is to select an appropriate drilling method and drilling rig.

5. Installation of casing and screen pipes: Casing and screen pipes will be installed after drilling a borehole as per the hydrogeological formation of the borehole**.**

6. Gravel packing: Where gravel packing is required, it should be chosen according to certain geologic conditions in order to provide a more permeable zone surrounding the screen by replacing artificially graded coarser materials**.**

7. Developing the borehole: Drilling of a borehole is not complete until the borehole has been developed to give maximum yield, and sediments and cuttings are removed to produce clear water**.**

8. Borehole capacity test: After development, a pumping test is required, to determine whether it is possible to install a hand pump in the borehole. This is positive if the well produces a minimum of 1200 liters per hour**.**

9. Water quality testing: The quality of the water from the borehole should be tested for physical, bacteriological, and chemical contamination before commissioning public consumption. Physical and bacteriological contamination can be checked at field level with portable equipment like H2S vials, Delagua Water Testing Kit or similar. Chemical contamination should be verified by the South Sudanese institute authorized to do this at state or national level. The quality of water should be checked against South Sudan/WHO guidelines for drinking water under normal conditions, or against Minimum Sphere Standards and /or South Sudanese/WHO guidelines during emergencies**.**

10. Sanitary sealing of a borehole: Polluted water from surface drainage or from formations other than an aquifer, can move downward through the annular space and contaminate the water being pumped from the well. It is advisable that the well casing should terminate above ground to allow surface water to drain away from the well in all directions. Provision must be made in the design of a well for grouting the well casing in the ground from the surface down to an adequate depth not less than 6 meters

(depending on the geological and site conditions), to provide a means for sealing an opening outside the casing. A grouting method suitable to local conditions should be applied.

11. Platform and drainage apron construction: A platform and drainage apron shall be constructed or modified as per consumer needs. Users should be consulted for the design of the platform and drainage aprons to ensure proper usage and maintenance of the water point**.**

12. Hand pump installation: An installation manual must be ordered with the hand pump. Installation, as per the guidelines of the manufacturer, can begin when the quality of the water in the borehole is found to comply with the South Sudanese/ WHO standard. It is important to ensure that all standard hand tools are available with the team that is installing the pump**.**

13. Pump Testing and Disinfection of the well: Disinfection is necessary initially during pump installation and if the well gets polluted. The well will be disinfected or sterilized with a chlorine solution yielding at least 50mg/l of active chlorine in all parts of the well. The chlorine solution will be prepared from calcium hypochlorite or sodium hypochlorite. In case bleaching powder is used for disinfection, 300g of bleaching powder should be mixed thoroughly in 15 liters of water and poured into the well**.**
The disinfectant will stay in the well for at least four hours at a specified concentration, after which water should be pumped out and discarded until the water smells strongly of chlorine. At this point, no more water should be pumped out for at least 24 hours, after which water should be pumped out and discarded until the taste of chlorine is just noticeable in the water. A sample of water should be collected in a sterile bottle and sent for bacterial analysis

3.3 Description of the proposed subprojects Scope of work (6 Motorized Water yard Installation)

1. Site setting
This includes the process of marking the position for the drilling machine, shape and size of a construction site.

2. Site Clearance
This involves the removal of vegetation to pave way for the start of construction activities. The size of land usually required for the construction is approximately about 15x15m

3. Hydrogeological/Geophysical Survey: The survey can only give an indication of where groundwater may be found and how much there might be. Hydrogeological surveys will include the review of the hydrogeological setup of the area, examination of the outcropping rocks, detection of suitable geological structure, availability of exposed/buried channels etc.
There are a number of choices for geophysical surveys where the choice or combination of is determined by hydrogeological conditions. These include electromagnetic survey, grounded electrical resistivity survey, seismic refraction survey, magnetic survey etc**.**

4. Drilling of a borehole: Taking into consideration the formations identified by the hydrogeological/geophysical survey and understanding the hydrogeological conditions of the area, the next step is to select an appropriate drilling method and drilling rig**.**

5. Installation of casing and screen pipes: Casing and screen pipes will be installed after drilling a borehole as per the hydrogeological formation of the borehole**.**

6. Gravel packing: Where gravel packing is required, it should be chosen according to certain geologic conditions in order to provide a more permeable zone surrounding the screen by replacing artificially graded coarser materials**.**

7. Developing the borehole: Drilling of a borehole is not complete until the borehole has been developed to give maximum yield, and sediments and cuttings are removed to produce clear water**.**

8. Borehole capacity test: After development, a pumping test is required, to determine whether it is possible to install a hand pump in the borehole. This is positive if the well produces a minimum of 1200 liters per hour**.**

9. Water quality testing: The quality of the water from the borehole should be tested for physical, bacteriological, and chemical contamination before commissioning public consumption. Physical and bacteriological contamination can be checked at field level with portable equipment like H2S vials, Delagua Water Testing Kit or similar. Chemical contamination should be verified by the South Sudanese institute authorized to do this at state or national level. The quality of water should be checked against South Sudan/WHO guidelines for drinking water under normal conditions, or against Minimum Sphere Standards and /or South Sudanese/WHO guidelines during emergencies**.**

10. Sanitary sealing of a borehole: Polluted water from surface drainage or from formations other than an aquifer, can move downward through the annular space and

contaminate the water being pumped from the well. It is advisable that the well casing should terminate above ground to allow surface water to drain away from the well in all directions. Provision must be made in the design of a well for grouting the well casing in the ground from the surface down to an adequate depth not less than 6 meters (depending on the geological and site conditions), to provide a means for sealing an opening outside the casing. A grouting method suitable to local conditions should be applied.

11. Platform and drainage apron construction: A platform and drainage apron shall be constructed or modified as per consumer needs. Users should be consulted for the design of the platform and drainage aprons to ensure proper usage and maintenance of the water point.

12. Pump Testing and Disinfection of the well: Disinfection is necessary initially during pump installation and if the well gets polluted. The well will be disinfected or sterilized with a chlorine solution yielding at least 50mg/l of active chlorine in all parts of the well. The chlorine solution will be prepared from calcium hypochlorite or sodium hypochlorite. In case bleaching powder is used for disinfection, 300g of bleaching powder should be mixed thoroughly in 15 liters of water and poured into the well.
The disinfectant will stay in the well for at least four hours at the specified concentration, after which water should be pumped out and discarded until the water smells strongly of chlorine. At this point, no more water should be pumped out for at least 24 hours, after which water should be pumped out and discarded until the taste of chlorine is just noticeable in the water. A sample of water should be collected in a sterile bottle and sent for bacterial analysis

13. Submersible pump installation: An installation manual must be ordered. Installation, as per the guidelines of the manufacturer, can begin when the quality of the water in the borehole is found to comply with the South Sudanese/ WHO standard. It is important to ensure that all standard hand tools are available with the team that is installing the Submersible pump**.**

Water yard and Solar panel Installation Process

1. Excavation

Involves the process of removing things like earth, rock, or other materials with tools, equipment. It includes earthwork and trenching. In construction, excavation is used to create foundations for the water tank base.

2. Footing and Concrete casting

These are an important part of foundation construction. They are typically made of concrete with rebar reinforcement that has been poured into an excavated trench. The purpose of footings is to support the foundation and prevent settling. Footing is especially important in areas with black cotton soils to provide strong support**.**

3. Superstructure construction

This is an upward extension of an existing structure above the foundation and ground level. and it usually serves the purpose of supporting the water storage tank. This usually involves work at height

4. Water storage Tank installation

This involves the installation of the water storage tank on the constructed superstructure. This usually requires water at height during the process of installation.

5. Solar Installation

After the water storage tank construction is completed the installation of the solar panels on top of the water tank follows. The installation process also involves work at height.

6. Chain Link Fence construction

To ensure the safety of the installed water yard a fence is usually constructed to secure these installations. The construction of the fence usually includes these activities like clearance of vegetation, Excavation, Footing, Concrete casting and finally the Installation of chain link fence

7. Water distribution network

The water distribution system forms part of the water yard construction. This is the component that delivers the potable water from a water storage tank to community (water consumers). The distribution of water is usually based on gravity flow.

The construction process for the water distribution network involves site mapping, vegetation clearance, excavation, laying of pipeline for water distribution, burying of the pipes underground, and installation of taps for the water withdrawal.

ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS FOR TWIC AND GOGRIAL WEST COUNTIES

Biophysical Conditions

The sites selected for the borehole's rehabilitation and drilling, and water yards construction lie in the Western floodplains/colluvial areas. The two counties share borders, hence having the same ecological conditions.

Soils: The sites have a mix of loamy and black cotton soils in both counties. The land is extensively flat, and gentle slopping. The two counties lie at an average elevation of 448 (404-511) m above sea level.

Vegetation: The vegetation is deciduous shrub land with sparse trees and extensive network of savanah grassland cover. This has shaped the agropastoral livelihoods pattern ideal for livestock keeping as the savannah grasslands provides sufficient pastures in the rain season.

Rainfall and Temperatures: Annual precipitation ranges from 200 - 700mm p.a. The rainfall pattern starts from around June and ends in November for a five-month period. The length of crop growing season in Twic and Gogrial West counties is estimated at 131 days per annum spanning over 4 months. Hence allowing for only one crop growing season. Average temperatures are 34 to 40 degree Celsius in the dry season and 25 to 35 degrees Celsius in the wet season. Drastic laws and highs are experienced depending on specific weather changes.

Drainage: Twic and Gogrial West Counties are drained by two main rivers such as River Lol and Jur River which provide significant amounts of water for pastures and domestic uses throughout the year

Socioeconomic Conditions

According to the REACH (2024), Gogrial West and Twic County populations are estimated at 325,922, and 263,824 people respectively. Dinka is the predominant ethnic group in the two counties. However, due to trade, there are various tribes from other regions of South Sudan, Sudan East and Horn of Africa. The population pattern is sparser in the rural areas (villages and hamlets) than in the county headquarters (Gogrial and Wunrruk) and trading centers. The population has largely remained stable despite the scare of floods and the returnee population trickling in from Sudan. A recent assessment World Vision South Sudan establishes that while Gogrial West had a "near-universal floodwater intrusion", Twic had a lower than Gogrial West but still high rate in Twic (82.7%) thus environmental exposure to low-lying floodplains, poor drainage, and increasingly intense, prolonged rains that overwhelm natural and

man-made channels. Main Threats: Some of the protracted threats to the environment and people are: Prolonged drought season, annual flash floods, food insecurity, cattle thefts and attacks by Messiria tribesmen from Sudan.

The livelihood activities of the people in Twic and Gogrial are mainly farming and cattle keeping. The recent socio-economic vulnerability assessment provides a more varied activity indicating that before flooding, crop farming (mainly sorghum) was the primary income source in both counties – up to 98.9% and 90.5% in Gogrial West and Twic respectively. Livestock is also a major earner stronger in Gogrial West while fishing featured more prominently in Twic. Petty trade, wage labour, salaried work, remittances were all much more common in Gogrial West, indicating a more diversified cash economy; Twic showed a narrower base with greater reliance on fishing and natural-resource activities (charcoal/firewood).

Fishing is a key livelihood activity among the rural communities in the two counties for sales and home consumption. While Lol River crosses through Twic County from west to east, Jur River crosses Gogrial County from south to northeast.

There is petty trade in mixed goods. The main trading centers supplying these counties are Aweil, and Wau, and as far as Khartoum, Sudan and Juba and the East African region. Kuacjok is the main market for a few counties and the whole of Warrap State, but in recent years inflation has made market goods unaffordable for many residents. Proximity to the Sudanese border provides access to supplies from Abyei, but regular insecurity and displacement has often hampered commercial progress. Otherwise, the markets have largely remained accessible and functional. The primary markets remain Kuajok and Akon in Gogrial West, and Turalei, and Wunrok in Twic.

Although there is a considerable number of health facilities, a recent ECRP II rapid assessment report conducted by WVI-SS (2025) presented a very deteriorating health situation evidenced by “spikes in illness due to post-flood environmental conditions such as near-universal malaria/fever (97% Gogrial West; 94% Twic), while Twic’s higher AWD (70% vs. 52%) and ARI (60% vs. 43%) point to greater exposure to contaminated water sources, crowded/damp shelters, and disrupted WASH services; elevated skin diseases are consistent with prolonged water contact and poor drying. Reported injuries and snake bites in both counties were more frequent in Twic align with damaged paths, tall vegetation, and night travel around flooded areas. The report suggests a priority of scaling up malaria testing, treatment and prevention (LLINs, IRS where feasible), intensify WASH (safe water, sanitation rehabilitation, hygiene.”

In Gogrial West County, the poor WASH conditions are a primary driver of diseases such as cholera, diarrhea, and guinea worm, contributing to high mortality rates. In late

2024/early 2025, the area faced cholera concerns, with the national Ministry of Health assessing facilities and emphasizing hygiene practices.

The Water, Sanitation, and Hygiene (WASH) status in Gogrial West County is dire, characterized by widespread water contamination, extremely low sanitation coverage, and a high prevalence of poor hygiene practices, leading to frequent disease outbreaks.

WHO (2025) and various aid agencies, found that there are key concerns relating to water, sanitation and hygiene in Gogrial West County. These include:

- Water Quality and Access: Water quality testing in 2025 revealed significant contamination in the majority of sources in the area. Access to safe drinking water is a major challenge, with existing infrastructure being limited and unevenly distributed. Humanitarian efforts include borehole rehabilitation and the distribution of water treatment materials like Aquatabs.

- Sanitation and hygiene coverage is critically low (below 2% in adjacent Gogrial East, indicating similar issues in Gogrial West), and open defecation is widely practiced by over 94% of the population in the region. Knowledge of proper hygiene practices, such as handwashing with soap at key times, is very limited.

- Humanitarian organizations, including the WHO and Action Contre la Faim (ACF) are actively engaged in providing emergency WASH services. Interventions include: emergency water provision and distribution of water treatment stocks; hygiene promotion messages and distribution of hygiene kits; and construction of sanitation facilities, though cultural resistance to latrine use is a reported challenge.

- The situation is exacerbated by factors such as a lack of logistics partners for consistent resupply in remote areas, ongoing conflict leading to displacement, and severe flooding that damages infrastructure and cuts off access roads.

In another study conducted by WVSS under the ECRP II Project, in Twic County, displaced women have expressed suffering various forms of GBV, including rape, abandonment, and forced early marriages, alongside challenges such as low secondary school enrollment for girls. Discussions and forums in Twic emphasize the need for inclusive anti-GBV campaigns involving men, traditional chiefs, and justice actors to address cultural practices that perpetuate violence. Gogrial West County too faces extreme GBV needs, identified among the highest in South Sudan. The county experiences infrastructural challenges, including damaged health facilities and limited water sources, that complicate access to GBV services. Flooding and conflict dynamics

have further elevated vulnerability. Humanitarian needs remain high in both counties, underlining the urgency to strengthen GBV referral pathways and service provision

Cultural heritage context: No cultural item was found during the screening of subproject sites. The lands allocated for the construction had no archaeological, historical, or culturally significant artifacts, structures, or features that have been identified or recorded during the screening. The sites are located in areas with limited historical occupations.

Key findings from the screening sites include:

- **Absence of Archaeological Remains:** No artifacts, structures, or features indicative of past human activity are found during screening.
- **Limited Historical significance:** The sites lack documented history or oral traditions, linking it to significant cultural events or figures.
- **Environmental Factors**: Natural conditions or recent land use (e.g., agriculture, construction) have not disturbed or obliterated previous cultural layers, leaving no trace.
- Further Monitoring: Even with no initial findings of cultural heritage, contractors will continue to monitor during construction to ensure no cultural heritage is inadvertently impacted.

CHAPTER 4

STAKEHOLDER ENGAGEMENT AND CONSULTATION

4.1 Purpose and objective

The purpose of this Stakeholder Engagement Plan (SEP) was to define a structured approach for engaging stakeholders throughout the project lifecycle in a transparent, inclusive, and culturally appropriate manner. The SEP aims to ensure that stakeholders are adequately informed about the project, consulted on potential environmental and social risks and impacts, and provided with accessible mechanisms to raise concerns and grievances.

The specific objectives of the SEP are to:

- Identify and analyze stakeholders who may be affected by or have an interest in the project;
- Disclose timely, relevant, and understandable project information;
- Facilitate meaningful consultation and participation of stakeholders, including vulnerable groups;
- Incorporate stakeholder feedback into project design and G-ESMP implementation where feasible; and
- Establish and maintain an effective Grievance Redress Mechanism (GRM) engagement and grievance management provisions;
- Institutional roles and responsibilities of the project proponent, contractors, and relevant government authorities.

4.2. **Stakeholder Identification and Analysis**

Stakeholders have been identified through a preliminary assessment of project activities, locations, and potential impacts. Stakeholders are categorized as follows:

Project Affected Parties: Individuals, households, and communities directly or indirectly affected by the project.

Other Interested Parties: Government institutions, local authorities, civil society organizations, NGOs, community-based organizations, and the media.

Vulnerable and Disadvantaged Groups: Groups that are disproportionately affected or face barriers to participation, such as women, elderly persons, persons with disabilities, displaced populations, or marginalized groups. A stakeholder analysis has been conducted to understand stakeholders' interests, concerns, level of influence, and preferred engagement methods. The results of this analysis inform the engagement

approaches described in this SEP. Engagement of Vulnerable and Disadvantaged Groups. Special measures shall be taken to ensure the meaningful participation of vulnerable and disadvantaged groups. These measures include:

- Use of culturally appropriate and gender sensitive engagement methods.
- Separate consultations or focus group discussions where appropriate;
- Use of local languages and simplified communication materials;
- Flexible meeting times and accessible locations.

These measures aim to avoid exclusion and ensure that the views of vulnerable groups are reflected in project decision making.

4.3. Stakeholder Engagement and Information Disclosure.

Stakeholder engagement will be an ongoing process throughout the project lifecycle and will include information disclosure, consultation, and feedback mechanisms.
Information to be disclosed may include:

- Project description and scope;
- Anticipated environmental and social risks and mitigation measures;
- Construction schedules and potential disruptions;
- Grievance Redress Mechanism procedures and contact details.
- Information will be disclosed using appropriate channels such as community meetings, notice boards, local radio, printed materials, and engagement through community leaders, ensuring accessibility for all stakeholder groups.

Stakeholder Engagement Plan and Schedule

Engagement activities will be implemented during all project phases, including preconstruction, construction, and operation. The SEP includes an engagement schedule outlining:

- Stakeholder groups to be engaged;
- Key issues to be discussed;
- Engagement methods and frequency;
- Responsible parties; and
- Indicative budget allocations.

A summary Stakeholder Engagement Plan table is included in the G-ESMP to guide implementation.

Grievance Redress Mechanism (GRM)

A project level Grievance Redress Mechanism (GRM) will be established to allow stakeholders to submit complaints, concerns, or suggestions related to environmental and social performance.

Key features of the GRM include: Multiple and accessible entry points (verbal, written, phone, community focal points); Clear procedures and timelines for grievance receipt, assessment, and resolution; Confidentiality and nonretaliation assurances; An escalation and appeal process where grievances remain unresolved. Information about the GRM will be widely disseminated to all stakeholders.

Institutional Arrangements and Responsibilities

The implementation of the SEP will involve:

- The **Project Proponent**, responsible for overall SEP oversight and reporting.
- **Contractors**, responsible for day-to-day engagement during construction.
- **Community Liaison Officers or Social Specialists**, responsible for coordinating engagement activities and GRM implementation.
- Relevant government authorities, where applicable.

Roles and responsibilities will be clearly communicated to all parties involved.

Monitoring, Reporting, and Adaptive Management Stakeholder engagement activities will be monitored and documented to assess effectiveness and ensure compliance with this SEP. Monitoring indicators may include:

Number and type of engagement activities conducted; Stakeholder participation levels (disaggregated where feasible);Number of grievances received and resolved within agreed timelines.

Findings from monitoring will be used to adapt and improve engagement approaches as needed.

Budget and Resources

Adequate financial and human resources will be allocated for SEP implementation. The budget covers costs related to consultations, communication materials, transport, staffing, and GRM operation. Indicative costs are provided in the SEP table and will be refined during project implementation.

For the ECRP II project, different stakeholders were engaged at different levels as shown below in Table 2.

Table 2: showing stakeholders engaged under the ECRP II Project

Engagement Level	Project Activity	Project Stakeholders Involved

National Government	• Signing of ECRP MoU • Project launch/introduction • Formation of National Technical Working group	• Ministry of Finance & Planning (MoFP) • Local Government Board (LGB) • Ministry of Gender, Child and Social Welfare (MoGCSW) • Relief and Rehabilitation Commission (RRC)
State Level	• Project launch/introduction	• State Governor • State Minister, State Ministry of Local Government (SMoLG) • Director General (DG) SMoLG & Law Enforcement (LE) • State Minister of Physical Infrastructure • DG, State Ministry of Physical Infrastructure • State Minister of Health • DG State Ministry of Health • Minister of Education • DG State Ministry of Education • County Commissioner • Executive Director • MoFP and/ LGB
County	• Project inception workshop • Signing of MoU • Formation of County Coordination Team • Environmental and social standards screening approach awareness raising	• County Commissioner • Executive Director • Departmental Heads • PDC • Paramount Chief • RRC Representative at county level
Payam	• Project Introduction • Confirmation of Subproject Payams and Bomas	• Payam Administrator • Payam Chief • PDC
Boma	• Project Introduction • Identification and reactivation of BDC	• Boma chief • Village chiefs • BDC Members

Community Level (Sub project site)	● Community engagement and consultation. ● Environment and Social screening awareness and exercise ● Engineering screening ● Signing of Voluntary land donation	● Community members comprising of women and men, youth and elderly, People with disability and local community leaders ● BDC Members

The development of the community engagement and revalidation methodology was very important as it clearly guided the revalidation team on the roles and responsibilities during the process of subproject revalidation and when responding to questions and concerns raised by the community during the consultation and engagement meetings. Arabic and the local language were interchangeably used during the community meetings while English was sparingly used. The use of Arabic and local languages helped the revalidation team in building more trust as the stakeholders were able to relate with what the team presented which encouraged valid contributions. During the group discussions the team ensured that there was moderation of the meeting in order to control dominance and encourage equal participation.
To ensure equality, diversity and fairness in the process, the team involved every member of the community in decision making. The people engaged in the community meetings included youth, boys and girls, women and men, people with disabilities and local traditional leaders.

The composition of the revalidation team during the community engagement process consisted of Engineer, HSSE associate and Social Mobilizer.

Table 3: showing the Feedback/Issues raised during the community engagement process of the subproject location.

Engagement Level	Project launch introduction	Level Project Activity	Feedback Issues Received	Resolution
State Level	● Project inception workshop ● Signing of MoU ● Formation of County Coordination Team ● Environment and social standards screening approach awareness raising	Project launch/introduction	Distrusting gov/humanitarian intervention	● The Project stressed key messages like, ● ECRP ll is a 2year project with a budget of $ 150 million, funded by World Bank and implemented by IOM, WVSS and IRC in partnership with the Government of South Sudan. ● Inclusion, improved governance, better access to services as key messages highlighted during the presentation of the project to all stakeholders ● Support of the county authorities, including that of the CCT in the successful implementation of the project, is vital;
County Level	-Project Introduction -Confirmation of Subproject Payams and Bomas	-Project inception workshop -Signing of MoU -Formation of County Coordination Team -Environmental and social standards screening	-Scope of ECRP Program -Distrust in gov/humanitarian intervention due to years of unfulfilled promises of drilling and rehabilitation boreholes by other NGOs operating the project areas, there was trust problem across communities	● The ECRP team emphasized the nature of the project design as a community informed initiative that helps the Government of South Sudan direct resources to those that need it most. ● Explain the role of the PDC that will be established in each Payam ● Review and validation of the bomas, payams, and anticipated sub-projects, as well as review of whether intended sub-projects ● Explain the roles and responsibilities of different stakeholders represented on the CCT (SMoLG, county, & payam) are understood. ● Explain the roles and responsibilities of the CCT as described in the TOR.

		approach awareness raising	regarding the work of NGOs and UN Agencies. -Many communities and project stakeholders raised concerns about the implementation status of the unfinished projects left behind by the previous LGSDP.	●There is a need to build trust and awareness training across project sites by implementing this subproject
Payam Level	-Project Introduction -Identification and reactivation of BDC	-Project Introduction -Confirmation of Subproject Payams and Bomas	-Incentive for BDC/ PDCs sitting allowances -Visibility for BDC/PDCs -Scope of ECRP Program -Distrust in gov/humanitarian intervention -Due to years of unfulfilled promises of drilling and rehabilitation boreholes by other NGOs operating the project areas, there was trust problem across communities regarding the work	The project stressed key messages like ●The ECRP ll will only implement sub projects that were identified and selected, validated by the community and government and finally approved by PMU/World Bank ● Explained overview of validation process and prospective sub-projects to be validated. ● The limitations of implementing projects that have changed significantly in cost or where other site considerations negatively impacted the viability of prospective projects was explained. ● The list of subprojects developed through community revalidation meetings will be presented to the PDC who will be responsible for the final review and recommendation. ● These recommended sub-projects will be presented to the ECRP ll project manager at PMU for final approval

			of NGOs and UN Agencies. -Many communities and project stakeholders raised concerns about the implementation status of the unfinished projects left behind by the previous LGSDP.	
Boma Level	-Community engagement and consultation. -Environment and Social screening awareness and exercise -Engineering screening -Signing of Voluntary land donation	-Project Introduction -Identification and reactivation of BDC	-Incentive for BDC/sitting allowances -Visibility for BDC -Distrust in gov/humanitarian intervention -Due to years of unfulfilled promises of drilling and rehabilitation boreholes by other NGOs operating the project areas, there was trust problem across communities regarding the work of NGOs and UN Agencies. -Many communities and project stakeholders raised	The project stressed key messages like, ; ● An overview of the validation process and sub-projects to be revalidated will be provided. ● The list of final recommended sub-projects developed through community revalidation meetings will be presented to PDCs who will then be responsible for the final review and recommendation. ● These recommended sub-projects will be presented to the ECRP II project manager for final approval.

			concerns about the implementation status of the unfinished projects left behind by the previous LGSDP.	
Community Level (Sub project site)		-Community engagement and consultation -Environment and Social screening awareness and exercise -Engineering screening -Signing of Voluntary land donation	-There was harmony of purpose by the community members at the meetings, and everyone who contributed to the discussion spoke as for the entire community. -Due to years of unfulfilled promises of drilling and rehabilitation boreholes by other NGOs operating the project areas, there was trust problem across communities regarding the work of NGOs and UN Agencies. -Communities appreciated the process of community	The ECRPII project was introduced and similarities and differences with LGSDP were explained. ● Overview of validation process and sub-project(s) to be assessed. ● Overview of how final project decisions will be made via the PDC and ECRP II Project Manager. ● Information concerning the sub-project that may disqualify them for support by the ECRP; this may include but not be limited to the following: a) Sub-projects that have been implemented by other partners b) Projects whose estimated budget is in excess of the allocated budget in ECRP II) Where community needs have significantly changed d) Where environmental screening disqualifies the prospective project

			engagement that involved consultation on the ownership of the land for the proposed project, awareness on procedures for voluntary land donation for development of subprojects, more so the consultation on presence and proximity of sites of cultural significance. And the selection of community GRM focal representatives that consisted of both female and male volunteers for receiving grievances and addressing project related grievances. -In the other locations, the community requested for the relocation of the subproject site location to a new	

			location due to reasons like recurrent flooding in previously selected locations -In the other locations, the community requested for the relocation of the subproject site location to a new location due to reasons like recurrent flooding in previously selected locations	

CHAPTER 5

ENVIRONMENTAL AND SOCIAL RISKS IMPACTS AND ANALYSIS

The Generic Environmental and Social Management Plan (G-ESMP) covers the rehabilitation and drilling of 70 boreholes and construction of 6 water yards. It serves as a standard guide for preparing contractor-specific ESMP (C-ESMP) at each borehole or water yard site, all based on the G-ESMP. This will ensure that distinct local conditions and risks are systematically assessed and managed throughout planning and implementation, thereby enhancing compliance with E&S risk management and contributing to the overall effectiveness and safety of the 76 sites/sub-projects.

This analysis will enable the WV Environmental and Social Safeguards team to ably support Contractors to: Prepare a site-specific C-ESMP for each site prior to mobilization; Assess site-specific environmental and social conditions; Adapt and supplement mitigation measures from the Generic ESMP as necessary; and submit the C-ESMP for review and approval by the Project Management unit (PMU) and supervising engineer

This chapter therefore presents a summary of anticipated positive and negative environmental and social risks during all stages of implementation of the proposed drilling works for the 70 boreholes and construction of 6 water yards in Twic and Gogrial West Counties.

5.1 Potential Positive impacts of the project Implementation

Creation of employment opportunities for the local population. The project will provide short term employment opportunities to skilled, semi-skilled and unskilled workers.

Improvement in water supply in the sub-project communities through the drilling of new boreholes, rehabilitation of non-functional boreholes and construction of water yards. Therefore, increasing the access to clean and safe drinking water across South Sudan.

Income Generation: Procurement of construction materials like sand, gravel, timber and cement will be required during construction. The purchase of these materials from suppliers in the project area will have a positive impact on the local economy.

5.2 Potential Negative Environmental risks and impacts

5.2.1 Pre-Construction stage (Site Mobilization)

During the preconstruction phase, key Environmental and Social Management Plan (G-ESMP) risks include inadequate site selection and design leading to environmental degradation or social conflict; unresolved land ownership or access disputes that may

cause delays, grievances, or involuntary resettlement impacts; insufficient stakeholder consultation resulting in community resistance, exclusion of vulnerable groups, or misinformation; failure to obtain required permits and approvals, exposing the project to legal and regulatory noncompliance; weak integration of environmental and social mitigation measures into designs and contracts, leading to poor implementation downstream; limited contractor capacity or lack of awareness of G-ESMP, occupational health and safety (OHS), and labor standards, increasing the risk of accidents, labor violations, and SEA/SH incidents; inadequate baseline environmental and social data, which may result in underestimated impacts on water resources, biodiversity, or livelihoods; poor planning for waste management, traffic, and site access, creating early environmental, safety, and nuisance impacts; and insufficient establishment of grievance redress mechanisms, monitoring arrangements, and institutional responsibilities, which can undermine accountability and effective risk management before construction begins

5.2.2 Construction stage (Borehole drilling, Pump testing, casing, disinfection, Installation of Hand pump and construction of borehole platform)

During the construction stage, anticipated environmental and social risks may include loss of vegetation as a result of site clearance to pave way for the installation of the drilling rig and other construction equipment; ambient air pollution as a result of dust and gaseous emissions from construction equipment like the air compressor, generator and vehicles; Noise and Vibration generation from the machinery and equipment used during drilling and construction activities; Soil erosion from exposure to rain and wind as a result of vegetation clearance; Water pollution due to sedimentation and siltation from runoff from spoils and exposed soils from the construction site; Generation of spoils from vegetation clearance activities and other construction wastes like concrete wastes and pipe cuttings during the process of construction; And the risk of accidental spillage and leakage of disinfection chemicals into the environment like High strength chlorine and used oils from machinery. Additionally, community members may be exposed to physical hazards on the project site leading to OHS issues like injuries and accidents; Inadequate provision of sanitary facilities like toilets for use by workers can inconvenience workers and even lead to improper disposal of human waste along the project areas and farmlands; Inappropriate siting of sanitary facilities close to the water boreholes could lead to the deterioration of borehole water Quality impacting on the health of the users; Generation of a wide range of waste effluents. These could include wastewater from washing and cleaning operations, oils and oily water generated by machinery maintenance, leaked/spilled fuels and oils. Health risk may include poisoning from inappropriate use of chlorine used during the process of borehole disinfection, while The loss of vegetation may compromise aesthetic value of the project sites

5.2.3 Construction stage (installation of water storage tanks, solar panels and chain link fence)

At this stage, more risks may be anticipated and may include loss of vegetation because of site clearance to pave way for the start of construction activities; Risk of damaging underground utilities lines for water and electricity during the process of excavation; Noise and Vibration from the use of machinery and motorized equipment like grinders, concrete mixers, jack hammers and compactors during construction; and increase in Soil erosion due to the exposure of soil to rain and wind because of vegetation clearance and excavation. Additionally, there may be slope instability arising from excavation in construction active areas, which may lead to collapse of slope on project workers; Predisposition of soil to erosion resulting from improper abandonment of borrow pit sites; Pollution of nearby surface water sources due to sedimentation and siltation from runoff from spoils and exposed soils; Generation of spoils and other construction waste; the risk of fall from height when installing above ground water storage tanks and solar panels; exposure of project staff to the risks of electrocution during the installation of solar panels; and Occupational health and safety due to exposure of workers to occupational health and safety hazards which could lead to injuries, ill health and accidents.

5.2.4 Construction stage (Laying of the water distribution lines)

- Emissions from vehicles and equipment used in maintenance may pollute air
- Risk of damaging underground utilities lines for water and electricity during the process of excavation for laying distribution lines
- Water pollution may result from the bust pipes or leakages, accidental spillage of fuels, lubricants and other chemicals
- Increase in Soil erosion due to the exposure of soil to rain and wind as a result of vegetation clearance and excavation.
- Public health problems may arise from diseases related to maintenance activities
- Occupational health and safety due to exposure of workers to occupational health and safety hazards

5.2.5 Rehabilitation of boreholes and water yards

- Noise and Vibration generation resulting from the use of machines and equipment like flashing machines, generators and welding machines.
- Risk of fall from height repairing above ground broken or damaged water storage tanks and solar panels.

- Generation of solid waste like pipe cuttings, metal cuttings and other construction waste during the process of rehabilitation.
- Generation of wastewater effluents during the process of well flashing and repair of storage tanks which could lead to the flooding of the nearby areas.
- Risk of being electrocuted by overhead power lines during the repair of the above ground water storage tanks.
- Health risk of poisoning from inappropriate use of chlorine used during the process of borehole disinfection.
- Risks of accidental spillage and leakage of disinfected chemicals and particles into the environment and well like High strength chlorine and used oils from machinery.

5.3 Environmental risks and Impact Mitigation Actions

5.3.1 Pre-Construction stage (Site mobilization)

- Maintaining vehicles and construction equipment in good working conditions to minimize exhaust emissions and noise generation.
- Driving project vehicles and construction equipment at low speed to minimize raising of dust to nearby communities along the road.
- Vegetation clearance will be strictly limited to necessary areas to minimize the destruction of the environment and exposure of soil to erosion.

5.3.2 Construction stage (Borehole drilling, Pump testing, casing, disinfection, Installation of Hand pump and construction of borehole platform)

- Vegetation clearance will be strictly limited to necessary areas to minimize the destruction of the environment and exposure of soil to erosion.
- Maintaining vehicles and construction equipment in good working conditions to minimize exhaust emissions and noise generation.
- Driving project vehicles and construction equipment at low speed to minimize raising of dust to nearby communities along the road.
- Avoid unnecessary idling of internal combustion engines of vehicles and construction machinery to minimize noise generation
- Enhance proper handling and disposal of waste through Implementing the measures for Waste Management outlined in the Waste Management Plan that promotes avoidance; reduction; reuse and recycling.
- Backfilling of borrow pits and restoration of vegetation in affected areas.
- Proper control and management of excavated earth materials
- Disposal of solid waste will be carried out in a manner that does not negatively affect the drinking water sources, cultivation fields, irrigation channels, natural drainage paths, wetlands and critical ecosystems.
- Ensure Water quality testing is done prior to commissioning of the borehole to the community. The water quality results must conform to the South Sudan National drinking water guidelines before the borehole hand over is done.

- Community sensitization on the potential physical hazards the project poses to them before the start of the project activities.
- Barricading of construction sites to limit and prevent exposure of community members to construction hazards.
- Proper sitting of boreholes at least 50 meters away from any sanitary facilities to prevent possible sources of water contamination.
- Training of project staff and contractors on chemical handling, Material safety data sheets, use, storage and disposal of used empty tins and keeping a registry of all chemicals on site.
- Disposal of solid waste will be carried out in a manner that does not negatively affect the drinking water sources, cultivation fields, irrigation channels, natural drainage paths, wetlands and critical ecosystems.
- Ensure Water quality testing is done prior to commissioning of the borehole to the community. The water quality results must conform to the South Sudan National drinking water guidelines before the borehole hand over is done.
- Community sensitization on the potential physical hazards the project poses to them before the start of the project activities.
- Barricading of construction sites to limit and prevent exposure of community members to construction hazards.

5.3.3 Construction stage (installation of water storage tanks, solar panels and chain link fence)

- Vegetation clearance will be strictly limited to necessary areas so as to minimize the destruction of the environment and exposure of soil to erosion.
- Obtaining a permit to work for excavation before the start of any excavation
- Liaising with the local authorities to determine the presence of underground utilities lines before the start of excavation works.
- Maintaining vehicles and construction equipment in good working conditions to minimize exhaust emissions and noise generation.
- Driving project vehicles and construction equipment at low speed to minimize raising of dust to nearby communities along the road.
- Avoid unnecessary idling of internal combustion engines of vehicles and construction machinery to minimize noise generation
- Borrow areas will be designed to minimize safety hazards and soil erosion
- Ensuring that safe work procedures for excavation are followed.
- Backfilling of borrow pits and restoration of vegetation in affected areas.
- Proper control and management of excavated earth materials
- Disposal of solid waste will be carried out in a manner that does not negatively affect the drinking water sources, cultivation fields, irrigation channels, natural drainage paths, wetlands and critical ecosystems.
- Minimize work at height if not possible the ECRP II work at height procedures must be followed when conducting any work at height activity.
- Isolation of electrical equipment from power sources when installing electrical equipment and the workers should follow the procedures for working with electrical equipment.

- Contractors should follow HSE measures outlined in the Project Health and safety management plan

5.3.4 Construction stage (Laying of the water distribution lines)

- Maintaining vehicles and construction equipment in good working conditions to minimize exhaust emissions and noise generation.
- Obtaining a permit to work for excavation before the start of any excavation
- Liaising with the local authorities to determine the presence of underground utilities lines before the start of excavation works.
- Ensure that distribution pipes are tested for any leakages before burying them underground to prevent pollution and contamination during the process of water supply.
- Backfilling of borrow pits and restoration of vegetation in affected areas.
- Barricading of construction sites to limit and prevent exposure of community members to construction hazards.

7.3.5 Rehabilitation of boreholes and water yards

- Vegetation clearance will be strictly limited to necessary areas so as to minimize the destruction of the environment and exposure of soil to erosion.
- Minimize work at height if not possible then ECRP II work at height procedures must be followed when conducting any work at height activity.
- Isolation of electrical equipment from power sources when installing electrical equipment and the workers should follow the procedures for working with electrical equipment.
- Contractors should follow HSE measures outlined in the Project Health and safety management plan
- Isolation of electrical equipment from power sources when installing electrical equipment and the workers should follow the procedures for working with electrical equipment.
- Contractors should follow HSE measures outlined in the Project Health and safety management plan

5.4 Potential Social Risks and Impacts

5.4.1 Pre-Construction stage (Site and Resource Mobilization)

- Land disputes arising from disagreement over donated land and its ownership which would delay implementation.
- Insecurity arising from inter-communal conflicts and cattle raids may considerably interfere with access to sites and progress of work
- Preparing for and drilling works may destroy key community cultural heritage sites such as burial grounds and sacred items such as trees which may cause conflict between community members and local authorities who donated the land on their behalf
-

5.4.2 Construction stage (Borehole drilling, Pump testing, casing, disinfection, Installation of Hand pump, construction of borehole platform, installation of water storage tanks, solar panels and laying of water distribution lines)

- Spread of diseases among communities, including HIV, through the interaction of contracted workers with community members.
- Increase in the risk of GBV/SEA, including sexual harassment and rape due to labor influx in the project areas.
- There is a risk of increased armed robberies targeting contractors when transporting cash/money to fields to pay their workers.
- Unemployment and Low women participation in project activities may lead to community uprisings/Protests targeting project workers brought from outside communities.
- Barricading of construction sites and access routes has the possibility to interfere with access to homes, commercial and social activities
- Risk of delayed payment of construction workers by contractors
- Risk that construction workers may be underpaid by the contractors

5.5 Social risk and impacts Mitigation Actions

5.5.1 Pre-Construction stage (Site and Resource Mobilization)

- ECRP staff to liaise with the BDC members, local authorities and UNDSS regarding the accessibility of the project areas before commencing on any field deployment of contractors.
- The contractor shall implement a labour management plan(LMP) in line with ESS2, prohibiting child and forced labor with age verification.

5.5.2 Construction stage (Borehole drilling, Pump testing, causing, disinfection, Installation of Hand pump, construction of borehole platform, installation of water storage tanks, solar panels and laying of water distribution lines)

- Sensitization of project workers, contractors and community members on risks of contracting sexually transmitted diseases, prevention of common diseases among workers and communities
- Sensitization of project staff, contractors and community members on GBV/SEA Prevention and the referral channels for SEA/SH cases (survivor centred pathways), including mandatory signing of code of conduct by all workers

- All cash in transit, salary payments and local transactions will be confidential to the contractor to advise their employee to avoid moving or showing off bundles of cash in public.
- The contractor will ensure that 80% of the employment opportunity is given to the local community and the contractor shall also ensure that he or she explains to the community the nature of labor requirement and timeframe required.
- The contractor shall be required to abide by the procedures outlined in the labour management plan for the management of its workers.
- Sensitization of the project workers and community members on the Grievance Redress Mechanism and Gender Action Plan, Environment and social topics.
- Ensure that proper community consultations are conducted prior to the start of any project activity.
- Incorporate chance to find Procedures for cultural heritage: immediately stop work, secure the site, notify PMU and authorities, and resume work only after assessment and approval.

CHAPTER 6

ENVIRONMENTAL AND SOCIAL MANAGEMENTRISK MITIGATION AND MONITORING PLAN

6.1 Environmental and Social Mitigation and Monitoring Plan

In line with the objective of this G-ESMP, the Monitoring plan and the Mitigation measure is to mitigate the adverse impacts at the implementation/operation of all the planned drilling of 70 boreholes and construction of 6 water yards in Twic, and Gogrial West, Warrap State. . It details the identified impacts, mitigation measures, responsibility for implementation and costs related amongst others. The sub-section after the G-ESMP matrix is the monitoring arrangement to ensure effective implementation and delivery of project development objectives.

8.1 Table: Environmental and Social risk/Impact Mitigation and Monitoring Plan

Potential risk and Impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
				Mitigation	Monitoring		
PRE-CONSTRUCTION STAGE							
Land disputes arising from disagreement over donated land and its ownership which would delay implementation	Secure land donation documents from chiefs and landowners and engage local authorities	ESS screening forms, sample of lands involuntary forms	Number of cases resolved	Contractor/	WVSS	Weekly, monthly	Part of contract
Preparing for and drilling works may destroy key community cultural heritage sites such as burial grounds and	Ensure cultural find chance are considered during engagement processes	Field monitoring reports, Contractors weekly report update	Cultural sites identified and protected	Contractor/	WVSS	Weekly, Monthly, quarterly	

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
sacred items such as trees which may cause conflict between community members and local authorities who donated the land on their behalf							
Insecurity arising from inter-communal conflicts and cattle raids may considerably interfere with access to sites and progress of work	Engage all ECRP II stakeholders e.g. RRC, County authorities through project implementation	Stakeholder engagement list, monitoring reports; Coordination meeting reports	Stakeholder minutes of meetings Zero incident encountered	WVSS	PMU, WVSS	Monthly, quarterly	

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
inadequate site selection and design leading to environmental degradation or social conflict	Avoid sensitive areas; verify land ownership; reduce community conflict. include E&S clauses in B.o.Qs and designs	Monitoring checklist,	Number of voluntary land donations signed, number of grievances reported, addressed or pending	Contractor/ WVSS	WVSS	Daily	
Low Community Engagement or Trust: Community members may lack trust in the mechanism, leading to underreporting of grievances or reluctance to participate, which can	WVSS to fully engage community and stakeholders on GRM importance and reporting	Community Engagement Report	Minutes of meeting	WVSS/Contractor	WVSS, PMU	Weekly, monthly, quarterly	

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
undermine its effectiveness							
Delays in Resolution: Administrative or procedural delays can result in grievances remaining unresolved for extended periods, causing frustration and diminishing confidence in the system.	Ensure timely resolution of complains received	MIS	Number of cases reported, addressed, pending	WVSS	PMU	Daily, WVSSS, PMU	
CONSTRUCTION STAGE							
Spread of diseases among communities, including	increase awareness of Site-specific risks to	Monitoring reports; stakeholder coordinatio	observation	Contractor	WVSS	Weekly	

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
HIV, through the interaction of contracted workers with community members	community, ensure proper stakeholder engagement is done	n meetings, community awareness minutes					
Increase in the risk of GBV/SEA, including sexual harassment and rape due to labor influx in the project areas.	Implementation of LMP (including CoC) -Implementation of GBV Action Plan	GRM Contractor compliance	Number of grievances registered	Contractor	WVSS		
There is a risk of increased armed robberies targeting contractors	Coordinate with state and authorities to support all ECRP II contractors	Security reports	Number of Security Clearance obtained before field travel	Contractor	WVSS	Daily	No operational cost

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
when transporting cash/money to fields to pay their workers.	in the field and along checkpoints						
Unemployment and Low women participation in project activities may lead to community uprisings/Protests targeting project workers brought from outside communities.	Ensure contractors sign Code of Conduct, Implementation of LMP, follow South Sudan labour act 2017	GRM register		Contractor	WVSS	Daily	
Risk of delayed payment of construction workers by	ensure contractors sign Code of Conduct, Implementati	GRM register Routine monitoring	Contractors Compliance -Worker's grievances registered	Contractor	WVSS	Weekly	

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
contractors	on of LMP, follow South Sudan labour act 2017						
Barricading of construction sites and access routes has the possibility to interfere with access to homes, commercial and social activities	Engage with stakeholders and community to understand the impact of barricading sites. Contractors to develop good working relation with community	Routine monitoring		Contractors	WVSS		
OPERATION AND MAINTENANCE STAGE							
Risk of vandalizing of installation	-Ensure that the hand pumps are not installed in an area that provides	- Site inspection	Evidence of specified location of the facility or surveillance	O&M Contractor	WVSS		

Potential risk and impact	Mitigation measures	Method of Monitoring	Performance indicator	Responsibility		Time frame	Budget (USD)
	hideout opportunity for vandals, but if so, provide community surveillance		arrangement				

8.1.1 DECOMMISSIONING STAGE

- The impacts generated during the decommissioning and withdrawal phase will be from wastes and unused building materials scattered all over the Project site.
- The waste and unused building materials may be washed by surface water into the drainage systems and cause clogging and pollution.
- Open boreholes soak away depth pits that may be left unused leading to loss of human and animal life.
- The wastes may also be scattered around by domestic/wild animals.

Mitigation.

- Ensure all waste and unused building materials are collected in receptacles or designated areas then transported away for disposal.
- Ensure that all waste receptacles are in enclosed areas away from domestic/wild animals.
- Ensure all waste with potential environmental impacts like oils and plastic containers and papers are transported on a daily basis.
- Fill all open pits.

The contractor shall be expected to draw a decommissioning plan to guide ECRP ll on the defect notification period (DNP) and the borehole users on monitoring and management of the facility. The plan will in addition be useful for community borehole management groups in their operation and maintenance practice.

8.2 Training and Capacity building Need and Targets

The G-ESMP would also include detailed capacity building/training for staff of ECRP II at the county level and for two counties . Here below is a breakdown of the proposed training and cost implications.

Objectives of Capacity Need	Participants Stakeholders /Targets population	Subject Issues for engagement	Method of engagement	Resource Person	Time frame	Cost (USD) Budget in USD
1. Institutional Strengthening	Project staff WVSS	Capacity Development	Training	PMU	Bi-annually	Include. in staff costs
2. Ensure HSSE Compliance	ECRP Staff, HSSE Team, Contractors Beneficiaries at place of work Beneficiaries, IP	● Environmental and Social Risks and how they are addressed ● Training for adoption & maintaining site specific risk assessments and Implementation of the G-ESMPs for subprojects	Focus group discussions, site visits/inspection and interviews	ECRP HSSE CI and Contractors	Monthly	

Objectives of Capacity Need	Participants Stakeholders /Targets population	Subject Issues for engagement	Method of engagement	Resource Person	Time frame	Cost (USD) Budget in USD
		● Training for Contractors on implementation of Waste Management Plan				
3. Environmental and Social Management Plan Implementation And Monitoring	ECRP Staff, HSSE Team, PMU, Contractors	● Overview of Environmental and Social Impact Assessment Process ● Environmental and Social Management Plan ● Overview of Potential Environmental and Social Impacts of Project ● Environmental Pollution & Control on the project sites ● Environmental Engineering ● Environmental	Focus group discussions , site visits/inspection and interviews	ECRP HSSE CI and Contractors	Monthly day	

Objectives of Capacity Need	Participants Stakeholders /Targets population	Subject Issues for engagement	Method of engagement	Resource Person	Time frame	Cost (USD) Budget in USD
		and social Performance Monitoring of Mitigation Measures in G-ESMP ● Environmental and Social Audits ● Environmental and social Reporting (GRM)				
4. Enhance knowledge and awareness on GBV Action Plan	ECRP Social Mobilizers, Contractors, Subcontractors, Primary Suppliers, Workers and Beneficiaries, Communities	GBV risks and Management	Meetings: Plenary discussion with question and answer	ECRP CI HSSE, and Contractor	Monthly	
5. Enhance knowledge and awareness on LMP	ECRP Social mobilizers, Contractors, Subcontractors, Primary	Labor risks management	Meetings: Plenary discussion with question	ECRP HSSE CI and Contractor	Monthly	

Objectives of Capacity Need	Participants Stakeholders /Targets population	Subject Issues for engagement	Method of engagement	Resource Person	Time frame	Cost (USD) Budget in USD
	Suppliers, Workers and Beneficiaries, Communities		and answer			
6. Site Induction training on Constructio n HSE	Engineers, Social Mobilizers and Contractors	• Introduction to Construction HSE • Overview of Health and Safety Hazards in Construction • Excavation Safety • Construction Site Inspection • Personal Protective Equipment		WVSS HSSE Team	BI-weekly	
7. HSSE Performanc e / Monitoring	ECRP Social mobilisers, Contractors, Subcontractors , Primary Suppliers and Workers	• Weekly HSSE Inspection across all sub project Sites • Monthly HSSE reporting • Review of Emergency preparedness and response	-Meetings: Plenary discussion with question and answer -site visits/ Inspection and interviews	-WVSS HSSE Team -Engineers -PMU	-Monthly -PMU bi-annually	

Objectives of Capacity Need	Participants Stakeholders /Targets population	Subject Issues for engagement	Method of engagement	Resource Person	Time frame	Cost (USD) Budget in USD
		measures ● Functional Health, Safety, Social and Environment Management System ● Biannual Review of Project HSSE Performance				
8. HSSE Incident Reporting/ Documentation	Engineers, Social Mobilizers and Contractors	● Incidents: Causation, Investigation & Reporting and Documentation	Meetings: Plenary discussion with question and answer	WVSS HSSE Team	Monthly	
9. Grievance and Redress Mechanism (GRM)	Engineers, Social Mobilizers and Contractors	● Introduction of the GRM ● Conductor GRM lodging process, procedures for addressing Complaints, Appeal process ● Classification		WVSS HSSE Team	Quarterly	

Objectives of Capacity Need	Participants Stakeholders /Targets population	Subject Issues for engagement	Method of engagement	Resource Person	Time frame	Cost (USD) Budget in USD
		of GRM ● How to report GRM ● How to handle project related Grievances				
Total (Capacity Building)						

Note: This cost is exclusive of the cost of the hall, and other logistics which shall be undertaken by ECRP II under management cost

6.2 Institutional arrangements

The successful implementation of this G-ESMP depends on the commitment and capacity of various institutions and stakeholders. Thus, the arrangement as well as the roles and responsibilities of the institutions and people that will be involved in the implementation, monitoring, and review of the G-ESMP are discussed below.

The roles and responsibilities of the various institutions in the implementation of this G-ESMP are outlined in table 8.3

Institutional arrangement for the Implementation of the G-ESMP

Category	Roles and Responsibilities
World Bank	● Overall supervision and provision of technical support and guidance. ● Recommend additional measures for strengthening the management framework and implementation performance. ● Supervising the application and recommendations of sub-project G-ESMPs.
PMU	● Review all G-ESMPs documents prepared by ECRP CI HSSE team and ensure adequacy under the World Bank Safeguard policies. ● Ensure that the project design and specifications adequately reflect the recommendations of the G-ESMPs ● Coordinate application, follow up processing and obtain requisite clearances required for the project, if required. ● Prepare compliance reports with statutory requirements. ● Develop, organize and deliver training program for the project staff, the contractors and others involved in the project implementation, in collaboration with WVSS I team ● Review and approve the Contractor's Implementation Plan for the environmental measures, as per the ESMF. ● Liaise with the Contractors and the CI team on the implementation of the G-ESMPs ● Liaise with various National government and State Government agencies on environmental and other regulatory matters. ● Review the performance of the project through an assessment of the periodic Quarterly/Biannual environmental and social monitoring reports ● Provide a summary of the same to the Project Manager and initiate necessary follow-up actions. ● Timely reporting of near misses, incidents, accidents and dangerous occurrence

Category	Roles and Responsibilities
	● Participating in incident investigation and ensuring lessons learned are communicated and remedial corrective actions closed.
WVSS	● Management, implementation, monitoring and compliance of the G-ESMP, and any approval conditions, including construction supervision and performance of project staff, contractors and subcontractors. ● Review of G-ESMP performance and implementation of correction actions ● Stop work procedures, in the event of breaches of G-ESMP conditions that may lead to serious impacts on local communities, or affect the reputation of the Project ● Ensure effective communication and dissemination of the content and requirements of the G-ESMP to contractors and subcontractors. ● Assisting the contractor with implementation of G-ESMP sub-plans. ● Monitoring of G-ESMP performance ● Ensuring compliance with all Project social commitments, including implementation of the social management plans ● Report on the environmental performance of the Project directly to PMU. ● Prepare quarterly HSSE reports summarizing Project activities, as required ● Representing the Project at community meetings ● Ensuring effective community liaison and fulfilling commitments to facilitate public consultation throughout the Project cycle ● Establish dialogue with the affected communities and ensure that the environmental and social concerns and suggestions are incorporated and implemented in the project ● Timely reporting of near misses, incidents, accidents and dangerous occurrence ● Participating in incident investigation and ensuring lessons learned are communicated and remedial corrective actions closed.
Constructio n Contractor	● Contractors should ensure that all their personnel or sub-contractor's personnel have received proper induction and awareness arising as necessary on G-ESMP, health and safety management practices, and are aware of relevant site rules. ● Keep the health and safety records of their subcontractors or partners in a joint venture, and to keep those records available

Category	Roles and Responsibilities
	for WVSS inspection at any time. ● Contractors will include environmental and social requirements in the procurement and contracting process including bidding documents, for potential civil works. ● Relevant requirements are included in contracts and subcontracts consistent with the requirements of Environment and Social Standards (ESSs); codes of conduct are required for contractors, subcontractors, primary suppliers, and their workers. ● Contractor will prepare a detailed construction-ESMP (C-ESMP) that is costed, with sufficient budget to mitigate E&S risks ● Contractor's commitment and compliance will be monitored in accordance with ESSs ● Contractors will be trained by WVSS on grievance redress mechanisms and their subcontractors are expected to do the same to the affected communities and other stakeholders. ● The contractor will develop a grievance mechanism to handle concerns of their employees and beneficiaries and ensure a proper procedure and confidential reporting of all GBV incidents ● Conducting weekly HSSE Inspection and submitting the reports to WVSS Site Engineer ● Contractors will provide Monthly and quarterly details on contractor's oversight on environmental, social, health and safety (ESHS) performance ● The contractor shall have a Labor Management Plan (LMP), which conforms to the requirements of the LMP and Environmental Social Standards 2. ESS2 ● Timely reporting of near misses, incidents, accidents and dangerous occurrence ● Participating in incident investigation and ensuring lessons learned are communicated and remedial corrective actions closed.
WVSS Field Engineer	● Supervision of contractor performance of implementation of the Construction ● Reporting any incidents or non-compliance with the G-ESMP to the CI HSSE Team ● Conducting weekly HSSE inspection at the sites and Submitting reports to CI HSSE Team ● Making recommendations to the CI HSSE Team regarding G-ESMP performance as part of an overall commitment to continuous improvement in implementing the G-ESMP and ensuring ESS Compliance.

Category	Roles and Responsibilities
General Public	● Identify environmental and social issues that could derail the project and support project impacts and mitigation measures ● Assist in awareness campaigns

6.3 G- ESMP Implementing schedule

The implementation of the G-ESMP will be done throughout the project Life Cycle.

Table: G-ESMP Implementing schedule

S/N	Activity	Responsibility	Pre-Construction (Month)			Construction (Month)			Operation and Maintenance
Environment and Social Management			**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Formal Disclosure of G-ESMP	PMU & WVI-SS							
	Develop Environmental/Social Requirements in Bid Documents for contractors	PMU							
	Allocate Budget for G-ESMP	PMU & WVI							
	Training of engineers and Contractors on the G- ESMP	WVI-SS							
	Implementation of Environmental and Social Mitigation Measures	WVI-SS							
	Supervision of pre-Construction and Construction activities	WVI-SS							
	Supervision of G-ESMP Implementation	WVI-SS							
	Environmental and Social Monitoring and Auditing	PMU							
	Report on G-ESMP	WVI-SS &							

	Implementation	PMU							

6.4 Proposed budget for G-ESMP implementation

The total cost for implementing this G- ESMP is estimated to be **50,000 USD only.**

The table below breaks down the budget estimate and the responsibility for implementation of the G ESMP.

S/N	Item	Responsibility	Cost Estimate (USD)
1	Mitigation	WVI-SS, Contractor and PMU	**16000**
2	Monitoring	WVI-SS & PMU	**18200**
3	Capacity Building	WVI-SS & PMU	**20000**
4	Car Hire	WVI	**9000**
5	Miscellaneous	10% of subtotal	**6320**
Total			**69520**

6.5 Reporting

Reports shall be produced through the course of implementation of monitoring programs, collecting incident/grievances forms, consulting with local communities and auditing performance of existing programs/mitigation measures within the G-ESMP.

Table: Types of reports required

Responsibility	Type of Report	Purpose/Details of Reporting	Frequency of Submission	Submit to:
Contractor	Accidents/ Incident Report	Filing/notification of accidents or unplanned events	Within 24 hours of the incident	Site Engineer
	Site Inspection Report	Report of compliance and noncompliance issues / measures	Weekly	Site Engineer
WVSS Site Engineer	Accidents/ Incident Report	Filing/notification of accidents or unplanned events	Within 24 hours of the incident	Safeguards Team
	Site Inspection Report	Report of compliance and noncompliance issues /	Weekly	Safeguards Team

Responsibility	Type of Report	Purpose/Details of Reporting	Frequency of Submission	Submit to:
		measures		
CI HSSE Team	Incident Investigation/ Review report	Detail the cause, nature and effect of any environmental and/or social incident	Not more than 5 days form occurrence	PMU
CI HSSE Team	Monthly Compliance Report	Monthly report of compliance before the 5th of every new month	Monthly	PMU
PMU	Quarterly Compliance Report	Quarterly report on compliance to G-ESMP	Quarterly	World Bank

6.6 G-ESMP Disclosure

The G-ESMP shall be disclosed to the Public following the review and clearance by the World Bank.

Activity	Responsibility
Disclosure of the G- ESMP at the National Level on the Public notice boards	PMU will liaise with WVI-SS and the relevant government authorities
Disclosure of the G- ESMP at the State level on the public notice boards	PMU will liaise with WVI-SS and the relevant government authorities
Disclosure of the G- ESMP at the County and Payam level on the public notice boards	PMU will liaise with WVI-SS and the relevant government authorities
Disclosure of the G- ESMP at the project community	PMU will liaise with WVI-SS and the relevant government authorities

CHAPTER 7

SUMMARY CONCLUSION AND RECOMMENDATION

7.1 Conclusion

The Environmental and Social Management Monitoring Plan provided in chapter six charts the path for sustainable project implementation. The plan provides strategies and activities that need to be implemented to mitigate the negative impacts arising from the drilling of 70 boreholes and construction of 6 water yards which may affect. . The implementation timelines, responsibilities, and cost estimates are also provided where applicable.

7.2 Recommendation

It is recommended that contractors and all the stakeholders mentioned in the G- ESMP implement the recommendations in the Generic environmental and social management plan. This is to ensure that the potentially affected environment is well managed and that incidents are prevented during project implementation. The Contractor and Project partners are expected to comply with the relevant legal and policy requirements regarding project implementation. During the operation of the borehole, it is necessary that environmental regulations be strictly adhered to and the performance of the borehole will also be monitored against the recommended mitigation measures to ensure sustainability.

7.3 Overall Opinion

The subprojects work – drilling of 70 boreholes and construction of 7 water yards - will have a far-reaching impact on the community in terms of accessibility to quality water. The project areas have water challenges which continue to stifle socio-economic development and threaten livelihoods. It is for this reason that the community members are very supportive of the project. It was also established that all the identified negative impacts will be effectively mitigated through full implementation of the G- ESMP.

REFERENCES

Environment and Social Management Framework-South Sudan Enhancing Community resilience and Local Governance Project ECRP, June 4, 2020

Technical guidelines for the construction and Management of Borehole Hand Pumps, Ministry of Irrigation & Water Resources, National Water Corporation, April 2009.

UNEMG-Moving Towards A Common Approach to Environmental and Social Standards
https://unemg.org/wp-content/uploads/2019/07/FINAL_Model_Approach_ES-Standards-1.pdfHealth Sector Infrastructure ESMP
General Construction G-ESMP
Project Implementation Manual 2022
South Sudan Labour Act 2017
Environmental Social and Commitment Plan ESCP 2023
WVSS ECRP II GBV Referral Pathway assessment 2025
WVSS ECRP II Socio-economic Vulnerability Assessment 2025
Project Appraisal Document – April 2023
Managing Contractors
Stakeholder Engagement Plan (SEP) 2022
Security and Safety Management Plan April 2024

APPENDICES
APPENDIX I : VOLUNTARY LAND DONATION FORM

ESS-47

VOLUNTARY LAND DONATION CONSENT FORM

State	Warrap
County	Gogrial
Payam	Gogrial
Boma	Mandeg
Sub- project ID	Pandau - Borhold

Name of land owner Anei Bak Deng	**ID Number**	**Beneficiary of the project** N/Y
Sex: male	**Age** 46	**Occupation:** farmers
Address: Pandau		

By signing or providing thumb-print on this form, the land user or owner agrees to contribute assets to the sub-project. The contribution is voluntary. If the land user or owner does not want to contribute his/her assets to the project, he or she should refuse to sign or provide thumb print, and ask for compensation instead.

Date: 26/8/2025

County representative's signature

Date: 26/8/2025

Witnesses:

1. James Kuch Bak A/C
2. Emberch Athomic W/O P.A.

(Signature or thumb-print, name and address)

JAMES KUC BAK APUK - HEAD CHIEF
DATE:
PETH MONYDIT PAYAM

PETH MONYDIT PAYAM - MAJOK
PAYAM ADMINISTRATOR'S OFFICE

21

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APPENDIX II : STAKEHOLDER ENGAGEMENT PARTICIPANT LIST

May 21 2025 Twic
County launch atte

APPENDIX III: STAKEHOLDER ENGAGEMENT AND ESS SCREENING PHOTOS

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<td>Block of 2-classrooms in Tuele Centre prioritized for renovation in Pan -Nyok Payam of Twic County</td>
<td>The Majook-Noon PHCC water yard at Majook-Noon Boma in Aweng showing the communal water point which currently non- functional</td>
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The Majook-Noon PHCC water yard at Majook-Noon boma in Aweng showing the bladder tank which currently non -functional	Lang-Agaal Primary School rehabilitation which was destroyed by strong winds during flooding season in Akon Payam of Gogrial West County

APPENDIX IV: STAKEHOLDER MEETING MINUTES

Meeting Title:	ECRP II - Meeting at Twic county-Project launch in county HQRs							
Date:	21 May 2025	**Type**	**X**	In person		virtual		GMeet
Chair:	Hon. John Mabior	**Location**		Country Office		Field Office	**X**	External
Prepared by:	Yuot Bol Yai	**Attendees**		Internal	**X**	External (xxx)		
Attendees:	ECRP Team, 1 Local Government staff State level, State RRC, a representative from State Ministry of Finance, PDC's, Payam Chiefs, Payam Administrators, Head of Departments County Level, Executive Director County, County RRC and Paramount Chief							
Circulation:								

Notes	**Actions Items**		
	Action	**Actionee(s)**	**Timeline**
Welcome and Opening Remarks The project launch was held on 21st May, 2025 in Twic County headquarters, Turalei. The Project Launch marked the official start of project activities to promote greater public infrastructure and community ownership of the project. The launch was also an opportunity for different county departments to appreciate project's scope and goals, and to seek a fuller understanding of what the project will achieve and how it will impact the community of Twic in selected 3 payams (Akoc, Pan-nyok and Aweng) County authority officials, including Hon. Mabior Marup (County Commissioner) and Mr. Natale Nhial Deng (Executive Director), welcomed the presence of the RRC Chairperson and World Vision Team Lead, Yuot Bol. They emphasized the importance of collaboration, highlighted existing gaps, and discussed potential	Welcoming remarks		

project identification areas. Hon. John Mabior was appreciative to State and National government for identifying Twic County under ECRP ll , Hon. John acknowledged Twic county support in service delivery in targeted 3 payams, and we request State and National Government to equally add more funds in other sector Prior to the launch, WVSS conducted series (12th March 2025 and 24th April 2025) of engagement with state, county and PMU on payams selection was developed with the aim of providing some background to the project partners and the issues the project seeks to address. The launch started at 9.00 am and was presided over by Hon. Commissioner of Twic County, Mr. John Mabior Marup. The project launch was attended by 18 participants including Twic Paramount Chief, Mr. Garang Nyuol Bol, State and County authorities . The discussions reaffirmed that certain areas within Twic County are suitable for effective and smooth project implementation thus the county engagement process confirmed three payams (Akoc, Pan-nyok and Aweng) to be supported. WVSS will carryout community engagement in Akoc and Pan-nyok within May-June 2025 in which community select subprojects and county and payam authorities to validate subprojects and then in early 2026 around February or March, WVSS will start implementation in those two payams. This is due to inaccessibility to Akoc and Pan-nyok during rainy season (May 2025-Janruary 2026).	ECRP ll areas of implementation in Twic		

Meanwhile WVSS continue with community engagement and project implementation in Aweng payam throughout June-December 2025			
Welcomed the ECRP ll project on behalf of the State authorities in Twic. He underscored the importance of this project considering the gaps in infrastructure and also institutional capacity that exist in the state and county at large. He also indicated that the project resonates well with previous World Bank funded project 2015-2018 LOGOSEED (Local Governance Services Delivery Project) He underscored the need for awareness and capacity of local authorities and people of Twic so that they can hold WVSS to account. He noted that since the project is a government funded grant, which makes the project interesting since errant contractors can be disciplined if they are found to have disregarded some regulations. Recalled previous agreements that ECRP II should target Pan-Nyok and Akoc, despite road access challenges. Proposed adding only one payam to support during road inaccessibility, allocating 20% of funds to Aweng payam and 80% to Pan-Nyok and Akoc.	Hon. Peter Madut, Assistant Director for Planning, State Ministry of Local Government & Law Enforcement Agencies-Warrap		
Confirmed consensus from previous meetings that focus should be on Pan-Nyok and Akoc. As the RRC team on the ground, expressed readiness to support project implementation. He indicated that government welcomes the project and there is need to put the grant funding to good use. He also appealed to WVSS to use the training and other opportunities through the	Welcoming remarks by County RRC, Mr. Maror Ayuel		

project so that the project addresses the pressing needs at the grassroots level. **"**Projects of this nature face delays. This is a government and donor regulations which ought to be followed by the implementing partner and there are a lot of things involved," he said			
Appreciated the support from the state government, World Bank, and World Vision in prioritizing Twic. Assured that county authorities will inform teams in Pan-Nyok and Akoc to prepare and cooperate. Committed to active participation in project implementation and guiding sub-project selection. Highlighted ongoing challenges such as lack of clean water, unstructured schools, and poorly equipped health facilities. Urged collective efforts for cholera prevention, noting the outbreak in Ajak-Kuac Hon. John Mabior Marup observed that the county has been crying for assistance and infrastructure for so long and this project has come at right time to support the most affected payams in Twic County. He pointed out a few public infrastructure projects which are riddled with controversy. He indicated that a multi-stakeholder approach to dealing with teething problems facing the sector was an ideal way of solving some of the challenges	Final remarks by the Commissioner of Twic, Hon. John Mabior Marup		
Recommendations by Twic County Authority: 1. Include Aweng Payam to ensure comprehensive coverage in rainy season 2. Conduct sub-project identification, committee formation, and training within this year and the next, year February or	Recommendations during project launch		

March 2026 WVSS should focus on construction and water infrastructure in Pan-Nyok and Akoc payams 3. Proceed with community engagement and project implementation in Aweng Payam, as it remains accessible 4. Establishment of robust Monitoring system to ensure the project is implemented accordingly and meets the intended objectives 5. Accountability and complaints mechanisms established in project sites to ensure timely identification of issues and timely action to such issues 6. All stakeholders (government line ministries, development partners, and academic institutions, media institutions and socio-economic groups in the communities including women, youth and the disabled) to be engaged as soon as implementation begins to ensure everyone is on the same boat and provide necessary support.			
Action Points: 1. Prepare all documentation and sub-project proposals in advance for the upcoming year. 2. Complete formation of Boma Development Committees (BDCs), Payam Development Committees (PDCs), and other relevant committees, including training. 3. Continue implementation efforts in Aweng due to its accessibility, even during the rainy season			

APPENDIX V : SOCIAL AND ENVIRONMENTAL SCREENING CHECKLIST

SECTION A: GENERAL INFORMATION

Enhancing Community Resilience and Local Governance Project	**Social and Environmental Screening Report – ECRP II**
Projects are screened for their inherent social and environmental risks regardless of planned mitigation and management measures. It is necessary to identify potential inherent risks in the event that mitigation measures are not implemented or fail. This means that risks should be identified as if no mitigation or management measures were to be put in place.	
SECTION A: General Information	
Date of screening	10 June 2025
Project/Subproject title	ECRP II
Project/Subproject component	Component 3 Emergency Flood Response
Implementing Agency	WVSS
Proposed project budget	...
Proposed project duration	1 Month
ES Screening Team Leader and Contact Details	Yuot Bol Yai email: yuot_yai@wvi.org +211925957373
ES Screening Team Members	Okot Jovine Owili, Abuoy Durdsan Thuch, Pascal Rungo, David Malual Kuir, Marko Nyuol, Deng Aleer, Peter Agourwel, Napoleon Phiri, PDC and BDC Members
Program/Site/Activity location	Borehole drilling and motorization of water yards in Twic and Gogrial West
Project Description. Briefly describe project activities, activities that interact with the ES	Resource mobilization, Setting the site/Site clearance, Geophysical/hydrogeological survey, Borehole drilling, Casing installation and gravel packing, Well development, Pump testing, Construction of apron, installation of handpump, water quality testing, sourcing of local construction materials like cement, gravel, sand, water etc
Categorize Project Activities into List A or List B or List C. Refer to Project Description and Project Categories in Section A	Category B

Potential Environmental/Social Risks Imp

Risk Category *(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no or I don't know are applicable answers)*	Yes	No	I don't know	If these risks ('yes') are present, refer to:	Comment
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts					
Is an Environmental and/or Social Assessment required where a project is undertaken?		X		ESMF	
Is there a risk of diversion of project benefits?		X		Stakeholder Engagement Plan (SEP) Grievance Redress Mechanisms (GRM)	The construction will be done by a contractor however; project management will carry out awareness about the project details. They will be further trained on how to report any suspicious activities happening on the site through GRM protocols. If the staff get involved in mismanaging project resources, relevant actions will be taken. Through stakeholder engagement community, all selected subprojects to be final and cannot change either by elites or whatsoever. This is one of the assurances that there'll be no diversion of project benefits
Is there a risk of lack of monitoring of project activities due to remoteness of location and insecurity?		X		Security Management Plan (SMP)	This subproject is accessible and there are no records security issues
Is there a risk that project benefits may not reach truly vulnerable populations?		X		Stakeholder Engagement Plan (SEP)	The construction of the school will be accessed by all children who are willing to attend school. With involvement of State Ministry of Education in ESS screening and also through validation workshop, the state

					government will take ownership of this subproject for it use and sustainability	
Is there a risk that subprojects may be manipulated by different factions?		X		Stakeholder Engagement Plan (SEP)	The location belongs to the community and is centrally located, hence giving accessibility to the catchment area. The possibility of politicians using it as a campaign tool is always there and the project will intensify information sharing about the ECRP being a government project for the community hence the management of the project rests in their hands	
Is there a risk that the selection of the activity location or beneficiaries will lead to conflict?		X		Security Management Plan (SMP) Grievance Redress Mechanisms (GRM)	The community indicated that currently their children are learning under the tree, hence the coming of this subproject is exciting and much appreciated	
Does the activity pose a security risk for local staff?		X		Security Management Plan (SMP)		
Is there a risk that the activity firms up contested local authority structures?		X		Stakeholder Engagement Plan (SEP)		
SS 2: Labour and Working Conditions						
Does the activity include any of the known labor rights / ESS 2 non-compliance risks in South Sudan (child and forced labor)?		X		Labor Management Procedures (LMP) Occupational Health and Safety Plan (OHS)	The community stated that they are aware of the age limit of 18 years. The project will keep having safeguarding tools to monitor the safety of children. Once subcontractors will be on board, WVSS will train all subcontractors and ensure adherence to PMU's regulations	

					and South Sudan Labour Act 2017	
Does the activity include a construction component?	X			Labor Management Procedures (LMP) C-ESMP Occupational Health and Safety Plan (OHS)		
Does the activity include labor-intensive manufacturing?		X		Labor Management Procedures (LMP)		
Does the activity include primary agricultural activities?		X		Labor Management Procedures (LMP) Occupational Health and Safety Plan (OHS)		
Will the activity require a larger contractor workforce?		X		Labor Management Procedures (LMP) Occupational Health and Safety Plan (OHS), C-ESMP		
Is there a security risk for Project Workers?		X		Security Management Plan (SMP)		
Is there a risk that the operation and maintenance of subproject facilities cause OHS issues?		X		Occupational Health and Safety Plan (OHS)		
Is there a risk of lacking OHS for workers at the construction site?		X		Occupational Health and Safety Plan (OHS) Pest Management Plan (PMP)	This may likely happen and hence the need of orientation training with the contractor to make sure that all people at the sites are working with PPE and follow the safety rules for the site	
Is there a risk of delayed payment of workers?	X			Labor Management Procedures (LMP	WVSS has deliberately provided milestones in the payment system to make sure that the contractor has the capacity to pay his/her staff	
Is there a risk that workers are underpaid?		X		Labor Management Procedures (LMP)		
Is there a risk that women will not be included in deployment in equal numbers?		X		Labor Management Procedures (LMP) GBV Action Plan		

Is there a risk that provision of employment or contracts sparks conflicts?		**X**		**Security Management Plan (SMP) Grievance Redress Mechanisms (GRM)**		
ESS 3: Resource Efficiency and Pollution Prevention Management						
Will the activity result in the production of solid waste? (directly by the project or by workforce)	**X**			**Waste Management Plan, based on *WBG Environmental, Health, and Safety General Guidelines* Pest Management Plan (PMP), C-ESMP**		
Will the activity result in the production of toxic or hazardous waste? (e.g. used oils, inflammable products, pesticides, solvents, pharmaceutics, industrial chemicals, ozone depleting substances)		**X**				
Will the activity result in the generation of dust and noise?		**X**		**C-ESMP**		
Will the activity result in soil erosion?		**X**		**C-ESMP**		
Will the activity produce effluents (waste water)?		**X**		**C-ESMP, Waste Management Plan**		
Will the activity result in increased levels of vibration from construction machinery?		**X**		**C-ESMP**		
Will the project produce air pollution? (e.g. significant greenhouse gas emissions, dust emissions and other sources)		**X**		**C-ESMP**		
Will the activity disturb any fauna and flora?		**X**		**C-ESMP**		
Will the activity result in irrigation water with high TDS with more than 1,500 ppm?		**X**		**C-ESMP Waste Management Plan**		
Can the project affect the surface or groundwater in quantity or quality? (e.g. discharges, leaking, leaching, boreholes, etc.)		**X**				
Will the project require use of chemicals? (e.g. fertilizers, pesticides, paints, etc.)		**X**				
Is there any risk of accidental spill or leakage of material?		**X**				
ESS 4: Community Health and Safety						
Is there a risk of increased GBV/SEA cases due to labor influx?	**X**			**GBV/SEA Action Plan Labor Management Procedures (LMP**	**The fact of bringing a group of people into one area will likely bring cases. The project, through safeguarding policies, will monitor and investigate any case reported using the appropriate channels. And also, community will be informed to report any incident through GRM**	

Is there a risk of spread of communal diseases due to labor influx?		**X**		**Labor Management Procedures (LMP); C-ESMP**		
Is there a security risk to the community triggered by project activities?		**X**		**Security Management Plan (SMP)**		
Does the activity have the potential to upset community dynamics?		**X**		**Stakeholder Engagement Plan (SEP) Grievance Redress Mechanisms (GRM)**		
Will the activity include payments or cash transfers?	**X**			**Stakeholder Engagement Plan (SEP) Grievance Redress Mechanisms (GRM)**		
Will the activity expose community members to physical hazards on the project site?		**X**		**C-ESMP**		
Will the activity pose traffic and road safety hazards?		**X**		**C-ESMP**		
Is there a possibility that the activity contaminates open wells?				**Waste Management Plan; C-ESMP**		
Is there a possibility that the activity spreads pathogens and other pollutants (e.g. latrines)		**X**		**Waste Management Plan; C-ESMP**		
Can the activity contribute to the spread of disease (e.g. health facilities)?		**X**		**Waste Management Plan**		
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement						
Will the project lead to the displacement of a population? (e.g. forceful relocation, relocation of the local community)		**X**		**See negative list**		
Is the project located in a conflict area, or has the potential to cause social problems and exacerbate conflicts, for instance, related to land tenure and access to resources (e.g. a new road providing unequal access to a disputed land)?		**X**		**Stakeholder Engagement Plan (SEP) Grievance Redress Mechanisms (GRM)**		
Would the project potentially discriminate against women and girls based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?		**X**		**Stakeholder Engagement Plan (SEP) Grievance Redress Mechanisms (GRM)**		
Is there a risk that the activity leads to loss of income, assets or means of livelihoods?		**X**		**See negative list**		
Will the activity lead to disputes over land ownership?		**X**		**ESMF**		
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources						
Will the activity impact sensitive areas?		**X**		**ESMF**		
Is there a risk that the project causes ecological disturbances?		**X**		**ESMF**		
Is there a risk that the activity causes changes in land form and habitat, habitat fragmentation, blockage or migration routes, water consumption and contamination?		**X**		**ESMF**		

Is there a risk that the activity causes loss of precious ecological assets?		**X**		**ESMF**	
ESS 8: Cultural Heritage					
Will the project be located in or close to a site of natural or cultural value?		**X**		**Chance Find Procedures (ESMF)**	
Is the project site known to have the potential for the presence of cultural and natural heritage remains?		**X**			
ESS 10: Stakeholder Engagement and Information Disclosure					
Is there a risk that the activity fails to incorporate measures to allow meaningful, effective and informed consultation of stakeholders, such as community engagement activities?		**X**		**Stakeholder Engagement Frameworks (SEF)**	
Is there a historical exclusion of disabled persons in the area?		**X**		**Stakeholder Engagement Frameworks (SEF)**	
Is there a lack of social baseline data?	**X**			**Stakeholder Engagement Frameworks (SEF)**	
Are women likely to participate in decision-making processes in regards to the activity?	**X**			**Stakeholder Engagement Frameworks (SEF)**	
Is there a risk that exclusion of beneficiaries leads to grievances?		**X**		**Stakeholder Engagement Frameworks (SEF) Grievance Redress Mechanisms (GRM) – see ESMF**	
Is there a risk that the activity will have poor access to beneficiaries?		**X**		**Stakeholder Engagement Framework (SEF) Grievance Redress Mechanisms (GRM) – see ESMF**	

ES Screening Conducted by: Yuot Bol Yai

Approved by PMU: Risk Management Unit

Recommended by Project Manager:

acts of Activities

Based on the ES screening, all the sites for the proposed 76 water points fall under category B (moderate risk), below are the detailed findings from the exercise:

- No culturally significant heritage sites have been identified within designated water points locations.
- The communities demonstrated strong support for the enhancement of water points services in their areas.
- The majority of proposed water points are sites situated in rural settlements characterized by limited existing infrastructure.
- All proposed sites are located on community-owned land (Voluntary land donation forms have be signed for all the 76 water points)
- Accessibility to some locations, particularly in Akoc, Pan-nyok, and Alek West Payams, is significantly hindered during the rainy season (May to November), due to challenging terrain and poor road conditions.(Site-specific logistics and continency plan for seasonal access will be incorporated into the plan)
- Currently, there are no emergency response arrangements in place near the proposed construction sites.
- During construction activities, community members are exposed to dust and noise, which may impact their health and daily activities.