# ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

# FOR THE PROPOSED RESPONSE TO THE SUDAN REFUGEE CRISIS IN SOUTH SUDAN PROJECT (SRCSSP) IN JAMJANG COUNTY, RUWENG ADMINISTRATIVE AREA, SOUTH SUDAN

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| IMPLEMENTING ORGANIZATION | CONSULTANT | FUNDING AGENCY |
|---|---|---|
| UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR) | SETAC ENGINEERING COMPANY LTD | THE AFRICAN DEVELOPMENT BANK GROUP (AfDB) |

May 2025

## CERTIFICATION

The proponent commissioned SETAC Engineering Company Limited to undertake an Environmental and Social Impact Assessment (ESIA) for the proposed **Response to the Sudan Refugee Crisis in South Sudan Project (SRCSSP)**. The report has been prepared in accordance with the existing legislations of South Sudan and African Development Bank the African Development Bank (AfDB) Environmental and Social Safeguards.

All information in this ESIA report is accurate to the best of our knowledge.

**Proponent:** United Nations High Commissioner for Refugees (UNHCR)

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## EXECUTIVE SUMMARY

### Overview of the Project

Response to the Sudan Refugee Crisis on South Sudan Project (SRCSSP) is a two years (24 month) project implemented by the United Nations High Commissioner for Refugees (UNHCR) together with Ministry of Interior (Commission for Refugee Affairs (CRA)) under the oversight of the Ministry of Finance and Planning.

The project's overall development objective is to build peace, inclusiveness, and resilience in the South Sudanese communities affected by the current conflict in Sudan.

Specifically, the project aims at

a. Supporting the inclusive and peaceful integration of refugees and returnees into the communities,
b. Social cohesion strengthening amongst refugees and host communities and
c. Enhancing the socio-economic well-being of the affected communities.

*Components*

The project has four (4) components, namely,

- Component 1: Enhancing Jobs and livelihoods amongst the refugees and host communities;
- Component 2: Restoration and improvement of basic social services in the refugee and host communities;
- Component 3: Restoration of the environment in the refugee and host communities; and
- Component 4: Project management and capacity building.

*Project outcomes*

Project outcomes are;

- Outcome 1: Improved self-reliance and economic well-being,
- Outcome 2: Displaced and host populations supported to access basic services (health, education, water, sanitation, and shelter) and markets,
- Outcome 3: Strengthened climate resilience of refugees' host communities and other displaced persons, and
- Outcome 4: Institutional capacity of government strengthened, and project managed and delivered effectively.

*Output*

Output 1: The crisis affected communities of refugees and their hosts supported with skills development and climate-smart agricultural production practices; and increased income-generation opportunities for the most vulnerable to empower them to create new sustainable and climate-responsive livelihood opportunities.

Output 2: The essential service delivery systems (health, education, WASH, camp infrastructure, etc.) are supported through rehabilitation and expansion of the systems and improving access and quality of services; in effect, enhancing the well-being of the crisis-affected communities.

Output 3: Enhanced resilience and adaptive capacity of displaced people (refugees) and host communities to climate-related and other environmental risks will be enhanced through well-established and environmentally sustainable early warning systems and preparedness measures; and

Output 4: Local institutions supported with capacity building and key equipment to facilitate their daily operations so that the leadership and capacity of these institutions can be more sustainable to advance peaceful coexistence efforts resulting in improved coping capacities and strengthened peaceful coexistence and social cohesion among refugees and other host communities.

**Project Location**

The proposed project components will be implemented within the Ajuong Thok and Pamir Refugee Settlements in the Ruweng Administrative Area. Ruweng Administrative Area is the most oil-producing area in South Sudan, about 80% of South Sudanese oil is produced here, mainly in Unity / Darbim oil field (in the southern part), Heglig / Panthou oil field (in the north-western part), Tomasouth/Kaloj oilfield (in the western part) and Toor / Athony oil field or and other oil fields like Labob / Miading and Munga / Wanhe Danluel oilfield and Maan Awal and other fields. Ruweng is rich in animal resources and fish resources, and it is also the home of two lakes: Lake Jau (in the northern part) and Lake No, locally known as Dhoo (in the southern part), where Bahr el Ghazal River ends and joins the White Nile. Ruweng is rich in Agricultural land, Ruweng is rich in wildlife.

Ajuong Thok was established in March 2013 to accommodate refugees from South Kordofan in Sudan. With an initial capacity of 24,000, the settlement is now able to accommodate more people. The settlement is 70 km distance by road from Yida refugee settlement. Pamir Refugee Settlement is located at GPS coordinates: N:09 54 53.7 E:30 20 51.9 and occupies an area of about 1,879.305 hectares. It was opened in September 2016 following GoSS decision to close Yida Refugee Settlement. UNHCR and partners continue expanding this settlement as the population grows steadily due to new arrivals and Yida residual refugees

Without intervention, the high influx of forcibly displaced people into South Sudan is constraining the capacity of the Government to provide basic services and has the potential of increasing intra and inter-communal friction and security risks and deterioration of the well-being of refugees and communities that are hosting them. The competition for scarce sources of livelihood (e.g. food, shelter, medicines, water) will exacerbate frictions in the host communities.

With the intervention, there will be an extension and strengthening of basic social services through infrastructure and technical development, provision of basic services for those arriving, promotion of livelihoods opportunities, increasing food production and availability of goods that no longer come from Sudan because of the closure of the borders; promotion of peaceful co-existence and social cohesion between refugees and with host communities and insurance of safety and well-being of refugees and host communities in a complex operating environment.

**Institutional and Legal Framework**

There is no operational legal system for ESIA in South Sudan. However, there are several legal and policy frameworks that are applicable to the proposed SCRSSP project components such as the Comprehensive Peace Agreement (CPA), The Revitalized Agreement for Resolution of Conflict in South Sudan (R-ARCSS), The Transitional Constitution of the Republic of South Sudan of 2011 amended 2015, The National strategy for climate change Adaptation and Mitigation 2021 and Environment Bill 2023 (draft) among others.

Draft National Environmental Bill 2023 (approval still pending) of South Sudan provides for the establishment of an autonomous South Sudan Environmental Management Authority (EMA) to act as the watchdog on all public institutions, private companies and individuals defaulting against the stipulated environmental laws and regulations. Until the Authority is fully established, the duties and functions of the Authority are delegated to the Ministry responsible for environment and forests. Other relevant institutions include Ministry of Agriculture and Food Security (MAFS), Ministry of Water Resources and Irrigation, Ministry of Health, Ministry of Education and Commission for Refugee Affairs (CRA).

**Impacts of the project**

Positive Impacts

Implementing the South Sudanese Community Resilience and Stability Support Project (SCRSSP) components in the Ruweng Administrative Area will generate several positive impacts on refugees. Returnees and host communities. These components collectively enhance social cohesion, economic resilience, and environmental sustainability, contributing to a more stable and peaceful community in the Ruweng Administrative Area.

***Component 1: Enhancing Jobs and Livelihoods***

**Economic Growth:**

Strengthening Community-Based Enterprise Groups enhances resilience and promotes self-reliance among refugees and host communities, similar to successful social

enterprise projects in other parts of the world. The poverty levels are quite high considering the difficult socio-economic, political instability and lack of holistic institutional structures for economic growth. The refugees, host community and returnees mainly survive on food rations and other humanitarian support from UNHCR and partners. However, taking into account the global funding cuts and the need to transition from dependence on aid to self-reliance, the SCRSSP will greatly lead to the long-term economic growth. Private sector seed multiplication and certified seed production can increase agricultural productivity, providing economic opportunities and improving food security.

**Infrastructure development**

SCRSSP components targeting improvement of the infrastructure for water supply, seed production and storage are valuable to the project beneficiaries in the Ruweng Administrative Area. Specifically, drilling water wells and constructing post-harvest handling facilities improve access to clean water and enhance agricultural productivity, benefiting returnees, refugees and host communities. The project will also help address food insecurity in the area that has been characterized by the drop in food supply by WFP. In addition, food security is linked to improved health and wellbeing, reduction of GBV, child mortality and insecurity.

***Component 2: Restoration and improvement of basic social services***

**Education and Skills Development:**

Rehabilitation and construction of school infrastructure, including vocational centers, enhance educational opportunities and skills development for refugees, returnees and host communities. The two VTCs located in Pamir and Ajuong Thok Refugee Settlements lack the required infrastructure in the form of workshops and lecture halls for training, which limits the number of learners that are enrolled and courses offered.

The school infrastructure is fairly developed (comprising ten primary schools and three secondary schools) in the project areas. However, there is congestion due to the increasing refugee population, with each class now accommodating up to 150 learners instead of the expected 50 learners. The school administrators have introduced short-term measures shifts where some learners attend lessons in the morning and others in the afternoon to accommodate the growing student population.

It is also important to take note that the ECD section is shut down due to lack of financing. Therefore, the project should also consider other aspects of ECD education such as operation and maintenance of the existing facilities.

**Health and Hygiene:**

Improvement of WASH facilities through borehole construction and solarization ensures sustainable access to clean water, reducing health risks. The boreholes are the main sources of water. However, the community is grappling with acute shortage of portable water resulting from over abstraction of water in the existing boreholes. Therefore, drilling additional boreholes and solarization will improve access to clean water.

**Psychosocial Support:**

Community empowerment and psychosocial support, including safe houses for GBV survivors, improve mental health outcomes and community cohesion.

***Component 3: Restoration of the Environment***

**Disaster Risk Reduction:**

Constructing flood protection infrastructure and supporting community structures enhance resilience against natural disasters, protecting both refugees and host communities. In the previous years, floods resulted to damage of properties, roads and crops. The risk of flood is still high considering the topography and lack of proper infrastructure for flood control. Therefore, the proposed project components will be crucial in managing flood and related risks.

**Environmental Protection:**

Promoting agroforestry and community tree planting helps restore the environment, supports biodiversity, and contributes to climate change mitigation. There are small scale initiatives by the UNHCR in the form of woodlots and tree nurseries and tree planting initiatives in the community. These are demonstration that agroforestry is a doable intervention that will benefit the community and restore degraded land.

**Accessibility and Infrastructure:**

Opening access roads to farming areas improves connectivity and facilitates economic activities, benefiting both refugees and host communities. It is also one of the steps towards ensuring food security and transition from dependence on aid to self-reliance by the project beneficiaries.

**Negative effects**

The proposed development may produce some negligible negative environmental and social impacts that may necessitate appropriate mitigation measures. These include but are not confined to;

***Noise and Vibration***

Relatively low noise levels are expected in all projects involving civil works. Noise control measures should be implemented in the construction area if the noise levels exceed 90dB (A) for a continuous 8 hours exposure. In addition, protection against the effect of the noise exposure among the workers should be monitored. Noise pollution is not foreseen during the operation phase.

***Soil Erosion***

The project sites are generally dry and there is the increased risk of erosion and increased dust during excavation and movement of the machinery in the proposed sites. Soil movement is also common during laying of foundations (earthworks) for the projects and site clearing. The contractors should adopt comprehensive soil erosion measures that include the following;

***Increased Water Demand***

The increase in demand for water will occur will occur for all the project components that entail civil works e.g proposed construction and rehabilitation of the various facilities under the SCRSSP. Water will be sourced from existing water yards and boreholes in the project sites. The consultant will also be advised to undertake rain water harvesting during the rainy season to supplement the water supply from the common sources namely boreholes and water yards.

***Air Quality (dust pollution)***

The civil works on the proposed sites will result to increased dust and gas emissions. Dust particles caused by vibrations of machines and vehicle movement suspends in the air mostly during dry spells.

***Fire***

Wild fires are common occurrences in areas adjacent to the proposed project sites in Jamjang. Some of the wildfires are started by human activities or natural causes due to the extreme heat. In addition, fire may be caused by the machineries used during civil works or operations of the installations.

***Solid waste***

Huge quantities of solid wastes are normally generated from construction activities. Such wastes include stones, wood, broken glasses, containers, rods of metal, pieces of

iron sheets etc. There is need for proper management (proper disposal) of the solid wastes expected from the site during construction phase.

Besides, other wastes such as medical waste, menstrual hygiene kits, and other solid waste materials and other sanitation wastes will be generated from provision of goods and services under the project. The situation is further affected by lack of a functional solid waste management system by the public or private sector. Therefore, it is important to put into place practical measures and infrastructure for waste minimization, material recovery, reuse and safe disposal of all types of wastes in the project sites.

***Ecological impacts***

The sites in Jamjang have no vegetation of conservation value hence the project will have no impact on ecology. It is however prudent to consider introduction of vegetation on site as part of environmental conservation initiative during the operation phase.

***Occupational Health and Safety (OHS)***

During civil works there will be increased dust, air and noise pollution. These are considered as negative impacts as they significantly lower the quality of the environment.

***Security***

The security condition in the proposed project sites is generally volatile. Therefore, it is imperative for the relevant stakeholders comprising UNHCR, GoSS, and contractor to reinforce security measures to avoid any losses or destruction of materials and facilities. This involves employing a guard to control movement within the site especially for the intruders. During Occupation/completion of the project, security of the premise occupants is also paramount

**Public Consultations**

Stakeholder consultation was conducted from March 27$^{th}$ 2025 – 2$^{nd}$ April 2025. A combination of KII and FGDs were utilized targeting various stakeholders namely, GoSS (Ministry of Education, RCC), refugee and host communities. The details of the stakeholder engagement sessions are summarized in the table below.

| Stakeholder consultation (Jamjang) | |
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| Hon. William MinYiel (CRA) – Assistant Commissioner | • CRA has been collaborating with UNHCR since 2013 on assignments related to protection of refugees and conflict resolutions.<br>• CRA is also responsible for negotiating and allocating land for the refugees upon receiving request from the UNHCR. |

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| | • There are more than 133,000 refugees hosted in Ajuong Thok and Pamir Refugee settlements, additional 4000 refugees are hosted in Yida settlement, all within Ruwen Administrative Area.<br>• There's peaceful coexistence among the refugees, host communities and returnees – they share facilities including schools, water points and health centers.<br>• There are over 40 police officers allocated to Ajuong Thok and Pamir refugee settlements. However, the capacity is limited specifically on handling complex issues such as GBV, early marriages etc.<br>• Conflict resolution comprises the zonal and block leaders, police. Serious matters are refereed to Ajuong Thok Joint Court or mobile court.<br>• Floods affected the refugees and host communities in 2024, farmlands were submerged and livelihood programs were greatly affected.<br>• The increasing refugee populations due to the war in Sudan is causing a severe strain on existing facilities. The situation is becoming extreme considering USAID budget cuts.<br>• CRA is aware of the proposed Response to the Sudan Refugee Crisis on South Sudan Project (SRCSSP) and supports its implementation.<br>• CRA has the capacity to improve security in the refugee settlement and farmlands. |
| Meeting with the GoSS representatives (RCC, Ministry of Education, Health, Agriculture) in Pariang | • RRC links the host communities and returnees with relevant humanitarian organizations and government agencies.<br>• RRC undertakes coordination of humanitarian interventions, follow up issues and facilitate resolution of conflicts.<br>• Returnees are mostly children and women. So far, RCC has received a total of 3205 households comprising 13870 persons.<br>• With regards to returnees, RCC has a center where returnees are received and details taken.<br>• RRC convenes quarterly meetings with partners to share ideas and track progress of interventions related to returnees' wellness. Besides, there are cluster meetings through the Ministry of Agriculture.<br>• RCC only provides accommodation and food for the returnees, for a few days, as they wait for IOM to transport them to their respective home areas, RCC also negotiates for land for the returnees.<br>• Returnees are allowed to integrate into their community, though no support or follow up actions are undertaken. |

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| | • Key environmental challenges – poor sanitation, the few existing latrines tend to collapse during rainy season, flooding, inadequate water resources.<br><br>**Agriculture**<br>• GoSS already demarcated agricultural land and now preparing for the planting season.<br>• Agriculture is mainly rainfed – prolonged dry season affects farming, floods destroy crops.<br>• Most farms are not accessible due to lack of access roads, the farms are cut off during the rainy season.<br>• GoSS has initiated programs to raise awareness on sustainable and climate smart agriculture, but there are no field extension workers.<br>• The ministry has 5 tractors out of which, 2 are grounded. There are no technicians in Jamjang to do the maintenance and repair, spare parts are also not available.<br>• Common crops which the government is promoting including maize, various types of sorghum which are drought resistant.<br>• GoSS has no capacity to install equipment for irrigation, though this would be a valuable asset/addition.<br>• There are no storage facilities for the harvested crops, and some are destroyed. |
| **March 29, 2025** | |
| Refugee leaders (Pamir Refugee Settlements) | • A clear administrative structure comprising the chairman and committee members and representatives of different sectors namely agriculture, zone leaders, health, zone leaders<br>• Made up of about 54 blocks, and 7 zones (10 blocks make on zone). There are 96 households in a block.<br>• Chairperson is the head and undertake the coordination, of the different activities including agriculture, women, youth, GBV and conflict resolution.<br>• Each block has 1 water point shared by 96 hh – these are placed in the block center<br>• Treatment of water – is undertaken by IRC<br>• Refugees enjoying a good relationship with the host communities.<br>• There are incidences of GBV, but the there is a basic structure for manage the challenge – comprising reporting system to the settlement administration, police and nearby health facilities.<br><br>**Challenges**<br>• Risk of flooding in the settlement during the rainy season.<br>• 2024 caused significant damages to crops and the market<br>• Community does not have any capacity to prevent the floods. |

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| | • Theft of crops or destruction of crops by the host communities (not frequent).<br>• The existing water sources are not sufficient considering the expanding population. The water points are also shared with the host community.<br>• Few tractors, and in most cases, the tractors are not made available early enough to facilitate land preparation.<br>• There's a 10 tonnes seed block within the refugee settlement, but it is not sufficient<br>• Pest control in the farms is also a challenge as refugees lack equipment. Mostly rely on traditional methods like need tree but lack the capacity to do the work in a large scale.<br>• Common illnesses in the settlement include TB, HIV, mental health issues. There is no proper structure for treatment or support after IRC withdrew support.<br>• Health centre was run by IRC with support of UNHCR, but now the government is taking over, they are concerned if the government will have the capacity to offer the basic services. This also affects availability of vaccines and ARVs.<br>• Open burning of waste, some households burry the waste.<br>• No proper system or incinerator of medical waste from the existing medical facilities.<br><br>**Education**<br><br>• There are 4 primary schools and one secondary school in the settlement. These are shared by the host communities and refugees.<br>• Free education and school feeding programme by WFP.<br>• There is no funding for ECD. Currently now working.<br>• One vocational training managed by DRC.<br>**Environmental**<br>• Food rationing and shortage is a serious concern<br>• Vegetable gardens are few and plots are small.<br>• Risk of flooding<br>• There is farmland provided by the community, but refugees lack tools. Other factors such price variation of farm inputs, and labor affect production. The seeds are not adequate.<br>• Flood mitigation – improve the channel to direct to nearly seasonal rivers and protect farms from backflow of water<br>• Provide seed for the local variety of sorghum e.g. wat, vegetable seeds that are resistant to droughts.<br><br>**Youths**<br>• Host Football and volleyball team tournaments with hosts |

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| | • Youth association promotes peaceful coexistence<br>• The VTC integral in training and capacity building of the youth - garment making, welding, carpentry. However, the capacity not adequate.<br>• Youths require additional training - first aid training, business, digital skills, plumbing, hairdressing.<br>• Some youths occasionally sell goods given them, but the administration is currently monitoring the activities<br>• Other youths established workshops for tailoring and welding (beneficiaries of UNHCR programmes).<br><br>**Traders – security,**<br>• Two markets in the settlement and market committee responsible for administration.<br>• There are waterpoints in the market, but the two existing latrines (collapsed) due to flood, and iron sheets vandalized,<br>• No fire response strategy |
| **April 2, 2025** | |
| Ajuong Thok (Refugee leaders) | **Education**<br>• Student/pupil enrolment has increased since the war in Sudan began, but class attendance varies based on many factors.<br>• ECD section is closed.<br>• Class attendance is affected by different factors including<br>✓ Food rationing – currently about 80% of refugees do not receive food supply<br>✓ Some of the orphans and women headed households start working or seeking other sources of income instead of studies.<br>✓ Migration to other places in search of food or income.]<br>✓ Traditional norms that encourage early marriage and early pregnancies<br>✓ Orphans mostly looking for basic income activities at the expense of going to school<br>• Previously learners were engaged in some awareness programs on reproductive health, early marriages, HIV/AIDs but the funding not available now.<br>• Female headed households not taken into account in the programming<br>• Risk of conflicts due to exclusion of some groups e.g women headed households in some programs.<br>• Host community also suffering and competing for the little food at the refugee settlement<br>• Refugees especially with the ulcers find the water not suitable especially if more chlorine is added |

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| | • Taps are not replaced and in cases where there are leakages, the taps are removed.<br>**GBV/Conflicts**<br>• Block leaders and community peace team handle conflicts, escalated to next level (tribal leaders) or to the settlement leadership depending on severity.<br>• There is a local court and police that also support peace and conflicts resolution.<br>• Water management committee and child protection committee at the block level, and model family help to resolve conflicts at the household level<br><br>**Driving factors for GBV at the settlement -**<br>• Food rationing -some households do not receive supply<br>• Income - It is mostly responsibility of the mother to find an alternative source of income e.g cut poles, grass, charcoal, but these are not sufficient<br>• Women also face GBV cases in the bush from unknown people, rape attempts, beaten<br>• Prostitution also common if the women are unable to find income or provide for their families<br>However, there are initiatives that can be scaled up to safeguard the women and children<br>• Soap making<br>• Training and business development<br>• Garment making<br>• Vegetable growing in the settlement – currently, there no enough watering cans and the distance from the water point to the kitchen gardens are long.<br>• Awareness creation on GBV prevention.<br><br>**Agriculture – seed distribution and production**<br><br>• Flooding – farms were submerged (both refugee and host community)<br>• Flooding affected the income and farm yields<br>• Seed distribution not fair – not everyone is given the seeds<br>• Insecurity at the farm, rape cases from unknown people. Some refugees are already traumatized.<br>• Tractor should be provided early enough for farm preparation.<br>• Only 2 tractors serving both Ajuong Thok and Pamir,<br>• Some farmlands are very far and not accessible. It can take up to 2 hours on foot. It is also difficult to transport the crops to home<br>• Committees for tractors are not efficient – poor management |

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| | **Leadership**<br><br>• Clear leadership structure at block and zone level – with various committees.<br>• Existing challenges comprise insecurity in the settlement, hunger and poverty due to inadequate food, goats stolen, theft incidences increasing,<br>• Lack of food resulting to other social vices including prostitution, theft<br>• Health facilities not equipped with the required medicine<br>• lacking medicine, refugees buy medicine from the market<br>• ECD section is currently closed<br>• There are 10 zones and 60 blocks.<br>• Elders and persons with disability represented in the leadership structures – comprise 7 individuals.<br>• Average household- size 1-16 (it varies). |
| | APC – mainly host communities |
| | • APC is registered by the GoSS<br>• 48 members<br>• Members were trained on peaceful coexistence between host and refugee communities, as well as climate change and climate smart agriculture.<br>**Challenges**<br>• Access roads are poor<br>• APC has no office, currently holding meetings in the seed storage facility.<br>• Population is increasing rapidly while the existing facilities and equipment are not sufficient, e.g there are only 3 tractors.<br>• Tractors should be made available early enough before the rains<br>• Risk of food shortage leading to rise of insecurity and theft, specifically by the refugees who lack food.<br>• Refugees are usually given priority during distribution of seeds.<br>• No capacity to respond to emergencies and control pests.<br>• IRC used to undertake mobilization and preparation for planting, up to now there is no preparation or communication, worried about the food production for the refugee. |

**Environmental & Social Management Plan (ESMP)**

Construction phase ESMP

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| **1. Minimize extraction site impacts and ensure efficient use of raw materials in construction** | | | | |
| **High Demand of Raw material** | **1.** Source building materials from local suppliers who use environmentally friendly processes in their operations. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Ensure accurate budgeting and estimation of actual construction material requirements to ensure that the least amount of material necessary is ordered. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Ensure that damage or loss of materials at the construction site is kept minimal through proper storage. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **4.** Use at least 5%-10% recycled, refurbished or salvaged materials to reduce the use of raw materials and divert material from landfills | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **2. Reduce stormwater, runoff and soil erosion** | | | | |
| **Increased storm water, runoff and soil erosion** | **1.** Surface runoff and roof water shall be harvested and stored in underground reservoir for reuse. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 15,000 |
| | **2.** A storm water management plan that minimizes impervious area infiltration by use of recharge areas and use of detention and/or retention with graduated outlet control structure will be designed. | The Civil Engineer, Mechanical Engineer and UNHCR | Throughout construction period | |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
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| **3. Minimize solid waste generation and ensure efficient solid waste management during construction** | | | | |
| **Increased solid waste generation** | **1.** Use of an integrated solid waste management system i.e. through a hierarchy of options: 1. Source reduction 2. Recycling 3. Composting and reuse 4. Combustion 5. Safe disposal in designated sites | UNHCR, Project, Management Unit, contractor | Throughout construction period | 12,000 |
| | **2.** Accurate estimation of the sizes and quantities of materials required, order materials in the sizes and quantities they will be needed, rather than cutting them to size, or having large quantities of residual materials. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Ensure that construction materials left over at the end of construction will be used in other projects rather than being disposed off. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **4.** Ensure that damaged or wasted construction materials including doors, plumbing and lighting fixtures, and glass will be recovered for refurbishing and use in other projects | UNHCR, Project, Management Unit, contractor | Throughout construction period | 5,000 |
| | **5.** Donate recyclable/reusable or residual materials to local community groups, institutions and individual local residents or home owners (within the refugee settlement and host communities) | UNHCR, Project, Management Unit, contractor | Project completion | 0 |
| | **6.** Use of durable, long-lasting materials that will not need to be replaced as often, thereby reducing the amount of construction waste generated over time | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **7.**Provide facilities for proper handling and storage of construction materials to reduce the amount of waste caused by damage or exposure to the elements | UNHCR, Project, Management Unit, contractor | Throughout construction period | 7,000 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | **8.** Use building materials that have minimal or no packaging to avoid the generation of excessive packaging waste | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **4. Reduce dust emissions** | | | | |
| **Dust emission** | **1.** Ensure strict enforcement of on-site speed limit regulations | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Avoid excavation works in extremely dry weather | UNHCR, Project, Management Unit, contractor | Throughout construction period | 10,000 |
| | **3.** Sprinkle water on graded access routes when necessary to reduce dust generation by construction vehicles | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| | **4.** Personal Protective equipment to be worn | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| | 5.construction materials on site to be covered to prevent to be blown off by wind | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| **5. Minimization of exhaust emissions** | | | | |
| **Exhaust emission** | **1.** Vehicle idling time shall be minimized | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Alternatively fueled construction equipment shall be used where feasible equipment shall be properly tuned and maintained | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | **3.** Sensitize truck drivers to avoid unnecessary racing of vehicle engines at loading/offloading points and parking areas, and to switch off or keep vehicle engines while at the site | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **6. Minimization of Noise and Vibration** | | | | |
| **Noise and vibration** | **1.** Sensitize construction vehicle drivers and machinery operators to switch off engines of vehicles or machinery not being used. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Sensitize construction drivers to avoid gunning of vehicle engines or unnecessary hooting especially when passing through sensitive areas e.g the refugee settlement, market, host community | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Ensure that construction machinery are kept in good condition to reduce noise generation | UNHCR, Project, Management Unit, contractor | Throughout construction period | 9,000 |
| | **4.** Ensure that all generators and heavy-duty equipment are insulated or placed in enclosures to minimize ambient noise levels. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 10,000 |
| | **5.** The noisy construction works will entirely be planned to be during games time when most learning sessions are not on. Also, can be done during weekends (these refer to construction and rehabilitation of school infrastructure, classrooms) | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **7. Minimization of Energy Consumption** | | | | |
| **Increased energy consumption** | **1.**Ensure electrical equipment, appliances and lights are switched off when not being used | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | **2.** Install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy | UNHCR, Project, Management Unit, contractor | Throughout construction period | 5,000 |
| **8. Minimize water consumption and ensure more efficient and safe water use** | | | | |
| **High Water Demand** | **1.** Promptly detect and repair of water pipe and tank leaks | UNHCR, Project, Management Unit, contractor | Continuous | 8,000 |
| | **2.** Ensure taps are not running when not in use | UNHCR, Project, Management Unit, contractor | Continuous | 0 |
| | **3.** Install a discharge meter at water outlets to determine and monitor total water usage | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| | **4.**proper re-use of water from other uses for sprinkling dusty pavements | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| **9. Minimize occupational health and safety risks** | | | | |
| **Unavailability and wrong use of Personal Protective Gear (PPG)** | ▪ Always ensure the general safety and security by providing day and night security guards and adequate lighting within and around the premises. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| | ▪ Suitable overalls, safety footwear, dust masks, gas masks, respirators, gloves, ear protection equipment etc should be made available and construction personnel must be trained to use the equipment | UNHCR, Project, Management Unit, contractor | Throughout construction period | |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| **Accidents resulting from disregard of Health and safety impacts** | • Implement all necessary measures to ensure health and safety of workers and the general public during construction | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| **Injuries** | Well stocked first aid box which is easily available and accessible should be provided within the premises | UNHCR, Project, Management Unit, contractor | Throughout construction period | 2,000 |
| | Provision must be made for persons to be trained in first aid, with a certificate issued by a recognized body. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 2,000 |
| **Fire incidents** | Firefighting equipment such as fire extinguishers should be provided at strategic locations such as stores and construction areas. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 8,000 |
| | Regular inspection and servicing of the equipment must be undertaken by a reputable service provider and records of such inspections maintained | UNHCR, Project, Management Unit, contractor | Every 3 months | 4,000 |
| | Fire escape routes and assembly point to be marked | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| | Signs such as "NO SMOKING" must be prominently displayed within the premises, especially in parts where inflammable materials are stored | UNHCR, Project, Management Unit, contractor | Throughout construction period | 3,000 |
| **GBV, teen pregnancy and** | Awareness creation on thematic issues including prevention of GBV, teenage pregnancies, HIV/AIDs | UNHCR, Project, Management Unit, contractor | Throughout construction period | 6,000 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| **forced marriages, HIV/AIDs** | Strengthening local leadership structures to respond to emergencies as well as training on effective conflict resolution both at household level and among the refugees, host communities and returnees. | | | |
| **Total** | | | | 126,000 |

**Project operation phase ESMP**

The necessary mitigation measures, and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts and maximization of positive impacts associated with the operational phase of project components are outlined below

**Operation Phase ESMP**

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| 1. **Fire risks** | 1. Install fire extinguishers<br>2. Clearly mark fire exit points and the fire assembly area<br>3. Provide sand buckets at strategic locations<br>4. Workers should be trained on firefighting skills by a qualified trainer<br>5. Fire drills should be conducted at least once a year<br>6. A firefighting team should be established | UNHCR & Project management Unit | Operation phase | 9,000 |

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| | 7. Warning and informational signs be displayed appropriately<br>8. Regular testing and servicing of fire-fighting equipment and appliances | | | |
| **2.Solid waste Management (Littering, soil and surface water pollution).** | 1. Provision of waste collection bins<br>2. Segregation of wastes at the source<br>3. Waste should be disposed at the designated site<br>4. Solid waste should be managed according to the waste management regulations.<br>5. Prepare a waste management plan;<br>6. Stop deposition of waste in open pits; open burning or burying of waste<br>7. Clearly designate and construct an appropriate waste collection facility or provide covered refuse skips;<br>8. Monitor waste volumes; | UNHCR & Project management Unit | Operation period | 5,000 |
| **3.Waste water management** | 1. Conduct wastewater monitoring to check compliance | UNHCR & Project management Unit | Continuous | 4,000 |
| **4.Workers Welfare (risks such as accidents, disregard of** | 1. Provide workers with PPEs<br>2. Provide adequate washrooms and changing rooms for workers<br>3. Training of workers<br>4. Provision of first aid and other welfare facilities<br>5. Provision of an Insurance cover | UNHCR & Project management Unit | Operation period | 5,000 |

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| **safety and wellness)** | 6. Regular medical check-ups<br>7. Wellness services for workers | | | |
| **5.Air pollution** | 1. Ensure that diesel generators are maintained to manufactures specifications, records maintained and availed whenever, there is need;<br>2. Ensure that tank vents are located away from sensitive receptors; | UNHCR & Project management Unit | Continuous | 3,000 |
| **6. Increased Energy Resource Utilization** | 1. Switch off electrical equipment, appliances and lights when not being used | UNHCR & Project management Unit | Continuous | 0 |
| | 2. Install occupation sensing lighting at various locations such as storage areas which are not in use all the time | UNHCR & Project management Unit | Operation phase | 0 |
| | 3. Install energy saving fluorescent tubes at all lighting points within the flats instead of bulbs which consume higher electrical energy | UNHCR & Project management Unit | Operation phase | 4,000 |
| | 4. Monitor energy use during the operation of the project and set targets for efficient energy use | UNHCR & Project management Unit | Operation phase | 3,000 |
| | 5. Sensitize occupants of the facilities and communities to use energy efficiently | UNHCR & Project management Unit | Operation phase | 3,000 |
| **7. Increased water demand/Water consumption** | 1. Promptly detect and repair water pipe and tank leaks | UNHCR & Project management Unit | Operation phase | 6,000 |
| | 2. Ensure taps are not running when not in use | UNHCR & Project management Unit | Operation phase | 0 |

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| | 3. Install water conserving taps that turn-off automatically when water is not being used | UNHCR & Project management Unit | Operation phase | 4,000 |
| **8. Increased incidences of social vices (GBV, theft, social intolerance, HIV/AIDs)** | Awareness creation on the thematic sectors namely prevention of GBV, HIV/AIDs)<br>Strengthening of local institutions and leadership structures on conflict resolution, emergency response.<br>Promoting coordination between different actors – NGO and civil society, police and GoSS agencies to promote peaceful coexistence, and minimize insecurity. | UNHCR & Project management Unit | Operation phase | 5,000 |
| **Total** | | | | 51,000 |

Environmental and social impact monitoring scheme

| Mitigation Measure | Monitoring Objective | Indicator/Parameters to be Monitored | Method/ Measurement | Frequency |
|---|---|---|---|---|
| All the construction contractor's HSE, labor welfare and social requirements | Compliance | Existence, and quality, depending on the measure | Visual inspection, reports | Daily/ weekly |
| Ecological Protection | To determine area and ecological functioning (quality) of terrestrial and aquatic ecology | Area in good condition | Visual inspection | Monthly |
| Waste management | To monitor impacts on the biophysical environment | To determine proper waste disposal and treatment operations to minimize any adverse environmental impacts<br>To determine the effectiveness of the recycling, composting and disposal operations | Visual inspection/weighing | Monthly |
| Social protection | To check on the status of vulnerable Households, GBV, refugees etc. | Economic status of at-risk households | FGD/KII | Yearly |
| Health protection | To determine the effectiveness of the mitigation measures and to obtain early warning of changes in health risks | Illness cases | Visual evidence, changes in baseline health indicators, | Annually |
| All the operators conform to HSE, labor welfare and social requirements | Compliance | Existence, and quality, depending on the measure | Visual inspection, reports | Quarterly |

**Grievance Redress Mechanisms (GRM)**

The GRM in the proposed project will be adapted under the guidance provided in the Bank's ISS through its (ESIA) Guidelines Notes. The first step is to determine the primary goal of the GRM which would generally be to resolve specific grievances in a manner that meets both project management and community needs, but with important local

variations. The scope of the grievances that may legitimately be brought forward by the communities and/or individuals affected shall be defined in advance. That scope will generally cover most, if not all, of the issues raised in a typical Environmental and Social Assessment: natural resources, pollution, cultural property, land acquisition, the welfare of vulnerable groups, etc. A summary of the Grievance Redress Mechanism is shown below:

| Step | Process | Description | Time frame | Other information |
|---|---|---|---|---|
| 1 | Identification of grievance | Face to face; phone; letter, e-mail; recorded during public/community interaction; others | 1 Day | Email address; hotline number; Responsible: community leader (host, returnees, refugees) |
| 2 | Grievance assessed and logged | Significance assessed and grievance recorded or logged (i.e. in a log book) | 4-7 Days | Significance criteria Level 1 –one off event; Level 2–complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or this ESIA provisions. |
| 3 | Grievance is Acknowledged | Acknowledgement of grievance through appropriate medium | 7-14 Days | Responsible: staff, CRA and contractor |
| 4 | Development of response | -Grievance assigned to appropriate party for resolution;<br>-Response development with input from management/ relevant stakeholders | 4-7 Days<br>10-14 Days | UNHCR, CRA, Payam |
| 5 | Response signed off | -Redress action approved at appropriate Levels | 4-7 Days | |
| 6 | Implementation and communication of response | -Redress action implemented and update of progress on resolution communicated to | 10-14 Days | |

| | | | | |
|---|---|---|---|---|
| | | Complainant | | |
| 7 | Complaints Response | -Redress action recorded in grievance log book<br>-Confirm with complainant that grievance can be closed or determine what follow up is necessary | 4-7 Days | Payam, peace, committee, UNHCR, CRA |
| 8 | Close Grievance | Record final sign off of grievance<br>-If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third- party arbitration or resort to court of law | 5 days | Payam, UNHCR, CRA |

**Estimated Budget for the ESMP**

The overall ESMP cost is estimated at USD 213,000 comprising USD 126,000 for construction phase, USD 51 000 per year during the project operation phase and decommissioning USD 36,000.

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ABBREVIATIONS

| | |
|---|---|
| **AfDB** | African Development Bank |
| **AoI** | Area of Influence |
| **CPA** | Comprehensive Peace Agreement |
| **CRA** | Commission for Refugee Affairs |
| **CSS** | Climate Safeguards System |
| **EAC** | East Africa Community |
| **EPI** | Expanded Programme for Immunization |
| **ESIA** | Environmental and Social Impact Assessment |
| **ESMP** | Environment and Social Management Plan |
| **FGD** | Focus Group Discussions |
| **GoSS** | Government of South Sudan |
| **IDPs** | Internally Displaced Persons |
| **IGAD** | Intergovernmental Authority on Development |
| **KII** | Key Informant Interview |
| **NGOs** | Non-Governmental Organizations |
| **PAPs** | Project Affected Persons |
| **PPE** | Personal Protective Equipment |
| **PWDs** | Persons With Disabilities |
| **R-ARCSS** | Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan |
| **RRC** | Relief and Rehabilitation Commission |
| **SEP** | Stakeholder Engagement Plan |
| **SRCSSP** | Sudan Refugee Crisis in South Sudan Project |
| **UN** | United Nations |
| **UNHCR** | United Nations High Commissioner for Refugees |
| **WASH** | Water, Sanitation & Health |

## CHAPTER ONE: INTRODUCTION

### 1.1. Project Background

The ongoing conflict in Sudan, characterized by brutal and violent clashes, hostilities and human rights violations as the primary driver of the cross-border displacement to South Sudan. The vast majority of the displaced people are settled in Upper Nile, Ruweng Administrative Area, Central Equatoria and Northern Bahr El Ghazal states.

As of February 2025, the total refugee and asylum-seeker population in South Sudan increased to **548,036** refugees, including **3,038** asylum-seekers. Sudan remains the main country of origin for refugees, constituting **95% (516,959)** of the total refugee population. This is followed by the Democratic Republic of the Congo 3% (14,166), Ethiopia (1%), the Central African Republic (0.6%), and Burundi (0.1%)[1].

Children make up over half **(57%)** of the refugee population, while women and children combined account for **80%** of refugees. The largest concentration of refugees is in Upper Nile State, hosting **268,617** refugees, followed by Ruweng Administrative Area RAA (Jamjang) with **132,698** refugees. Doro camp remains the top hosting camp with **102,403** refugees, followed by Batil with **56,129** refugees in Upper Nile State, while **61,880** are at other locations in South Sudan[2].

In January 2025, **15,070** new refugee arrivals were registered across South Sudan. Additionally, **1,150** newborns were registered within existing cases. A total of **45,756** new arrivals were recorded in February 2025, including **25,044** Sudanese, **20,605** South Sudanese returnees from Sudan, and 107 third-country nationals. This is an increase of **18%** compared to January 2025[3].

The influx of refugees, returnees and asylum seekers has greatly increased pressure on the limited natural resources. The high influx of forcibly displaced people into South Sudan is constraining the capacity of the State to provide basic services and it has the potential to increase intra and inter-communal friction and security risks. The competition for scarce sources of livelihood e.g food, shelter, medicines is exacerbating frictions in host communities, especially in the context of the reduced fiscal space that already overstretched WASH services and the high levels of malnutrition.

Given the complex political and conflict nature of the refugee displacement and the need to scale up the response, UNHCR, together with the Commission for Refugee Affairs (CRA), under the oversight of the Ministry of Interior, will implement the Response to the Sudan Refugee Crisis in South Sudan Project (SRCSSP).

[1] UNHCR-IOM (link)
[2] UNHCR-IOM (link)
[3] UNHCR-IOM (link)

The ongoing political instability in the Sudan suggests that refugees are unlikely to return to their country anytime soon. The presence of these refugees is expected to create environmental and social risks. These risks are intensified by the ongoing efforts of humanitarian organizations and other support groups involved in the Response to the Sudan Refugee Crisis in South Sudan Project.

According to the African Development Bank Integrated Safeguard System Environmental and Social Risk classification, the project has been categorized as Category 2, indicating moderate risks. Therefore, an environmental and social impact assessment (ESIA) was conducted in project location in Jamjang leading to the development of the Environmental and Social Management Plan (ESMP) proportionate to the level and complexity of the project components.

## CHAPTER TWO: SCOPE OF WORK

### 2.1. Proposed Response to the Sudan Refugee Crisis on South Sudan Project (SRCSSP)

The proposed **Response to the Sudan Refugee Crisis on South Sudan Project (SRCSSP)**, is a two years (24 month) project implemented by the United Nations High Commissioner for Refugees (UNHCR) together with Ministry of Interior (Commission for Refugee Affairs (CRA)) under the oversight of the Ministry of Interior.

Project's overall development objective is to build peace, inclusiveness and resilience in the South Sudanese communities affected by the current conflict in Sudan.

Specifically, the project aims at

a. Supporting the inclusive and peaceful integration of refugees and returnees into the communities,

b. Social cohesion strengthening amongst refugees and host communities and

c. Enhancing the socio-economic well-being of the affected communities.

#### 2.1.1. Components

The project has four (4) components, which encompass urgent, quick, and impactful activities over 2 years (24 months). The project components include;

**Component 1: Enhancing Jobs and livelihoods amongst the refugees and host communities;**

The objective under this component is to increase sustainable food production and food security, enhance skills of youth and women for self-reliance and wage employment, develop infrastructure for agriculture and peace, and support micro, small, and medium enterprise development for economic inclusion. This component will include skills profiling leveraging human capital of skilled refugees/returnees through job matching schemes (in education, health, and engineering fields) for the public and private sectors, and also enhancing skills in business and entrepreneurship development. It includes settling-in grants. Additionally, entrepreneurship development involves microcredit grants for refugee and host community entrepreneurs, market infrastructure improvements, and supporting the development of multipurpose centers for business incubation and digital learning. The component will also support agricultural production and self-reliance through seed multiplication, value chain development, and skills training with a focus on certified seed production. The component will support increased agricultural production through the use of productivity mechanized equipment, training extension officers and establishing seed production blocks. Value chain development will involve medium-sized mills installation and post-harvest handling equipment. For market connectivity and agricultural production, emergency livelihood support farm tool kits will be provided and

also climate-smart multi-cropping systems and demarcation of farmlands. A total of 6,440 households will be supported under this component.

***Sub-component 1.1: Skills profiling and job matching (Juba).*** This subcomponent aims to develop a system that supports refugees in gaining employment through skills profiling and job placement. The activities include organizing mobilization workshops, updating the socioeconomic progress data for profiling socioeconomic data, organizing registration campaigns, and facilitate government liaison for job matching opportunities. The target beneficiaries are refugees who will benefit from Integration activities targeting both highly skilled and junior professionals. English language courses to overcome communication barriers and aid integration, will be supported and a job space platform will be developed that allows collaboration with various government and private sector to match employment. Additionally, the project aims to provide a settling-in grant and essential information on public services to aid in workplace integration to at least 400 refugees that are successfully placed in government and private sector jobs. Advocacy efforts with government agencies will be strengthened, aiming to foster a supportive environment for refugee employment and societal integration within the government system. This holistic approach not only assists refugees in finding work but also ensures they have the necessary tools and support for successful workplace integration and also benefits the hosting country with specialized expertise.

***Sub-component 1.2: Micro-Credit and Business Support for Enterprise Development (Aweil, Jamjang and Maban).*** The primary goal of this subcomponent is to empower refugees by enhancing their economic prospects through targeted micro-credit support to agricultural enterprises. This support aims to unlock the potential of these enterprises, fostering sustainable income generation and economic resilience. The activities include providing access to tailored revolving finance as working capital, for agro investment, to 600 agro entrepreneurs. Technical assistance will also be offered, focusing on enterprise selection and management. The project provides affordable revolving business development capitalization grants to for businesses showing potential for expansion. 280 individual businesses will be targeted and provided with business advisory to create investment plans for scaling up operations, diversification, and value addition to enhance income levels and promote economic integration. This comprehensive approach aims to build sustainable income generation ventures and productive assets for refugees, contributing to their long-term well-being and creating thriving communities. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 1.3: Strengthen capacity Community-Based Enterprise Groups for Resilience (Aweil, Jamjang and Maban).*** This subcomponent will foster resilient communities through the establishment of 47 enterprise groups at the village or Boma level, targeting vulnerable

populations. These groups will work to enhance local collaboration and knowledge sharing, focusing on addressing agricultural challenges, income generation, and overall community well-being. the groups will receive basic training in climate-smart multi-cropping systems, optimizing land use, crop rotation, water management, and Pama gardening which is designed to grow diverse crops efficiently in limited spaces, ensuring water conservation and increased yields. Furthermore, the project will introduce on farm mechanization to improve productivity and expand the area under crop production by procuring 12 tractors with essential equipment for ploughing, coupled with training refugees in the safe and efficient operation to ensure the sustainability of the equipment. Three 3 water wells will be drilled to provide farmers whose farming areas are 15 - 20 kilometers away from the settlement in Jamjang.

Target beneficiaries are primarily vulnerable community members and refugee farmers, who will be empowered for the development of improved seed systems and crop productivity. The project will collaborate with local seed multipliers to provide climate-adapted foundation seeds kits to 4200 farmers and encourage climate-smart agricultural practices such as crop rotation, intercropping, and agroforestry to improve soil health, conserve water, and bolster resilience against climate variability, ultimately promoting sustainable agriculture within refugee hosting areas. To promote healthy handling and marketing of meat products the project will construct one improved abattoir in Maban to enhance development in the livestock sector. Over 360 members of the host community will be supported through a livestock restocking programmes. The project will construct a foot bridge to create commercial opportunities through improving access to farmland, markets for goods and commodity trading. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 1.4: Strengthening Private Sector Seed Multiplication for Certified Seed Production and post-harvest handling (Aweil, Jamjang and Maban).*** To boost certified seed production within the refugee hosting locations, the project will leverage private sector engagement to enhance agricultural productivity and food security across the target locations. The project will also construct four (4) post-harvest handling storage facilities to serve as a seed storage, showroom, and also offer market services for crop produce. The storage facilities will be strategically located near seed production blocks in the respective locations to offer proper storage facilities. The facilities will serve to ensure timely availability of crop seed for refugees during planting seasons and reduce post-harvest losses. 100 seed inspectors will be trained to enhance their capacity to monitor seed multiplication activities, ensuring adherence to standards to ensure the produced seeds meet the certification criteria, and receive official certification to boosting their market value and reliability.

The project will identify suitable areas within refugee settlements and host communities to establish 18 seed production blocks across the project locations which will serve as dedicated spaces for growing high-quality seeds. Working with private companies, the local community/refugees will select resilient crop varieties that are well-adapted to local conditions. 400 out grower farmers will be chosen for their expertise and commitment for seed multiplication using foundation seeds and will receive specialized training about seed selection, planting techniques, disease management, proper seed handling and production within the production blocks. To optimize farmland preparation and productivity the project will map and demarcate agriculture farmlands allocated to refugees in the respective project locations. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project

**Component 2: Restoration and improvement of basic social services in the refugee and host communities; *Aweil, Jamjang and Maban).***

This component aims to enhance the quality and accessibility of basic social services and infrastructure in areas impacted by forced displacement. The activities encompass a broad range of initiatives aimed at educational, health, nutrition, sanitation, and safety improvements. Specifically, the component will focus on the expansion and equipping of primary and secondary school facilities, and the offering of vocational training. In the health sector, the component aims to strengthen the capacity of health facilities to provide comprehensive services addressing the multifaceted health and nutrition issues arising from displacement, including maternal and child healthcare, mental health, and malnutrition support. Sanitation and hygiene are also a priority, with plans to increase clean water access through boreholes and water networks, and to promote hygiene practices by provision of sanitary kits. Lastly, the component seeks to bolster safety and security measures by enhancing community structures, installing solar lighting, and fostering community safety initiatives. The target beneficiaries are primarily refugees and individuals from host communities who are directly affected by displacement, with a focus on ensuring they receive the necessary support to improve their living conditions and integrate successfully into the community.

***Sub-component 2.1: Rehabilitation and Upgrade of school infrastructure (Aweil, Jamjang and Maban).*** This subcomponent will improve educational outcomes for refugees and the host community by upgrading educational infrastructure and providing training programs. The activities include constructing additional two (2) blocks of 4 classrooms each for secondary schools and three (3) blocks of 4 classrooms each for primary schools within refugee hosting areas, which will allow for more students to be enrolled leading to a more effective learning environment. In Aweil 2 early childhood development centres in Aweil will be constructed to create a conducive environment for early education. In Maban 5

school classrooms will be upgraded from semi-permanent to permanent classrooms while in Jamjang 3 classrooms, in Aweil 2 classrooms the selected schools will be upgraded.

Furthermore, the Albunj secondary school Complex block will be renovated to serve as a digital center, offering computer training to equip students with vital skills and rehabilitate facilities at the school for vocational training to provide vocational skilling for both refugees and host community members. Rehabilitate/set up the skills incubation centre in Aweil and Jamjang and Maban where youth can access skills training. To ensure human capacity development vocational skills training skilling will be provided, targeting 380 beneficiaries from the refugee population and the host community, with a focus on enabling them to acquire employable skill development. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 2.2: Improvement of WASH facilities for sustainable water services (Aweil, Jamjang and Maban).*** This subcomponent will improve water access for refugees and the host community through a multi-faceted approach to accommodate the influx of new arrivals. This will involve the rehabilitation/maintenance of existing boreholes and construction and solarization of 7 new boreholes, water network infrastructure to include solar technology to enhance the efficiency of water distribution within the settlement. Distribute sanitary kits through cash or in-kind to targeted 1500 women in Awiel, Maban and Jamjang to promote personal hygiene practices for women and girls. In Jamjang drilling of 5 water wells to provide water to individuals whose farming areas are 15 - 20 kilometers away from the settlement. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 2.3: Community empowerment and psychosocial (Mental health) support. (Aweil, Jamjang and Maban).*** This subcomponent will support to refugees and local community members to strengthen capacity to respond to gender-based violence, sports and cultural events by organizing celebrations, including commemoration of 16 Days of Activism and International Women's Day, sports events to allow refugees to connect with their cultural heritage and promote to promote refugee-host community social integration and foster connections. While the establishment of safe houses across the project locations will offer a haven for those at heightened GBV risk and offer psychosocial support targeting 200 individuals. The construction of sports facilities will be constructed within the project locations will reinforce the community's sports activities contributing to a more inclusive society and strengthened social bonds and shared understanding and respect of human rights. community centre will be established in Maban and Jamjang for the host community to strength youth and women empowerment activities and for social cohesion and enable communities participate in peacebuilding activities within the host

community. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 2.4: Facilitate access to integrated health and nutrition services. (Aweil, Jamjang and Maban).*** The project subcomponent will provide multipurpose cash assistance to 5646 vulnerable refugees and members of the host community households to support nutritional health and food security ensuring they have the means to purchase essential food items. It aims to alleviate immediate nutritional challenges and contribute to the long-term resilience and stability and integration of the new arrivals. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 2.5: provide sustainable lighting energy solutions for improved settlement security. (Aweil, Jamjang and Maban).*** This sub-component aims to improve the quality of life for refugees and the host community sustainable lighting solutions will be provided. These will include the installation of 804 solar lighting in critical areas within the settlement, such as streets and water points or community safe structures, to ensure safe access during nighttime and enhance security. Furthermore, solar lamps will be distributed to 5200 vulnerable households to help in personal safety and daily living activities. The project also aims to empower community safety committees through financial and material support, fostering a sense of resilience and self-reliance within the community and addresses immediate safety concerns. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

**Component 3: Restoration of the environment in the refugee and host communities; *(Aweil, Jamjang and Maban).***

Under this component, the project will support the rehabilitation of degraded areas due to deforestation for firewood and construction because of the high influx of displaced as well as by host communities. The degraded forest and land resources will be restored, losses to farm crops will be reduced and effects of flooding on farmlands will also be reduced; while providing access to energy and energy efficiency. In line with the Government's pledge on climate action under the Nationally Determined Contributions (NDC), this component will include tree planting (adoption of household and institutional tree planting approaches), construction of water reservoirs (Haffirs/water pans) for water source management and climate smart agriculture. It will also promote access to clean cooking solutions to prevent environmental degradation. About 5,210 households will be supported under this component.

***Sub-component 3.1: Community preparedness for Disaster Risk Reduction and Early Warning Systems (Aweil, Jamjang and Maban).*** This project subcomponent aims to bolster the resilience of communities in climate-vulnerable refugee hosting areas by equipping them with the tools and knowledge to effectively respond to climate-related disasters. The activities include establishing and facilitating 13 community committees in Maban, Jamjang and Aweil responsible for setting up and supervising community led disaster risk reduction projects and local early warning systems. These committees will play a pivotal role in fostering a proactive approach to disaster preparedness. Additionally, the activities aim to empower refugee farmers and livestock keepers by providing them with up-to-date climate information, thereby enabling them to make well-informed decisions that enhance their adaptability to environmental changes and secure their livelihoods against erratic weather patterns. To combat the threat of flooding, the project will support the construction of flood protection structures including 6 valley dams (Haffirs) and a drainage line of up to 6 km which are essential in strengthening community communities from floods. To respond to the impacts of perennial flooding to strengthen resilience of at least 1000 individuals. The project will provide cash for labour intensive public work targeting 800 individuals to promote community led flood mitigation and preparedness actions for improvement of drainage in market places, public facilities at the risk of floods to respond to flooding impacts, this will empower individuals to take swift and effective measures in adapting to flood risks ensuring they have the means to protect and sustain their way of life in the face of such challenges. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 3.2: Enhancing access clean cooking options and training on clean cooking access. (Aweil, Jamjang and Maban).*** This component will foster the adoption of clean cooking technologies among refugee and host communities, aligning with sustainable cooking practices. The component will encourage producing alternative cooking fuels, such as briquettes, and construct improved cook stoves. These activities aim to empower 3960 new arrivals by, giving them voucher assistance for cooking energy, briquette fuel to improve access to cooking fuel and reduce environmental impact through efficient use of biomass cooking fuel the Cash and Voucher assistance is intended to ensure access to cooking energy, thereby supporting daily life while encouraging a shift towards cleaner energy sources. Additionally, the project will support women stove producers to produce fuel efficient stoves and distribute among 450 refugee other vulnerable refugees to improve cooking fuel efficiency at the household level. At the institutional level, the project will support the construction of improved institutional cook stoves in 10 primary schools. Through these efforts, the project aspires to create a model of sustainability and self-sufficiency. Existing community sectoral structures will be engaged to promote awareness and engagements between host community and refugees to support the above activities as part of community engagement strategy of the project.

***Sub-component 3.3: Build community capacity to promote Environment protection agroforestry and community tree planting. (Jamjang and Maban).*** The subcomponent will strengthen the capacity of communities in refugee hosting areas for environmental preservation and rehabilitation. This initiative will engage community members in activities designed to reduce protection risks, foster peaceful coexistence, and improve environmental conservation. The core activities include the establishment and rehabilitation of tree nurseries for a diverse range of tree species, ensuring a continuous supply of seedlings for reforestation projects. A significant effort will be the distribution of over 200,000 fruit and shade tree seedlings among refugees and host communities, for household tree planting and establishment of a woodlot which aims to encourage widespread tree planting and ultimately enhance the local ecosystem. Existing community sectoral structures will be engaged to promote awareness raising through community outreach engagements between host community and refugees to promote environmental protection and as part of community engagement strategy of the project.

**Component 4: Project management and capacity building.**

The objective under this component is to ensure smooth and effective implementation and management of the project. This component will support the Project Steering Committee (involving relevant stakeholders dealing with refugee affairs at the central and local levels) to oversee the execution of the project and strengthen institutional capacity of Commission for Refugee Affairs through provision of equipment, rehabilitation of infrastructure and mission/capacity building visits. This component will also support refugee and host community led peaceful co-existence including building capacity of the peace committees.

***Sub-component 4.1: Local/county government capacity building and infrastructure improvement (Aweil, Jamjang and Maban).*** This subcomponent will promote peaceful coexistence and development among refugee and host communities (340 individuals) through targeted interventions aimed at enhancing the capacity for dialogue, cooperation, and local governance. Activities will include providing the peace committees in the project locations with incentive cash support for Peacebuilding community activities, procurement of motorcycles for Police and renovate the police office in Aweil, bicycles for Peaceful committees and uniforms to facilitate their work, rehabilitating Maban county offices with solar power for better administrative functions.

***Sub-component 4.2: CRA institutional capacity building (Aweil, Jamjang, Juba and Maban).*** This subcomponent will provide capacity building to CRA, through which it will support the implementation of project activities. Capacity building support will also enhance inter-government coordination between the CRA and UNHCR, as well as strengthen the operational capacity of the Commission for Refugee Affairs through provision of equipment activities conducting a livelihood study, mobilization, field missions, among

others. The project also involves equipping the Commission with laptop computers for institutional capacity development.

***Sub-component 4.3: Programme management and learning (Aweil, Jamjang, Juba and Maban).*** This subcomponent will facilitate project location stakeholder inception workshops, day-to-day project management, monitoring, coordination, and information sharing. It will support the overall project management by the implementing agency, project management unit (PMU) to be established, monitoring and evaluation processes, and knowledge sharing. Additionally, it will assist in onboarding necessary human resources and technical assistance for implementing planned activities. The project will continue using the approved UNHCR monitoring and evaluation framework under the country multiyear strategy and adapting it as needed. This will include a PMU oversight annual supervisory mission to ensure timely monitoring, tracking progress, and address implementation challenges promptly. A learning agenda which will also capture lessons learned and knowledge to inform the scale-up of the integration and resilience interventions.

### 2.1.2. Project Outcomes

Project outcomes are;

- **Outcome 1:** Improved self-reliance and economic well-being,
- **Outcome 2:** Displaced and host population supported to access basic services (health, education, water, sanitation and shelter) and markets,
- **Outcome 3:** Strengthened climate resilience of refugees' host communities and other displaced persons, and
- **Outcome 4:** Institutional capacity of government strengthened, and project managed and delivered effectively.

### 2.1.3. Project Outputs

**Output 1**: The crisis affected communities of refugees and their hosts supported with skills development and climate smart agricultural production practices; and increased income-generation opportunities for the most vulnerable so as to empower them to create new sustainable and climate responsive livelihood opportunities;

**Output 2**: The essential service delivery systems (health, education, WASH, settlement infrastructure, etc.) supported through rehabilitation and expansion of the systems and improving access and quality of services; in effect enhancing the wellbeing of the crisis-affected communities;

**Output 3**: Enhanced resilience and adaptive capacity of displaced people (refugees) and host communities to climate-related and other environmental risks will be enhanced

through well established and environmentally sustainable early warning systems and preparedness measures; and

**Output 4**: Local institutions supported with capacity building and key equipment to facilitate their daily operations so that the leadership and capacity of these institutions can be more sustainable to advance peaceful coexistence efforts resulting in improved coping capacities and strengthened peaceful coexistence and social cohesion among refugees and other host communities.

### 2.2. Project Location

The Ruweng Administrative Area shown in Figure 1 is located in the northern part of South Sudan and its headquarters is at Pariang. It borders Upper Nile State in the east and Jonglei State in the southeast, Unity State in the south, Warrap State in the southwest, Abyei to the northwest, and Sudan in the north as shown in the figure below.

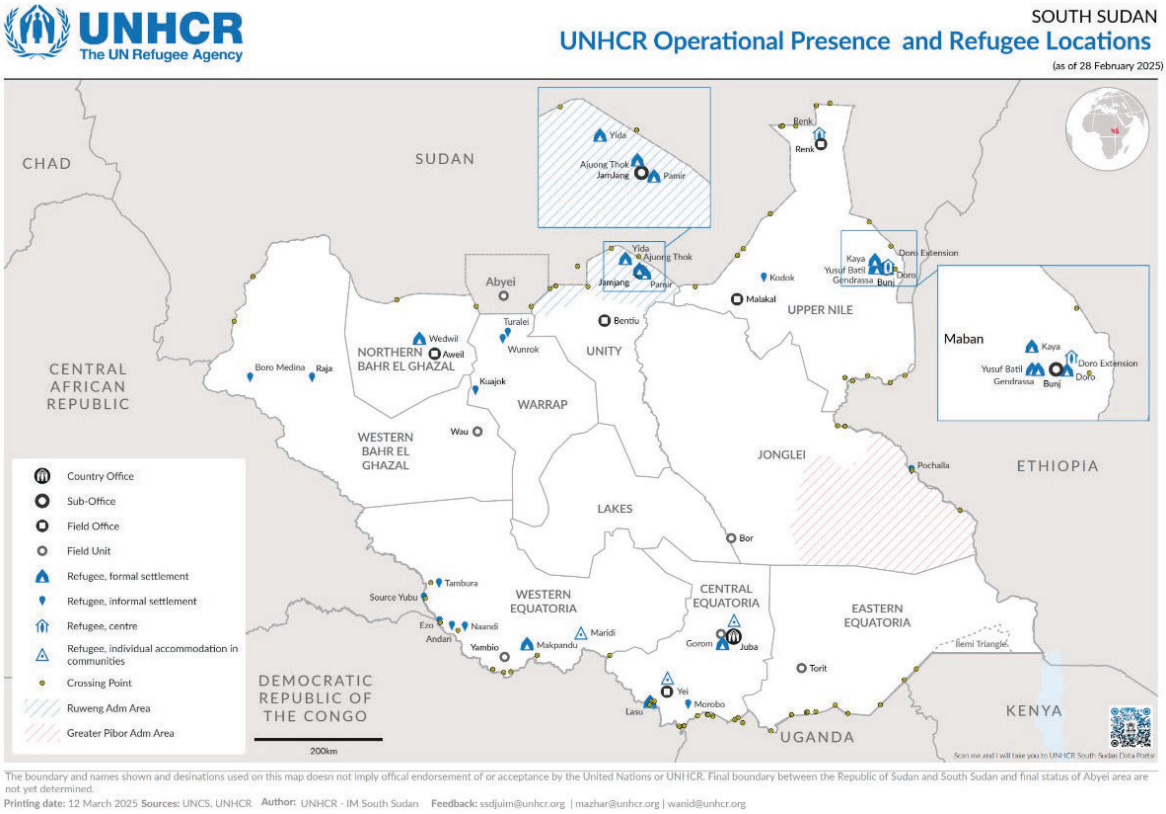


**Figure 1: Administrative units/states**[4]

Ruweng Administrative Area most oil-producing area in South Sudan, about 80% of South Sudanese oil is produced here, mainly in Unity / Darbim oil field (in the southern part), Heglig / Panthou oil field (in the north-western part), Tomasouth/Kaloj oilfield (in the

[4] Paanluelwel (link)

western part) and Toor / Athony oil field or and other oil fields like Labob / Miading and Munga / Wanhe Danluel oilfield and Maan Awal and others fields.

Ruweng is rich in animal resources and fish resources, and it also is the home of two lakes: Lake Jau (in the northern part) and Lake No locally known as Dhoo (in the southern part), where Bahr el Ghazal River ends and joins the White Nile. Ruweng is rich in Agricultural land, Ruweng is rich in wildlife.

Jamjang County is the capital of the Ruweng Administrative Area.

### 2.3. General layout, size, and capacity

The proposed SCRSSP project components are mainly classified into Goods, services and civil works and are shown in the Table 1.

**Table 1: Proposed project activities in Jamjang (Ruwen Administrative Area)**

| Jamjang SCRSSP Components | Category |
|---|---|
| COMPONENT 1: Enhancing Jobs and livelihoods amongst the refugees and host communities | |
| Sub-component 1.2: Micro-Credit and Business Support for Enterprise Development | |
| Provide micro-credit support to agro enterprises along the agriculture value chain. | Goods |
| Provide business development credit for enterprise capitalization | Goods |
| Support to sectoral community structures | Services |
| Sub-component 1.3: Strengthen capacity Community-Based Enterprise Groups for Resilience | |
| Establish enterprise groups at village/boma for capacity development on climate smart cropping systems | Goods |
| Procure mechanized equipment (tractors) for on-farm mechanized operations Including in country logistics | Goods |
| Procure and distribute climate-adapted seed kits for farming for Refugees and Host Community | Goods |
| Livestock restocking programme for the host community | Goods |
| Drilling of water wells | Civil Works |
| Support to sectoral community structures | Services |
| Sub-component 1.4: Strengthening Private Sector Seed Multiplication for Certified Seed Production and post-harvest handling | |
| Engage Private sector for seed multiplication using foundation seeds targeting out grower farmers | Services |
| Establish seed production blocks | Civil Works |
| Construction of post-harvest handling storage (seeds storage, showroom, mills/ farm market) | Civil Works |
| Demarcation of agricultural farmland | Civil Works |
| Train seed inspectors for quality assurance | Services |

| Jamjang SCRSSP Components | Category |
|---|---|
| Support to sectoral community structures | Services |
| COMPONENT 2: Restoration and improvement of basic social services in the refugee and host communities | |
| Sub-component 2.1: Rehabilitation and Upgrade of school infrastructure | |
| Construction of new classrooms blocks in existing schools | Civil Works |
| Rehabilitation of vocational centers | Civil Works |
| Renovation of classrooms in existing schools | Civil Works |
| Providing vocational skills training to refugees and host community members | Services |
| Support to sectoral community structures | Services |
| Sub-component 2.2: Improvement of WASH facilities for sustainable water services | |
| construction and solarization of boreholes | Civil Works |
| Distribution of hygiene kits (in-kind or Cash) | Goods |
| Support to sectoral community structures | Services |
| Sub-component 2.3: Community empowerment and psychosocial (Mental health) support. | |
| Construction of safe house to accommodate the GBV survivors with heightened risks. | Civil Works |
| Construct a community multipurpose centre (including solarization) | Civil Works |
| Organize sports events and celebrations of 16 Days of Activism and International Women's Day to connect with their cultural heritage and promote inclusivity. | Goods |
| Support to sectoral community structures | Services |
| Sub-component 2.4: Facilitate access to integrated health and nutrition services. | |
| Provide cash assistance and livelihood support for nutritional support to vulnerable households. | Goods |
| Support for sectoral community structures | Services |
| Sub-component 2.5: Provide sustainable lighting energy solutions for improved settlement security. | |
| Installing solar lighting in settlements (community structures). | Goods |
| Provide solar lamps to vulnerable households. | Goods |
| Support for sectoral community structures | Services |
| COMPONENT 3: Restoration of the environment in the refugee and host communities | |
| Sub-component 3.1: Community preparedness for Disaster Risk Reduction and Early Warning Systems | |
| Set up community committees for disaster risk reduction and set up early warning systems or community networks | Goods |
| Construct flood protection infrastructure (Hafirs/ Drainage) | Civil Works |
| Cash for labor-intensive public works for flood mitigation and preparedness | Goods |

| Jamjang SCRSSP Components | Category |
|---|---|
| Support to sectoral community structures | Civil Works |
| Sub-component 3.2: Enhancing access clean cooking options and training on clean cooking access. | |
| Support women to produce fuel efficient stoves and distribute among refugee women | Goods |
| Support to sectoral community structures | Services |
| Sub-component 3.3: Build community capacity to promote Environment protection agroforestry and community tree planting | |
| Produce and distribute of fruit and medicinal tree seedlings | Goods |
| Establishment of woodlots and reforestations | Goods |
| Construction/opening of Access roads to the farming area | Civil Works |
| Support to sectoral community structures | Services |
| COMPONENT 4: Project management and capacity building | |
| Sub-component 4.1: Local/county government capacity building and infrastructure improvement | |
| Provision of equipment (laptops, printers, etc.) including in country logistics | Goods |
| Sub-component 4.2: CRA institutional capacity building | |
| Provide incentive cash support for Peacebuilding community activities | Services |

## 2.4. Area of Influence of the Project

The proposed SCRSSP will mainly be implemented in the Ajuong Thok and Pamir Refugee Settlements, both located in Jamjang in the Ruweng Administrative area. These are shown in Figure 2 below.

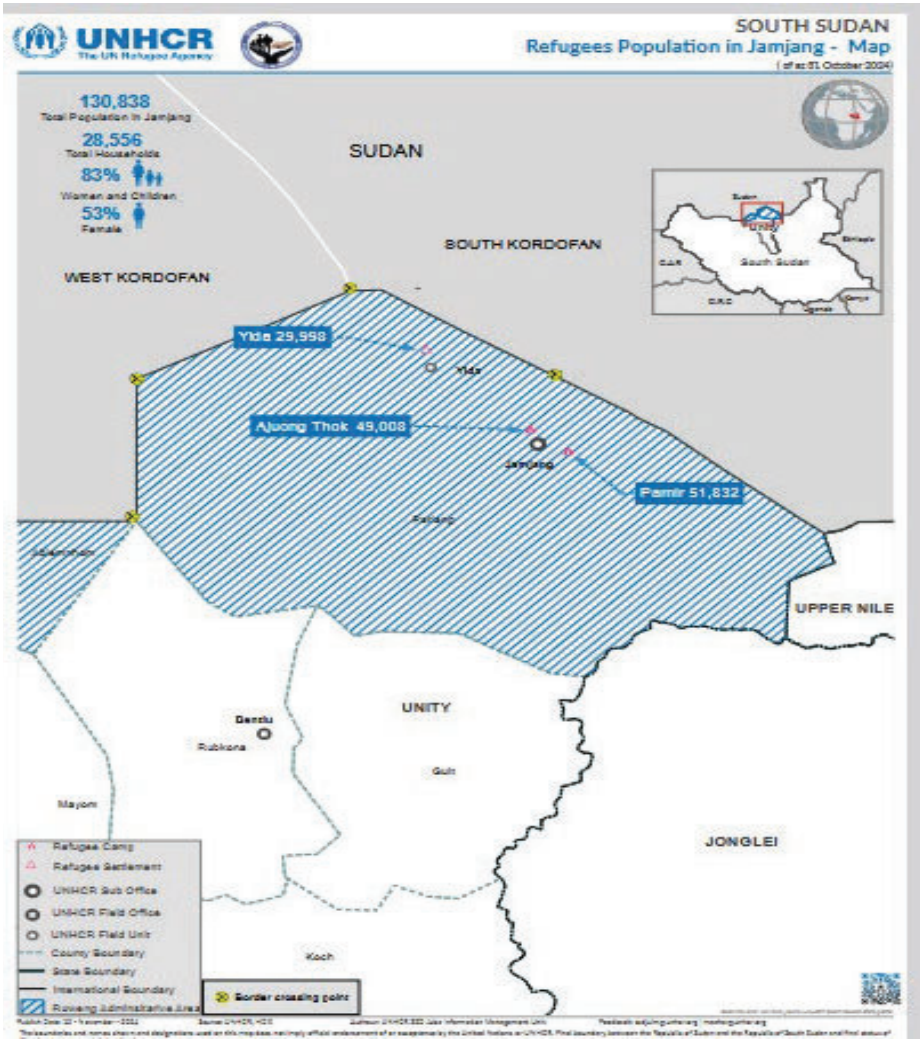


**Figure 2: Ajuong Thok and Refugee Settlements Map**[5]

### 2.4.1. Ajuong Thok Refugee Camp

Ajuong Thok refugee settlement in Jamjang (Ruweng Administrative area) is located at GPS coordinates: N:09.59.08 E:30.16.06.5, about 420m above sea level.

Ajuong Thok was established in March 2013 to accommodate refugees from South Kordofan in Sudan. With an initial capacity of 24,000, the settlement is now able to accommodate up to 66,400indviduals using standard average household size 5. The settlement is 70 km distance by road from Yida refugee settlement.

The settlement is managed by the UNHCR, together with the Danish Refugee Council (DRC) and the CRA. In addition, there are other humanitarian institutions that provide other humanitarian assistance services such as Lutheran World Federation (LWF),

[5] UNHCR (link)

Humanitarian & Development Consortium (HDC), Africa Humanitarian Action (AHA), International Rescue Committee (IRC), Malteser International (MI), Samaritans Purse (SP), World Food Programme (WFP) and Action Africa Health International (AAHI-I)[6].

A detailed layout of the Ajuong Thok Refugee Settlement showing the facilities and blocks is provided as Annex 1 to the report.

**Population**

UNHCR estimates that there are about 49,537 persons at the Ajuong Thok Refugee Settlements and 9,919 households. This is shown in the Table 2 below.

**Table 2: Population Breakdown - Ajuong Thok**

| Population Age and Gender Breakdown | | | |
|---|---|---|---|
| **Row Labels** | **Female** | **Male** | **Grand Total** |
| 00 - 04 years | 3,534 | 3,813 | 7,347 |
| 05 - 11 years | 5,704 | 5,760 | 11,464 |
| 12 - 17 years | 4,504 | 4,651 | 9,155 |
| 18 - 59 years | 11,103 | 9,427 | 20,530 |
| 60+ years | 579 | 462 | 1,041 |
| Grand Total | **25,424** | **24,113** | **49,537** |
| **Active Population** | | | **Households** |
| **49,537** | | | **9,919** |

**Administrative space**

The administrative spaces at the Ajuong Thok refugees' settlement include the UNHCR, CRA offices as well as police post and police outpost strategically located within the settlements. Other NGO offices are located in the south and central portion of the settlement. These NGOs provide different humanitarian support including; Settlement Management: DRC, CRA; Education: LWF; Food: SP/WFP; Health, nutrition, and hygiene: AHA, MI; Livelihoods: DRC, IRC; Logistics: AAH-I; NFI and shelter: DRC; Protection (SGBV): IRC; Protection (Child): LWF; Protection (Access to Justice): HDC; Water and Sanitation: SP.

**Camp structure**

Ajuong Thok Refugee camp occupies an area of 1,554 hectares, it has expanded into the western and northern sections to accommodate the increasing number of refugees, mainly from Sudan. The settlement is divided into zones, with 6 to 8 blocks in each zone. Furthermore, each block is subdivided into 8 communities, which in turn have units. There

[6] UNHCR (link)

are also two scales of open spaces in the settlement, the larger one with centralized services and the smaller one with community spaces[7].

**Leadership structure**

The leadership of the camp comprise the following

- Supreme leadership
- Block leaders and deputy leaders
- Women's Committee
- Youth Committee
- WASH Committee
- Community Watch Team
- Older persons' Committee
- Conflict Resolution Committee
- Child Protection Committee
- Project Management Committee
- Health Committee
- Shelter Committee
- Environment Committee
- Religious Leaders Committee
- Art and Cultural Committee

### 2.4.2. Pamir Refugee Camp

Pamir Refugee Camp is located at GPS coordinates: N:09 54 53.7 E:30 20 51.9 and occupies an area of about 1,879.305 hectares. It was opened in September 2016 following GoSS decision to close Yida Refugee Settlement. UNHCR and partners continue expanding this settlement as the population grows steadily due to new arrivals and Yida residual refugees[8]. A map of Pamir Refugee Camp is provided as Annex two (2) to the report.

**Population**

UNHCR estimates show that total active population as of March 2025 was 54,225 persons, and 12,878 households. The detailed information on population is provided in Table 3

**Table 3: Pamir Population breakdown**

| Population Age and Gender Breakdown | | | |
|---|---|---|---|
| Age | Female | Male | Grand Total |
| 00 - 04 years | 4,589 | 4,745 | 9,334 |

[7] UNHCR (link)
[8] UNHCR (link)

| Population Age and Gender Breakdown | | | |
|---|---|---|---|
| 05 - 11 years | 6,895 | 6,892 | 13,787 |
| 12 - 17 years | 4,710 | 4,418 | 9,128 |
| 18 - 59 years | 11,884 | 9,116 | 21,000 |
| 60+ years | 483 | 493 | 976 |
| Grand Total | 28,561 | 25,664 | 54,225 |
| Active Population | | Households | |
| **54,225** | | **12,878** | |

**Leadership structure**

UNHCR in collaboration with partners is responsible for the general administration of Pamir Refugee camp. The stakeholders comprise NGOS and Civil Society actors namely; camp Management: CRA, DRC; Education and Child Protection: LWF; Food: SP/WFP; Health and hygiene: IRC; Livelihoods: DRC, IRC; Logistics: AAH-I; Non-Food Items (NFI) and shelter: DRC; Nutrition: IRC; Protection (SGBV): IRC; Protection (Access to Justice): HDC; Water and Sanitation: SP

The settlements leadership structure comprises;

- Supreme camp leadership
- Block leaders and deputy leaders
- Women's Committee
- Youth Committee
- WASH Committee
- Community Watch Team
- Older persons' Committee
- Conflict Resolution Committee
- Child Protection Committee
- Project Management Committee
- Health Committee
- Shelter Committee
- Environment Committee
- Religious Leaders Committee
- Art and Cultural Committee

## 2.5. Pre-construction

SRCSSP project components including the provision of goods and services, as well as civil works (construction, rehabilitation of facilities and establishment of the farmlands) will be undertaken in different sites within Jamjang. Various activities will be undertaken during the pre-construction phase jointly between the UNHCR and project management unit. These are broadly classified into project mobilization and civil works.

The first phase will entail confirmation of data and accuracy of topographical survey; Mobilization of Labor force, equipment and plant for construction works; Transportation of equipment, workers, materials and storage;

The second phase will entail securing/hoarding off the project sites and installing a construction board indicating the kind of project, work and professionals and organizations involved including UNHCR, CRA and GoSS. The site facilities will be temporary in nature (for the duration of the construction phase) and will include site offices, and other temporary facilities for the contractor. The contractor will have to comply with ESIA requirements including environmental and social management plan (ESMP) for prevention, minimizing and mitigating likely impacts including gender-based violence. During the site preparation, both skilled and unskilled temporary employment opportunities will be created, of which, priority will be given to the local people and youths (returnees, host community and refugees, where applicable)

In the third phase, UNHCR jointly with the project partners namely CRA and GoSS will identify suppliers of required goods. The main construction material including construction blocks (hard red stone, and burned bricks), steel, cement and sand will be sourced from accredited suppliers and installed by certified technicians. Local suppliers should be subcontracted to provide burned bricks for the construction of schools, seed production blocks, vocational training center and demarcation of the farmlands.

Other materials and equipment such as sanitary kits and other WASH equipment will be sourced from reliable suppliers selected by UNHCR and approved by project partners. Great emphasis will be laid on procurement of material from the local area or within South Sudan which will make both economic and environmental sense as it will reduce negative impacts of long-distance transportation of materials to the project site, saving a lot of money and boosting economy of the Republic of South Sudan.

The selected sites have sufficient space for storage of bulk building materials such as sand, stones, ballast, bricks, Tanks will not be a challenge. The contractors will install separate storage facilities for other materials such as Sanitary kits and photovoltaic equipment.

To avoid pilling large quantity of materials on site, the project implementing agency is advised to order bulky materials in bits and on demand. Materials such as cement, sand, paint among others will be purchased when required and stored in a temporary storage structure within the sites.

### 2.6. Construction activities and other project activities

The project components that will involve construction activities comprise;

**Sub-component 1.3: Strengthen capacity Community-Based Enterprise Groups for Resilience**

- Drilling of water wells

**Sub-component 1.4: Strengthening Private Sector Seed Multiplication for Certified Seed Production and post-harvest handling**

- Establish seed production blocks
- Construction of post-harvest handling storage (seeds storage, showroom, mills/ farm market)
- Demarcation of agricultural farmland

**Sub-component 2.1: Rehabilitation and Upgrade of school infrastructure**

- Construction of new classrooms blocks in existing schools
- Rehabilitation of vocational centers
- Renovation of classrooms in existing schools

**Sub-component 2.2: Improvement of WASH facilities for sustainable water services**

- construction and solarization of boreholes

**Sub-component 2.3: Community empowerment and psychosocial (Mental health) support.**

- Construction of safe houses to accommodate the GBV survivors with heightened risks.
- Construct a community multipurpose centre (including solarization)

**Sub-component 3.1: Community preparedness for Disaster Risk Reduction and Early Warning Systems**

- Construct flood protection infrastructure (Hafirs/ Drainage)
- Support to sectoral community structures

**Sub-component 3.3: Build community capacity to promote Environment protection agroforestry and community tree planting**

- Construction/opening of Access roads to the farming area

**Construction works**

**Earthworks**

Construction works will involve excavation of the topsoil to prepare the site for construction of foundation. This will involve the use of bulldozers and human labor. However, care and architectural specifications should be followed strictly at this stage. Approved anti-termite will be applied before commencement of work and an approved dump proof course (D.P.C.) will be provided under the walling. The excavated materials will be carted away from the site to approved storage area or safe disposal site. Some of

the carted material shall be selected for re-use and general filling of the site where required.

**Masonry, concrete works and related activities**.

Once earthwork is complete, the contractor will commence construction of concrete foundations for establishing respective facilities. General masonry and related activities will include shaping the bricks, concrete mixing, plastering, slab construction, construction of foundation. These activities are known to be labour intensive hence will be supplemented by machinery such as concrete mixers, vibrators where necessary.

**Plumbing**

Pipe work will be done to connect drainage of storm water from the roof top into the roof harvesting system. In addition, plumbing entails establishment of infrastructure for distribution of water from the new boreholes to the water points within the community. Plumbing will include metals and plastic cutting, the use of adhesives, metal grinding and wall drilling among others.

**Electrical Works**

Electrical works will be installation of lighting, electrical conduits, distribution boards, and undertaking wiring specifically of the solarized facilities such as the boreholes, community centers, schools etc.

**Landscaping**

To improve the aesthetic value and visual quality of the site once construction is complete, open places will be landscaped by the contractor. This will include removal of waste from the site, ground leveling and establishing flowers gardens to replenish the topsoil and improve the visual quality of the site. Locally available indigenous species will be given priority in landscaping unless where it unavoidably calls for exotic species.

**Processes, Equipment, Materials, Output and Expected Waste**

Short-term impacts to the environment such as dust pollution, and noise that will result from the construction are predictable and manageable with appropriate mitigation measures proposed. No negative impacts on destruction of critical ecosystems, and sites of cultural importance are foreseen in the project sites.

The full implementation of the ESMP will be essential in minimizing adverse environmental and social impacts of the project. Although the sub-projects will have minimal negative impacts, these will be carefully monitored and mitigated throughout implementation, with regular and consistent monitoring, and timely interventions to mitigate and prevent the potential negative impacts. and CRA will be expected to ensure full compliance with the proposed Environmental and Social Management Plan (ESMP).

**Utilities**

**Water**: The following are some of the sources of water that the project may consider:

***Ground water sources:*** Borehole with handpumps and water yards are the main sources of water in the project sites. The water resources, e.g water yards, are available for use during the construction phase. The water management committee will also support the construction team by allocating water for other uses.

**Rainwater Harvesting:** The use of rainwater is recommended to reduce the volume of water extracted from the borehole during times of rainfall, thus conserving the underground aquifer supply. Harvested rainwater may be used for potable uses or for irrigation of soft landscape areas

**Sewerage**: There is no existing trunk sewer line in Jamjang. The sewerage discharge from the development will be taken offsite on-site retention or on-site sewerage treatment.

**Flood/ Storm Water Drainage:** The topography of project area of Influence is generally flat, and it may be assumed that the entire development site will be impermeable, whether through building development or hard landscape areas and roads.

## 2.7. Schedule of project activities

All the project components will be implemented over 24 months starting 2025 in the identified sites within Ruweng Administrative Area. The project activities will be implemented concurrently by UNHCR and NGO and Civil Society Organization actors based on agreed schedule. However, the ESIA recommends that all activities that involve civil works should be undertaken during the wet seasons to minimize dust, erosion and water abstraction from the already stretched ground and surface water sources in Jamjang.

## 2.8. Staffing and Support

The project will be implemented by the UNHCR field office in Jamjang jointly with partners including the CRA, NGO and civil society actors. The overall supervision will be undertaken by the UNHCR country office based in Juba, South Sudan in collaboration with the African Development Bank office. The key contact persons in the field office will include the Shelter and Planning officer and the community development officer who will monitor progress and update the UNHCR office in Juba.

Besides, there is an existing leadership structure by the refugees that will also play a role in the implementation of the various project activities. The leadership of the settlement comprise the following

- Supreme camp leadership
- Block leaders and deputy leaders

- Women's Committee
- Youth Committee
- WASH Committee
- Community Watch Team
- Older persons' Committee
- Conflict Resolution Committee
- Child Protection Committee
- Project Management Committee
- Health Committee
- Shelter Committee
- Environment Committee
- Religious Leaders Committee
- Art and Cultural Committee

### 2.9. Facilities and services

The following facilities are available at the Ajuong Thok refugee Camp

- Reception centre - The reception center is located in the south sector of the camp, next to a food distribution center and some offices.
- Two (2) food distribution centres
- Primary Health Care Centers (PHCC), Primary Health Care Unit (PHCU), Nutrition Centre
- Six (6) primary schools
- One (1) secondary school and 1 ICT centre
- 13 Child Friendly Spaces
- 1 Youth and Adolescents Centre
- Early Childhood Development Centre
- 3 Women and Girls Wellness Centre
- Vocational Training Centre
- 11/11 solarized boreholes
- Field Offices: UNHCR, CRA, Camp Management
- 1 Police station and 7 Police outposts[9]

**Community areas**

There are thirteen child friendly spaces, one center for youth and teenagers, 3 wellness centers for women and girls, 1 center for vocational training. There are three cemetery spaces in the settlement in the northeast, central portion and south of the camp. Water supply is done through boreholes then distributed through a piped network to the access points in each block.

[9] UNHCR (link)

**Structure of individual shelters**

There are two types of shelters namely emergency and transient. The structures are made of wood/bamboo, with canvas for emergencies and corrugated iron for transients. These are locally available materials and mainly constructed by the refugees as shown in Figure 3[10].

**Figure 3: Shelters for the refugees**

The access roads within the Ajuong Thok Refugee Camp are well graded, however, they require regular maintenance especially during the rainy reason as there is not proper drainage channel. The risk of roads being cut off is also high during the rainy season. At the time the ESIA was being conducted, there was no functional excavator or grader that could be deployed for roads infrastructure maintenance. The access road is shown in Figure 4

[10] Ajuong Thok (link)

**Figure 4: Access Road in the refugee camp - Ajuong Thok**

**Water Resources**

Solarized boreholes are the main sources of water in both Pamir and Ajuong Thok Refugee Camps. These are shown in Figure 5

**Figure 5: Solarized boreholes and water points - Ajuong Thok**

**Waste management**

There is no proper infrastructure for collection and safe disposal of the solid waste within the Ajuong Thok refugee camp and the host community including the market. The

common waste disposal methods are open burning, and burying. These presents a severe risk considering that the area is low land and experiences floods every rainy season. Figure 6 is a disposal site at Ajuong Thok Market.

**Figure 6: Status of solid waste management - Ajuong Thok**

**Existing Initiatives in Ajuong Thok**

UNHCR Jamjang initiated small scale projects to build the capacity of the refugees and host communities, as well as build capacity to enable the transition from humanitarian support to self-reliance. The proposed SRCSSP will support the expansion of these initiatives to create a tangible impact on the refugees, host communities and returnees in the proposed project areas. Below is a description of the existing projects whose components align with the proposed SRCSSP.

**Ajuong Thok Vocational Training Center (VTC)**

The VTC which is located at the center of the Ajuong Thok Refugee Camp is managed jointly by the UNHCR and DRC. The VTC has different departments comprising hair dressing and barber shop, welding workshop, dressmaking center, bakery and ICT. Students both from the host community and refugees are offered scholarships to pursue their preferred course based on merit. Besides, they are supported with seed capital to establish businesses upon successful completion of the courses.

Figure 7 are the existing VTCs.

**Figure 7: Ajuong Thok Vocational Training Center**

Apart from the vocational training, UNHCR has established infrastructure for other livelihood programs within the VTC mainly the integrated livestock project shown in Figure 8

**Figure 8: Ajuong Thok Integrated Livestock Project**

**Tree nursery**

The tree nursery is managed by the DRC, the implementing partner of UNHCR at the VTC with the main purpose of preparing seedlings which are then planted within the community and the refugee settlements.

There is a woodlot mainly comprising neem trees within the settlement. The neem tree is preferred because it is drought resistant and the medicinal values. These are shown in **Error! Reference source not found.**

**Figure 9: Ajuong Thok Agroforestry Project**

**Agriculture and value addition**

**Aquaculture –** There are two fishponds shown in Figure 9 with a capacity of up to 5000 fingerlings within the Technical and Vocational Education and Training (TVET). The fishponds are managed by the project beneficiaries (refugees) and it is expected that the revenue from the sale of the fish will be shared between the TVET and students who managed and maintain the fishpond.

**Figure 9: Ajuong Thok Fishpond**

Poultry farming – there's a structure for poultry farming within the VTC compound shown in Figure 10

**Figure 10: Poultry House -Ajuong Thok**

Apiculture – a section has been allocated for apiculture shown in

Figure 11 and the relevant equipment installed to support bee keeping. The UNHCR staff believe that these will be another revenue stream and further enhance sustainability of the projects.

Figure 11: Apiculture - Ajuong Thok

Hydroponics – UNHCR has also put up two standard greenhouses for hydroponics shown in Figure 12. These demonstrate the commitment to embrace climate resilience and increase food productivity within Ajuong Thok Refugee Camp

**Figure 12: Green House/Hydroponics Facility – Ajuong Thok**

Black Soldier Fly (BSF) – a greenhouse for the production of the BSF shown in Figure 13 has been established within the VTC compound. The objective is to produce larvae that will be used to feed the chicken and fish. However, this project is quite ambitious considering that there are no adequate raw materials (kitchen waste) within the facility and limited control measures to establish a sufficient BSF colony.

**Figure 13: Black Solider Fly (BSF) Greenhouse Facility - Ajuong Thok**

Farmland – there is farmland shown in Figure 14 which the government allocated for the refugees. UNHCR is currently clearing the forest part to expand the farmland, as well as to establish access roads. The process of expansion of the farmland has been hampered by lack of equipment including excavators as the existing one broke down one year ago. However, there is a high risk of flooding during the rainy season. Other environmental challenges observed include the risk of clearing indigenous trees and leaving the land bare considering that farming is a seasonal event (based on the onset of rains). Each Household has been allocated approximately two (2) acres, but there is adequate space for expansion of the farms.

**Figure 14: Farmlands Ajuong Thok**

Seed storage facility – there is an existing seed storage facility in Ajuong Thok shown in Figure 15 with a capacity of up to 30 metric tonnes. The facility is managed by the APC and the purpose is to enable proper storage and handling of seeds, and make the seeds accessible to farmers. As part of the SRCSSP, UNHCR is proposing to improve the facility through expansion and installation of relevant equipment.

**Figure 15: Ajuong Thok Seed Storage Facility**

Facilities and Services in Pamir

Details of existing facilities and services are shown below

- Reception centre
- Food distribution centre

- 1 PHCC and 1 Nutrition Centre
- Nine solarized boreholes
- 4 primary schools and 1 secondary school
- Early childhood development centre
- 1 Women and Girls Wellness Centre
- 8 Child Friendly Spaces
- 1 Youth and Adolescents Centre
- UNHCR Field Office (hosts CRA and Settlement Management offices)
- 1 Police station and 5 Police Posts[11].

**Pamir Context Analysis**

**Shelter**

The shelters structures are made of wood/bamboo, with canvas for emergencies and corrugated iron for transients. These are locally available materials and mainly constructed by the refugees as shown in Figure 16

**Figure 16: Pamir shelters and Access roads**

**Pamir Vocational Training Center (VTC)**

The Pamir Vocational Training Center shown in Figure 17 is located at the heart of the Pamir Refugee camp offers training programs on garment making, welding and fabrication

[11] UNHCR (link)

as well as hair dressing. The students are mainly from the host community and refugee camp. They are offered sponsorship by UNHCR and partners including DRC.

**Figure 17: Pamir Vocational Training Center**

**Seed storage facility**

There is a ten (10) tonnes seed storage facility at Pamir shown in Figure 18. The facility serves the refugee community. However, the capacity is low, and it requires expansion and other improvements.

**Figure 18: Seed Storage facility Pamir**

**Woodlot**

The woodlot at the Pamir Refugee Settlement shown in Figure 19 is mainly made up of neem trees. Mainly because the trees are drought resistant and the medicinal value. The seedlings are prepared by the students at the Pamir VTC and distributed to the community.

**Figure 19: Pamir woodlot**

***Apiculture***

An apiculture facility shown in Figure 20 has been established by the UNHCR at the Pamir VTC. This is managed by the students and the proceeds will be ringfenced/ploughed back to the VTC to support the operational expenditures.

**Figure 20: Pamir- Apiculture**

***Kitchen Garden***

The refugees have been allocated small plots for kitchen gardens shown in Figure 21. Due to limited space, priority is given to vulnerable households mainly to boost nutritional demands. The main crops include vegetables e.g okra.

**Figure 21: Kitchen Garden Pamir**

## CHAPTER THREE: BASELINE INFORMATION

### 3.1. Physical Environment

#### Geology and Soils

The Ruweng Administrative Area is characterized by the following geological formations that include basement complex rocks comprising schists, metasediments and banded magmatic gneiss. Basic intrusive rocks like gabbro and granites, and alluvial deposits along the rivers and flood plains. The soils vary across the landscape as a result of climatic influences and geological parent materials. The area falls under two major livelihood zones: the Eastern Flood Plains and the Nile-Sobat Rivers zone. These zones influence soil characteristics and land use. Eastern Flood Plains Zone and the Nile Sobat Rivers Zone characterized by low-lying flatlands prone to flooding. The floodwaters leave behind fertile loamy soils suitable for cultivation. However, the risk of flooding restricts agricultural activities.

#### Climatic Conditions

Ruweng Administrative Area experiences a tropical climate with distinct wet and dry seasons. The region is influenced by the intertropical convergence zone (ITCZ), which oscillates between moist southerly air and dry northerly air masses, shaping its seasonal weather patterns.

**Dry Conditions**: Ruweng is predominantly dry, especially during the October to December period, with little to no rainfall forecasted. This aligns with its location in the northern part of South Sudan where arid conditions prevail

**Rainy Season**: Rainfall typically occurs during the boreal summer (June to September), contributing to a single rainy season. However, annual rainfall amounts are relatively low compared to southern regions of South Sudan, as the area falls within a semi-arid climatic zone

**Warm Temperatures**: Ruweng is expected to experience above-normal temperatures during much of the year. Seasonal temperature peaks occur at the beginning and end of the rainy season (March-May and October-November). Daily mean temperatures average around 28°C, with seasonal fluctuations of about 7°C. The warmest months are typically March-May, while cooler temperatures occur during winter (November-February)

***Seasonal Implications***

- **Dry Season**: The prolonged dry season limits agricultural activities and increases reliance on irrigation or rain-fed farming during the rainy season.
- **Rainy Season**: While rainfall supports crop cultivation, it is insufficient for large-scale agriculture due to its variability and low annual totals. Rainfall intensity may increase over time due to climate change, but this could manifest as high-intensity

events rather than consistent rainy days. There is also the risk of flooding during the rainy season,

### 3.2. Socio-cultural environment

#### Agriculture

Most residents including refugees and host communities in the Ruweng Administrative area, are agro-pastoralists. The region has significant agricultural potential due to its fertile soil and suitable climate for certain crops. However, challenges such as limited infrastructure, pests, and market inaccessibility hinder large-scale agricultural development.

Main crops include  Sorghum and maize as the primary crops cultivated. Sorghum is particularly valued for its drought resistance. Vegetables grown include Okra, cowpeas, pumpkins, and onions are commonly grown. Some households practice fruit farming specifically Mangoes, bananas but in smaller quantities.

Livelihoods - Most households combine farming with livestock rearing (primarily goats, cattle, and sheep). Fishing is practiced in some areas as a supplementary activity.

#### Agricultural practices

The majority of farming in Ruweng is subsistence-based and rain-fed. Mechanization remains limited; most farmers rely on traditional tools. Efforts to introduce tractors and modern equipment are ongoing but insufficient to meet demand.

#### Agricultural potential

The fertile soils in Ruweng support agro-pastoral livelihoods. Residents primarily cultivate maize, sorghum, and vegetables like okra and pumpkin. However, agricultural yields remain modest due to challenges such as flooding and limited infrastructure, for example, Gross cereal yield in Ruweng was reported at 0.9 tonnes per hectare in 2021.

Flooding is a significant challenge in the Eastern Flood Plains zone. Although receding waters enhance soil fertility by depositing nutrients, they also disrupt farming activities and limit land accessibility

#### Challenges

**Infrastructure Deficits**: Poor road connectivity limits access to farmlands and within the refugee and host communities, especially during the rainy season when roads become impassable. Up to 70% of produce can go to waste due to transportation issues as the farms are submerged.

**Pests and Crop Losses**: Weaverbirds are a major pest, particularly affecting cereal crops like sorghum during harvest periods

**Climate Variability**: Rainfall variability affects crop yields as agriculture is heavily dependent on seasonal rains

**Opportunities**

With improved infrastructure and mechanization, Ruweng could become a significant food production hub for South Sudan and neighboring countries. The region's fertile soil offer potential for expanding vegetable and fruit production if irrigation systems are developed.

**Health and nutrition**

Host communities and Refugee settlements in the Ruweng Administrative Area, host a significant number of refugees from Sudan. The health and nutrition conditions in these settlements are influenced by the availability of humanitarian aid, environmental factors, and the overall stability of the region.

The main health challenges include risk of Malaria and Fever which are common among refugees due to poor living conditions and inadequate healthcare facilities. Although not specifically reported in refugee settlements in Ruweng, cholera outbreaks in South Sudan pose a risk to refugee populations.

There is limited access to healthcare services. While humanitarian organizations provide some medical support, resources are often insufficient to meet the needs of the growing refugee population.

**Nutrition**

**Food Distribution**: Humanitarian organizations like the World Food Programme (WFP) and UNHCR provide monthly food distributions to refugees, which helps maintain basic nutrition levels. However, the programme has been affected by the global funding cuts and currently, only 20% of the refugees receive food supply, and it is expected that this will stop in the future.

**Dietary Diversity**: Reliance on staple food distributions can lead to dietary imbalances if not complemented with diverse food sources. UNHCR supports other livelihood programs such as kitchen gardens, bee keeping, poultry etc to improve the nutritional and dietary aspects.

### 3.3. Water resources and sanitation

Ruweng is the home of two lakes: Lake Jau (in the northern part) and Lake No locally known as Dhoo (in the southern part), where Bahr el Ghazal River ends and joins the White Nile. Groundwater is the major source of water supply to the people. There is no water quality analysis lab and hence no baseline water quality data is available. Water resources and sanitation in the Ruweng Administrative Area, including refugee settlements, face

significant challenges due to limited infrastructure, environmental factors, and ongoing humanitarian crises.

**Challenges**:

Refugee settlements in Ruweng face similar challenges as the broader population, including limited access to clean water and sanitation facilities. Humanitarian organizations provide some support, but resources are often insufficient to meet the needs of growing refugee populations. Enhancing groundwater management and expanding water supply services in rural areas are crucial for improving access to clean water

**Flora and Fauna**

The main vegetation types in the project area include grassland, shrub land and scattered trees, and riverine vegetation. There is no nationally protected area in the proposed command land. The project development is expected to have no impact on these important wildlife habitats.

## CHAPTER FOUR: LEGISLATIVE, POLICIES, ADMINISTRATION FRAMEWORK

### 4.1. Legislative and policy framework

There is no operational legal system for ESIA in South Sudan. The Draft National Environmental Bill 2023 (approval still pending) of South Sudan provides for the establishment of an autonomous South Sudan Environmental Management Authority (EMA) to act as the watchdog on all public institutions, private companies and individuals defaulting against the stipulated environmental laws and regulations. Until the Authority is fully established, the duties and functions of the Authority are delegated to the Ministry responsible for environment and forests[12].

The ESIA will entail a description of the pertinent regulations and standards governing the environmental quality, health and safety, protection of sensitive areas, land use control at the International, national and local levels.; a summary of the relevant legal frameworks are shown in Table 4

**Table 4: Policy and Legislative Framework**

| Policy/Legislation | Description |
|---|---|
| **The Comprehensive Peace Agreement (CPA)** | Signing of the CPA in January of 2005 brought peace to Southern Sudan by enabling Southern Sudan to acquire the mandate to legislate laws for internal governance ranging from State to Local Authority level. It also paved the way for secession of South Sudan through a referendum in 2011.<br><br>Under Schedule B of the CPA, GoSS is mandated to coordinate service provision within its territories. GoSS is also under obligation to set standards for environmental management which essentially requires that all development projects consider precautionary principles, which underscores the importance of undertaking an ESIA to determine the potential positive impacts, negative impacts and mitigation measures. |
| **The R-ACRSS** | The Revitalized Agreement for Resolution of Conflict in South Sudan (R-ARCSS) in Articles 1.10.3.7, 4.6.1.3, 4.9.1 and 4.9.2 set foundation for;<br><br>Establishment of the national Ministry of Environment and Forestry under the Economic Cluster; and creation of the **Environmental Management Authority (EMA)** upon commencement of the transitional period to oversee policy implementation and compliance.<br><br>The Ministry of Environment and Forestry is the governing body of all natural resources in South Sudan. In addition, the creation of the EMA would imply that all development projects and/ or feasibility study of any |

[12] Netherlands Commission for Environmental Assessment (link)

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| | project must include an environmental impact certificate from the Ministry of Environment and Forestry |
| **The Transitional Constitution of the Republic of South Sudan of 2011 amended 2015** | Section 44 of the Constitution stipulated the right of every person and community to clean and health environment; It also emphasize the importance of safeguarding the environment for the benefit of present and future generations, through reasonable legislative action and other measures that:<br>a. prevent pollution and ecological degradation;<br>b. Promote conservation; and<br>c. secure ecologically sustainable development and use of natural resources while promoting rational economic and social development so as to protect genetic stability and bio-diversity of Southern Sudan.<br>The ESIA is widely considered as a planning tool for any development project specifically aimed at ensuring early identification of all adverse impacts such as destruction of natural ecosystem, pollution sources and recommendation of practical mitigation measures to safeguard the environment. It is on this basis that the ESIA for the proposed SRCSSP was undertaken to ensure compliance and safeguard the quality of life of the citizens and the environment. |
| **REFUGEE ACT, 2012** | The Refugee Act of 2012 in South Sudan is designed to implement international refugee protection standards within the country. It provides a framework for the reception of asylum seekers, the application and recognition of refugee status, and outlines the rights and obligations of refugees. It provides for the establishment of the Commission of Refugees Affairs (CRA) to oversee refugee matters, sets up a Refugee Eligibility Committee to assess applications for refugee status and includes a Refugee Appeals Board for appeals against decisions<br>The refugees must be recognized and entitled to legal protection, identity documents, and Convention Travel Documents. They also have the right to seek employment and access basic health services and primary education similar to South Sudanese nationals. Refugees must obey all laws of South Sudan.<br>The proposed SRCSSP has components relating to the protection of refugees and offering opportunities for self-reliance through job opportunities. Therefore, the Refugee Act 2012, is vital in the design and implementation of the proposed project by enabling equal treatment and consideration in the existing opportunities arising from its implementation. |
| **South Sudan Vision 2040: Towards Freedom, Equality,** | The vision emphasizes creation of a diversified economy, driven by sectors like agriculture, industry, mining, manufacturing, tourism, and services. |

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| **Justice, Peace and Prosperity for All.** | However, these should be utilized in a manner that does not affect their long-term sustainability.<br><br>The 2040 vision underscores the significance of precautionary principles in development and utilization of natural resources for economic growth. The ESIA is a planning tool that enables early identification of potential risks resulting from implementation of a project as well as recommendation of practical mitigation measures. |
| **South Sudan National Environment Policy 2015 – 2025** | The objectives of the GoSS Draft Environmental Policy are to: -<br>1) Enhance equitably the livelihoods of Southern Sudanese citizens;<br>2) Conserve and recuperate ecosystem processes and biological diversity;<br>3) Integrate environmental considerations into public-sector development policies, plans, programs, and projects at all levels of government;<br>4) Promote effective, widespread, public participation in the consideration and incorporation of environmental considerations into development activities.<br>The strategic goal of the policy is to ensure the protection, conservation and sustainable use of the natural resources of South Sudan without compromising the tenets of inter-generational equity.<br><br>This policy introduces a national environmental response framework and strategies to be implemented by all key actors in the public, private, and community domains. The foundation of the National Environmental Policy is to protect and improve the environment in a manner which contributes to the quality of life of both present and future generations. The objectives of this policy are integral in impact identification and formulation of ESMP. |
| **National Land Policy 2023 (draft)** | The **purpose of this Bill** is to provide for establishment of a legal and institutional framework for addressing land governance challenges and promoting sustainable management of the environment.<br><br>This Bill is drafted in accordance with the provisions of Article 4.6.1.3, 4.9 of the **R-ARCSS and 41 of the Transitional Constitution, 2011**, which grants the Government of South Sudan concurrent authority over protection and management of the environment. Specifically, it establishes a framework for sustainable framework for allocating and protecting collective and individual land rights for all South Sudanese.<br><br>The bill describes category of land ownership namely<br><br>public land – all land owned, held or otherwise acquired by any level of government (including land owned by Bomas, Counties, States and federal government or administration and all land that is not otherwise designated as community or private). This means that all land that is not claimed automatically belongs to the government |

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| | community land – all land traditionally and historically held or used by local communities or their members (including grazing lands for animals, hunting grounds, or locations of traditional sacrifices and worship)<br>private land including registered land held by a person under leasehold tenure, investment land acquired under lease from the government, and other land designated as private land in accordance with the law. This means that all investment land is acquired from the government through leasehold tenure.<br>It is on this basis that all matters pertaining to acquisition and transfer of ownership for project implementation is handled by the CRA in collaboration with other GoSS departments. |
| **The National strategy for climate change Adaptation and Mitigation 2021** | South Sudan's climate change strategy emphasizes building resilience, promoting sustainable development, and addressing the impacts of climate change through comprehensive adaptation and mitigation measures<br><br>The policy outlines the measures for<br>i. the development of a national strategy for climate change adaptation and mitigation;<br>ii. the formulation of the climate change policy; and<br>iii. increasing the country's efforts to reduce communities' vulnerability to climate variability and change.<br>The project prioritizes Adaptation actions through agricultural improvement, improved water infrastructure and sustainable energy, as well as protection of the communities from adverse impacts such as flooding and extreme hunger. |
| **Health Policy 2016-2025** | The National Health Policy 2016-2025 aims to improve health services by aligning health service delivery, health financing, strategic information, leadership and governance, human resources for health, and access to essential medicines.<br><br>The project aligns with the guiding principles including:<br>i. health and health services as a human right;<br>ii. primary health care approach;<br>iii. decentralization;<br>iv. partnerships;<br>v. international conventions and guidance;<br>vi. gender mainstreaming;<br>vii. community participation;<br>viii. efficiency and effectiveness;<br>ix. respect for values and cultures. |
| **South Sudan Forest Policy (2019)** | The policy broadly aims to achieve ecological stability of river systems, lakes, swamps, agricultural production and other natural ecological systems. It is also meant to ensure that there are optimal benefits from forestry and agro-forestry activities for food security and poverty alleviation among our |

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| | rural communities through provision of woody and non-wood forest products. The policy integrates forest sector actions with rural development efforts to ensure that the rural population of South Sudan has access to basic needs which include sustainable household food security, shelter, wood fuel, safe clean water, as well as sanitation and health facilities. |
| **Government of Southern Sudan Water Policy (2007)** | Water policy provides a guiding framework for all water sector activities and an important point of reference for future development of more detailed implementation strategies: water is an important natural resource that is commonly owned by all riparian people.<br><br>The Government of South Sudan must ensure effective development and use of water resources for the benefit of all, including poor and vulnerable groups. Access to sufficient water of acceptable quality to satisfy basic needs is considered a human right and shall be given the highest priority in the development of water resources. The proposed SRCSSP takes into consideration the optimal allocation of available resources based on social equity, economic efficiency, system reliability, and environmental sustainability. |
| **Environment Bill 2023 (draft)** | The purpose is to protect the environment and to promote ecologically sustainable development that improves the quality of life for both the present and future generations.<br><br>Section 18 of the South Sudan Draft Environmental and Protection Bill introduces the requirement for Environmental Impact Assessments. An Environmental Impact Assessment (EIA) is defined as a systematic examination conducted to determine whether or not a project will have any adverse impact on the environment and prescribe mitigation measures.<br><br>In addition, Section 32, Cap 5, proposes the requirement for Environmental Audits which 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.<br><br>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. |
| **The Land Act, 2009** | Land Act promotes a land management system, which can protect and preserve the environment and ecology for the sustainable development of South Sudan. |

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| | 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.<br><br>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 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'. Project proponents must also conduct environmental and social impact assessments (ESIAs) before undertaking any activity that might affect people or the environment. |
| **The Public Health (Water and Sanitation) Act (2008)** | It encompasses the measure to address the pollution of water with focus on water for consumption. The act stipulates that provider of water for consumption, including 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.<br><br>The Public Health Act (2008) also emphasizes enforcement of regulations and measures necessary to combat all elements of pollution and protect the natural level of the environment and public health. The provisions of the Act have been taken into account in the formulation of the ESMP to safeguard water resources from potential contamination that could result from the proposed SRCSSP |
| **The 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.<br><br>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. The legislation is important in the implementation of the proposed SRCSSP specifically enabling equal employment opportunities for the qualified individuals comprising host communities, returnees and |

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| | refugees during the construction, operation and decommissioning of the project. |
| **Child Act (Act No. 10 of 2008):** | The Child Act regulates the prohibition on child Labor. The project will put measure to ensure that the law is adhered to during the preconstruction, construction and operation phase of the project. Only persons who have attained the required legal age should be employed or engaged in the project activities from the construction, operation and decommissioning phases. |
| **South Sudan Durable Solutions Strategy and Plan of Action for Refugees, Internally Displaced Persons, Returnees and Host Communities, 2024** | This is a framework designed to provide sustainable solutions for refugees, internally displaced persons (IDPs), returnees, and host communities. It aims to create conditions for safe, dignified, and voluntary returns, local integration, and recovery. The strategy is guided by the Revitalized Agreement on the Resolution of the Conflict in South Sudan (R-ARCSS) and involves a government-led process with participation from various stakeholders. It is anchored on the R-ARCSS and aligns with international frameworks like the UN Secretary-General's Action Agenda on Internal Displacement.<br><br>The proposed SRCSSP comprise the key objectives and priority actions for ensuring safety and wellbeing of the refugees, and returnees. These are illustrated as follows.<br><br>**Objectives include**<br>• To establish a framework supporting durable solutions for displaced populations.<br>• To guide government and partners in coordinating efforts for safe returns and integration.<br>**Priority Actions:**<br>• **Secure Environment:** Create a secure and safe environment for achieving durable solutions.<br>• **Basic Services:** Provide basic services to support and sustain durable solutions.<br>• **Integration and Livelihoods:** Support integration of refugees, IDPs, returnees, and host communities, and improve their livelihoods.<br>• **Institutional Strengthening:** Strengthen government capacities and relations at all levels. |
| **Government of South Sudan Pledges Global Refugee Forum 2023** | The Government of South Sudan made significant commitments at the 2023 Global Refugee Forum (GRF), building on its previous pledges from 2019. These pledges are part of the country's broader strategy to enhance services for refugees, internally displaced persons (IDPs), returnees, and host communities. These pledges are aligned with the Revitalized Agreement on the Resolution of Conflict in South Sudan (R-ARCSS) and the Revised National Development Strategy (R-NDS) 2021-2024. The National |

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| | Technical Committee on Durable Solutions (NTC) plays a crucial role in coordinating these efforts, supported by UNHCR and IGAD<br><br>The SRCSSP is aligned to the **key pledges and commitments namely**<br><br>**Education and Livelihoods:** The government pledged to increase access to quality education for refugees and host communities.<br><br>Expand economic opportunities to ensure equitable economic development in refugee-hosting areas.<br><br>**Environmental Sustainability:** Commitment to provide sustainable and green energy solutions for refugees and host communities.<br><br>**Statelessness:** Address statelessness by acceding to the 1954 and 1961 Conventions and adopting a National Action Plan to eradicate statelessness.<br><br>**New Initiatives:** South Sudan committed to six new initiatives aimed at enhancing services for refugees and host communities, aligning with the Global Compact on Refugees and the country's national development strategies. |

GoSS of South Sudan is also a signatory to other international agreements. A review of policies and frameworks are shown in the Table 5Error! Reference source not found.

**Table 5: Policy Framework (International)**

| Framework | Description |
|---|---|
| **African Convention on the Conservation of Nature and Natural Resources 1969** | The African Convention of Nature and Natural Resources emphasizes the need for conservation, utilization and development of natural resources in Africa in accordance with the scientific principles and with due regard to the best interest of the people. It requires parties to establish land use plans based on scientific investigations when implementing agricultural practices and agrarian reforms. Projects should utilize agricultural scientific knowledge and interventions in the conservation, utilization and development of<br>natural resources. |
| **United Nations Convention to Combat Desertification (UNCCD) 1996** | Main goal is to combat desertification and mitigate the effects of drought in in countries seriously affected by droughts, especially in Africa, Latin America, the Caribbean, Asia, and Northern Mediterranean. The Convention seeks to achieve this objective through integrated approaches to development, supported by international cooperation and partnership arrangements, in the affected countries. It lays emphasis on long-term strategies that focus on improved productivity of land and the rehabilitation, conservation and sustainable management of land and water |

| Framework | Description |
|---|---|
| | resources, leading to improved living conditions, in particular at the community level |
| **United Nations Framework convention on Climate Change (1992)** | The Convention seeks to regulate levels of greenhouse gases (GHGs) concentration in the atmosphere, so as to avoid the occurrence of climate change at levels that would harm economic development, or that would impede food production. The Convention is founded on the principle that contracting parties should take action, in respect of their economic and social activities, and with regard to the Convention's specific requirements, that will protect the global climate to ensure sustainable development |
| **The Nile Treaties** | The riparian countries are under obligations under general international law to permit the lower riparian States an equitable share of the water, but the exact modalities are subject to negotiations. The Nile Basin Initiative is currently addressing the issue of equitable utilization of the common Nile Basin water resources. The Nile Basin Initiative seeks to harness the tremendous potential of the Nile for the benefit of the people of the Basin, both for now and for generations to come. This becomes a major challenge because as economic development accelerates, population increases and demand for water grows. NBI's Shared Vision is to advance the concept of sustainable economic development from the use of the<br>River Nile waters for the benefit of all people of the Nile basin |
| **Ramsar Convention on Wetlands** | The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world". |
| **The World Heritage Convention** | The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. The Convention stipulates the obligation of States Parties to report regularly to the World Heritage Committee on the state of conservation of their World Heritage properties. |
| **The United Nations Framework Convention on Climate Change (UNFCCC)** | The UNFCCC's goal is to prevent "dangerous" human interference with the climate system. The ultimate objective of the Convention is to stabilize greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system." It states that "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner. |
| **Basel Convention** | The overarching objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous |

| Framework | Description |
|---|---|
| | wastes. Its scope of application covers a wide range of wastes defined as "hazardous wastes" based on their origin and/or composition and their characteristics, as well as two types of wastes defined as "other wastes" - household waste and incinerator ash. The provisions of the Convention Centre around the following principal aims: This is considered in the pest management in agricultural production |
| **Convention on the Rights of the Child** | The Convention on the Rights of the Child from 1989 is the most comprehensive compilation of international legal standards for the protection of the human rights of children. It acknowledges children as individuals with rights and responsibilities according to their age and development, as well as members of a family or community. This includes non-discrimination, the best interest of the child, the right to life, survival and development and the right to participation. South Sudan has been party to the Convention since 23 January 2015.This is to ensure that child labour will not be practiced in the project Activities |
| **ILO 182 Worst Forms of Child Labor Convention (1999)** | The convention calls for immediate action to prohibit and eliminate the worst forms of child labor. The predefined forms of child labor include all forms of slavery, trafficking of children, debt bondage or any other form of bonded labor, forced or compulsory labor, and commercial sexual exploitation of children, prostitution and the production of pornography, as well as work that is likely to harm the health, safety or morals of children. 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, 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. |
| **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. |
| **The African Development Bank (AfDB) Environmental and Social Safeguards** | The integrated Safeguards System (ISS) promotes growth that is socially inclusive and environmentally sustainable through the implementation of the 5 Operational Safeguards. The aim is to identify environmental and social risks and impacts, reducing development costs, and improving project sustainability. Therefore, benefiting project targeted beneficiaries and ensure environmental conservation.<br>This ESIA report has an embedded ESMP which has been prepared to forestall environmental and social impacts that will arise during the development and operational implementation of this project and has suggested mitigation measures to address those impacts. |

The project was also reviewed taking into account AfDB operational safeguards shown in the Table 6.

**Table 6: AfDB Operational Safeguards**

| Operational safeguard | Triggered | Policy objectives | Trigger for the policy |
|---|---|---|---|
| **OS1- Environmental Assessments** | **YES** | To identify and assess the environmental and social impacts (including gender) and climate change vulnerability issues of Bank lending and grant-financed operations in their area of influence<br><br>To avoid or if not possible minimize, mitigate and compensate for adverse impacts on the environment and on affected communities;<br><br>To ensure that affected communities have timely access to information in suitable forms about Bank operations and are consulted meaningfully about issues that may affect them | This OS is triggered and the reason for the Environmental and Social Screening Process.<br><br>It will assist in the categorization of the project based upon its potential environmental and social risks and impacts Observed. |
| **OS2**<br><br>**Involuntary Resettlement: Land Acquisition, Population Displacement & Compensation** | **NO** | To avoid involuntary resettlement where feasible, or minimize resettlement impacts where involuntary resettlement is unavoidable through project design; | This OS is NOT triggered as the projects does not require the involuntary acquisition of land, involuntary acquisition of other assets or restrictions on land use and on access to local natural resources which result in: |

| Operational safeguard | Triggered | Policy objectives | Trigger for the policy |
|---|---|---|---|
| | | To ensure that displaced people receive significant resettlement assistance, preferably under the project, so that their standards of living, income earning capacity, production levels, and overall means of livelihood are improved beyond pre-project levels;<br><br>To set up a mechanism for monitoring the performance of involuntary resettlement programs in Bank operations and remedying problems as they arise to safeguard against ill-prepared and poorly implemented resettlement plans | Relocation or loss of shelter by the people in the project area;<br><br>Loss of assets or restriction of access to assets including national parks, protected areas or natural resources; or<br><br>Loss of income sources or means of livelihood due to the project, whether or not the PAPs are required to move. |
| **OS3 Biodiversity and Ecosystem Services** | **NO** | To preserve biological diversity by avoiding, or if not possible, reducing and minimizing impacts on biodiversity;<br><br>In cases where some impacts are unavoidable, to endeavor to reinstate or restore biodiversity including, where required, the implementation of biodiversity offsets to | This OS is NOT triggered as the project is to be located in a habitat where with limited potential biodiversity impacts and the area does not provide ecosystem services upon which potentially affected stakeholders are dependent for survival, sustenance, livelihood, or primary income, or which are used for sustaining the project.<br><br>There is limited extensive interference with the ecosystem. |

| Operational safeguard | Triggered | Policy objectives | Trigger for the policy |
|---|---|---|---|
| | | achieve "not net loss but net gain" of biodiversity;<br><br>To protect natural, modified and critical habitats;<br><br>To sustain the availability and productivity of priority ecosystem services to maintain benefits to the affected communities and to sustain project performance.<br><br>To inhibit introduction of new organisms into a local environment | |
| **OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials** | **YES** | To manage and reduce pollutants likely to be caused by a project so that they shall not pose harmful risks to human health and the environment, including hazardous, non-hazardous waste and GHG emissions.<br><br>To set a framework for efficiently utilizing all a project's raw materials and natural resources especially focusing on energy and water. | This OS is triggered as the project is likely to cause significant adverse environmental or social impacts owing to the emission of pollutants, waste or hazardous materials (pests management and it is also triggered by potentially significant levels of GHG emissions. |
| **OS 5 Labour Conditions, Health and Safety** | **YES** | To protect the workers' rights and to establish, maintain, and improve | This OS is triggered as the project involves the |

| Operational safeguard | Triggered | Policy objectives | Trigger for the policy |
|---|---|---|---|
| | | the employee-employer relationship;<br><br>-To promote compliance with national legal requirements and provide due diligence in case national laws are silent or inconsistent with the OS;<br><br>-To provide broad consistency with the relevant International Labour Organization (ILO) Conventions, ILO Core Labour Standards and the UNICEF Convention on the Rights of the Child in cases where national laws do not provide equivalent protection;<br><br>-To protect the workforce from inequality, social exclusion, child labour and forced labour; and | establishment of a temporary and/or permanent workforce. |

### 4.2. Institutional Framework for ESIA Implementation

#### Ministry of Environment and Forestry

The Ministry of Environment and Forestry is the competent government Authority in South Sudan regarding environmental matters. It is, therefore, the ministry responsible in the ESIA process. It ensures that the proponent complies with the requirements of the ESIA process; maintains the operations and consultations between the different sectorial agencies throughout the ESIA process and maintains a close relationship with the proponent as well as providing guidance on the process. The Ministry evaluates and takes decisions on the documents that arise from the EIA process, including site visit, monitoring and auditing of environmental performance of the project (periodic and independent reassessment of the undertaking).

**Ministry of Agriculture and Food Security (MAFS)**

The Ministry of Agriculture and Food Security (MAFS) is responsible for promoting agricultural development and improving livelihood of the populations. Based on the stakeholder consultations, the Ministry is planning to transform agricultural practices from subsistence to modern, market-oriented sector that involves mechanization and use of improved seeds that are drought resistant. The proposals align with the proposed SRCSSP project components including support for smallholder and large-scale farming to increase food production, investment in agroforestry, seed multiplication and storage.

**Ministry of Water Resources and Irrigation**

The proposed SRCSSP prioritizes investments in drilling boreholes, establishing infrastructure for distribution of water and flood control infrastructure. These initiatives are primarily domiciled at the Ministry of Water Resources and Irrigation (MWRI) in South Sudan, which is responsible for managing the country's water resources to support sustainable development, agriculture, and livelihoods. The ministry is responsible for developing and implementing policies, guidelines, master plans, and regulations for water resources development, conservation, and management and oversees the design, construction, and management of dams and other surface storage infrastructure for irrigation, human consumption. Therefore, it would be important to collaborate with the ministry and adhere to the safety standards regarding the establishment, supply and utilization of water resources in the project sites

**Ministry of Education**

The proposed project has components on improvement of infrastructure for education. Ministry of Education is responsible for primary and secondary education, aims to provide equitable access to quality lifelong learning opportunities for all, including developing policies, managing the education system, and ensuring teacher training and deployment

**Ministry Of Health**

The proposed project has components related to ensuring equitable, accessible, and quality healthcare for all citizens, focusing on improving health outcomes and strengthening the health system through policy development, service delivery, and capacity building

**Commission for Refugee Affairs (CRA)**

The Commission for Refugee Affairs (CRA) is the national agency responsible for managing all issues related to refugees, including regulating their presence and legal status, and coordinating with other government bodies and international organizations

## CHAPTER FIVE: STAKEHOLDER INVOLVEMENT

### 5.1. Introduction

The stakeholder's consultation is enshrined in the South Sudan constitution, and is part of the decision-making process, which allows integration of diverse views and perceptions of the project by stakeholders, creating conditions suitable for implementing the project and its integration at community and national levels. Consultation with the public and stakeholders is considered as an important activity of the environmental assessment study for the project. It provides valuable input to bring about sustainable and acceptable project design as well as ease of implementation and operation to the user community. Consultation with the public in the project area were made at the project site and through key informant interview and focused group discussions.

Public consultation in this project was done with the following aims:

- To inform stakeholders namely host communities, refugees, government agencies and humanitarian agencies about the proposed project and its objectives.
- To seek views, concerns and opinions of local residents and other people around the proposed project sites
- To establish if the stakeholders foresee any positive or negative environmental effects from the proposed project activities and if so, how they would wish the perceived impacts to be addressed.

**Objectives of Public participation**

The specific aims of the consultation process during the EIA study stage were:

- To inform the local people, entities and other stakeholders about the proposed project;
- Obtain the main concerns and perceptions of the population and their representatives regarding the project.
- Obtain opinions and suggestions directly from the affected communities on their preferred mitigation measures;
- To find out if there are issues or places of cultural/or religious importance to the local communities that could be negatively impacted upon by the project and infrastructure; and
- To improve project design and, thereby, minimize conflicts and delays in implementation;

### 5.2. Stakeholder Identification

Prior to detailed design and implementation, extensive consultations were held with stakeholders to gather information about the selected project site and to get the consensus and involvement of the various players, including identifying and coming up with the mitigation measures to address social and environmental concerns.

During the stakeholders' consultations and engagements with local authorities, the overview of the proposed project and objective of the ESIA was presented. Furthermore, the challenges that could impede the implementation of the project and the support needed from all stakeholders to ensure smooth implementation were also discussed.

Stakeholder engagement methodology

The following methods were used to gather information from the stakeholders:

- Key informant interviews.
- Observations; and
- Public participation was mainly achieved through direct interviews and observations.

### 5.3. Stakeholder engagement plan

Stakeholder consultation was conducted from March 27th, 2025 – 2nd April 2025. A combination of KII and FGDs were utilized targeting various stakeholders namely, GoSS (Ministry of Education, RCC), refugee and host communities.

The Table 7 below shows the stakeholder consultation plan in Jamjang and the dates.

**Table 7: Public consultation Jamjang**

| Local Government and local administration units | | Date March 28th | Time |
|---|---|---|---|
| Commissioner for Refugees Affairs (CRA) | Key Informant Interview (KII) | 28th /03/2025 | 8:30 AM – 9:00 AM |
| Ministry of Environment and Forestry, Ministry of Agriculture and Food Security, Ministry of Health | FGD | 28th /03/2025 | 10:15 am – 11:00 |
| Relief and Rehabilitation Commission – RRC | KII/FGD | 28th /03/2025 | 11:00 am – 12:00 pm |
| UNHCR | KII/FGD | 28th /03/2025 | 2:00 pm– 3:00 pm |
| Local administration/Payam | FGD | 28th /03/2025 | 3:00 pm – 4:00PM |

| Refugee camp – Pamir | | March 29th | |
|---|---|---|---|
| Meetings with refugee leaders, and PSNs | Baseline data collection FGDs | 29th /03/2025 | 9:00 – 9:45 am |
| Engagement with the Women | | | 9:45 – 10:35 |
| Meeting with the Youths | | | 10:45 – 11:35 |
| Meeting with Traders | | | 1:30 – 2:30 |
| Engagement with farmers | | | 2:30 – 3:15 |
| Refugee Camp – Ajuongthok | | 1st April | |
| Meetings with refugee leaders, | Baseline data collection FGDs | 1st /04/2025 | **9:00 am – 10:45 am** |
| Engagement with the Women | | | 9:45 – 10:35 |
| Meeting with the youth | | | 10:45 – 11:35 |
| Meeting with Traders | | | 1:30 – 2:30 |
| Meeting with farmers | | | 2:30 – 3:15 |
| Host community | | April 2nd | |
| Returnees | FGD | Morning | 9:00 – 10:00 |
| Women and youth self help groups, organizations, associations | Public meeting | Afternoon | 10:00 – 11:00 |
| APC | FGDs | Afternoon | 2:00 - 3:30 |
| Transect walk, farmers, site visits – | | Afternoon | 2:00 am – 3:00 am |

Stakeholder consultation sessions are shown in Figure 22

**Figure 22: Stakeholder consultation in pictures (Jamjang)**

FGD with the Refugee Leadership in Pamir Camp

FGD host community

KII CRA Assistant Commissioner

Findings of the stakeholder consultation forums are summarized in Table 8 and the participant list annexed.

**Table 8: Stakeholder consultation summary findings**

| | Stakeholder consultation (Jamjang) |
|---|---|
| Hon. William MinYiel (CRA) – Assistant Commissioner | • CRA has been collaborating with UNHCR since 2013 on assignments related to protection of refugees and conflict resolutions.<br>• CRA is also responsible for negotiating and allocating land for the refugees upon receiving request from the UNHCR.<br>• There are more than 133,000 refugees hosted in Ajuong Thok and Pamir Refugee settlements, additional 4000 refugees are hosted in Yida settlement, all within Ruwen Administrative Area.<br>• There's peaceful coexistence among the refugees, host communities and returnees – they share facilities including schools, water points and health centres. |

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| | • There are over 40 police officers allocated to Ajuong Thok and Pamir refugee settlements. However, the capacity is limited specifically on handling complex issues such as GBV, early marriages etc.<br>• Conflict resolution comprises the zonal and block leaders, police. Serious matters are refereed to Ajuong Thok Joint Court or mobile court.<br>• Floods affected the refugees and host communities in 2024, farmlands were submerged, and livelihood programs were greatly affected.<br>• The increasing refugee populations due to the war in Sudan is causing a severe strain on existing facilities. The situation is becoming extreme considering USAID budget cuts.<br>• CRA is aware of the proposed Response to the Sudan Refugee Crisis on South Sudan Project (SRCSSP) and supports its implementation.<br>• CRA has the capacity to improve security in the refugee settlement and farmlands. |
| Meeting with the GoSS representatives (RCC, Ministry of Education, Health, Agriculture) in Pariang | • RRC links the host communities and returnees with relevant humanitarian organizations and government agencies.<br>• RRC undertakes coordination of humanitarian interventions, follow up issues and facilitate resolution of conflicts.<br>• Returnees are mostly children and women. So far, RCC has received a total of 3205 households comprising 13870 persons.<br>• With regards to returnees, RCC has a center where returnees are received and details taken.<br>• RRC convenes quarterly meetings with partners to share ideas and track progress of interventions related to returnees' wellness. Besides, there are cluster meetings through the Ministry of Agriculture.<br>• RCC only provides accommodation and food for the returnees, for a few days, as they wait for IOM to transport them to their respective home areas, RCC also negotiates for land for the returnees.<br>• Returnees are allowed to integrate into their community, though no support or follow up actions are undertaken.<br>• Key environmental challenges – poor sanitation, the few existing latrines tend to collapse during rainy season, flooding, inadequate water resources.<br><br>**Agriculture**<br>• GoSS already demarcated agricultural land and now preparing for the planting season. |

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| | • Agriculture is mainly rainfed – prolonged dry season affects farming, floods destroy crops.<br>• Most farms are not accessible due to lack of access roads, the farms are cut off during the rainy season.<br>• GoSS has initiated programs to raise awareness on sustainable and climate smart agriculture, but there are no field extension workers.<br>• The ministry has 5 tractors out of which, 2 are grounded. There are no technicians in Jamjang to do the maintenance and repair, spare parts are also not available.<br>• Common crops which the government is promoting including maize, various types of sorghum which are drought resistant.<br>• GoSS has no capacity to install equipment for irrigation, though this would be a valuable asset/addition.<br>• There are no storage facilities for the harvested crops, and some are destroyed. |
| **March 29, 2025** | |
| Refugee leaders (Pamir Refugee Camp) | • A clear administrative structure comprising the chairman and committee members and representatives of different sectors namely agriculture, zone leaders, health, zone leaders<br>• Made up of about 54 blocks, and 7 zones (10 blocks make on zone). There are 96 households in a block.<br>• Chairperson is the head and undertake the coordination, of the different activities including agriculture, women, youth, GBV and conflict resolution.<br>• Each block has 1 water point shared by 96 hh – these are placed in the block center<br>• Treatment of water – is undertaken by IRC<br>• Refugees enjoying a good relationship with the host communities.<br>• There are incidences of GBV, but the there is a basic structure for manage the challenge – comprising reporting system to thee settlement administration, police and nearby health facilities.<br><br>**Challenges**<br>• Risk of flooding in the settlement during the rainy season.<br>• 2024 caused significant damages to crops and the market<br>• Community does not have any capacity to prevent the floods.<br>• Theft of crops or destruction of crops by the host communities (not frequent).<br>• The existing water sources are not sufficient considering the expanding population. The water points are also shared with the host community. |

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| | • Few tractors, and in most cases, the tractors are not made available early enough to facilitate land preparation.<br>• There's a 10 tonnes seed block within the refugee camp, but it is not sufficient<br>• Pest control in the farms is also a challenge as refugees lack equipment. Mostly rely on traditional methods like need tree but lack the capacity to do the work in a large scale.<br>• Common illnesses in the camp include TB, HIV, mental health issues. There is no proper structure for treatment or support after IRC withdrew support.<br>• Health centre was run by IRC with support of UNHCR, but now the government is taking over, they are concerned if the government will have the capacity to offer the basic services. This also affects availability of vaccines and ARVs.<br>• Open burning of waste, some households burry the waste.<br>• No proper system or incinerator of medical waste from the existing medical facilities.<br><br>**Education**<br><br>• There are 10 primary schools and 3 secondary schools in Jamjang camps (Ajuongthok and Pamir). These are shared by the host communities and refugees.<br>• Free education for all (10 Primary & 3 Secondary) and school feeding programme in primary schools by WFP.<br>• There is no funding for ECD. Currently now working.<br>• One vocational training managed by DRC<br><br>**Environmental**<br>• Food rationing and shortage is a serious concern<br>• Vegetable gardens are few and plots are small.<br>• Risk of flooding<br>• There is farmland provided by the community, but refugees lack tools. Other factors such price variation of farm inputs, and labor affect production. The seeds are not adequate.<br>• Flood mitigation – improve the channel to direct to nearly seasonal rivers and protect farms from backflow of water<br>• Provide seed for the local variety of sorghum e.g wat, vegetable seeds that are resistant to droughts.<br><br>**Youths**<br>• Host Football and volleyball team tournaments with hosts<br>• Youth association promotes peaceful coexistence |

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| | • The VTC integral in training and capacity building of the youth - garment making, welding, carpentry. However, the capacity not adequate.<br>• Youths require additional training - first aid training, business, digital skills, plumbing, hairdressing.<br>• Some youths occasionally sell goods given them, but the administration is currently monitoring the activities<br>• Other youths established workshops for tailoring and welding (beneficiaries of UNHCR programmes).<br><br>**Traders – security,**<br>• Two markets in the settlement and market committee responsible for administration.<br>• There are waterpoints in the market, but the two existing latrines (collapsed) due to flood, and iron sheets vandalized,<br>• No fire response strategy |
| **April 2, 2025** | |
| Ajuong Thok (Refugee leaders) | **Education**<br>• Student/pupil enrolment has increased since the war in Sudan began, but class attendance varies based on many factors.<br>• ECD section is closed.<br>• Class attendance is affected by different factors including<br>✓ Food rationing – currently about 80% of refugees do not receive food supply<br>✓ Some of the separated children and women headed households start working or seeking other sources of income instead of studies.<br>✓ Migration to other places in search of food or income.]<br>✓ Traditional norms that encourage early marriage and early pregnancies<br>✓ Orphans mostly looking for basic income activities at the expense of going to school<br>• Previously learners were engaged in some awareness programs on reproductive health, early marriages, HIV/AIDs but the funding not available now.<br>• Female headed households not taken into account in the programming<br>• Risk of conflicts due to exclusion of some groups e.g women headed households in some programs.<br>• Host community also suffering and competing for the little food at the refugee settlement<br>• Refugees especially with the ulcers find the water not suitable especially if more chlorine is added |

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| | • Taps are not replaced and in cases where there are leakages, the taps are removed.<br>**GBV/Conflicts**<br>• Block leaders and community peace team handle conflicts, escalated to next level (tribal leaders) or to the camp leadership depending on severity.<br>• There is a local court and police that also support peace and conflicts resolution.<br>• Water management committee and child protection committee at the block level, and model family help to resolve conflicts at the household level<br><br>**Driving factors for GBV at the settlement -**<br>• Food rationing -some households do not receive supply<br>• Income - It is mostly responsibility of the mother to find an alternative source of income e.g cut poles, grass, charcoal, but these are not sufficient<br>• Women also face GBV cases in the bush from unknown people, rape attempts, beaten<br>• Prostitution also common if the women are unable to find income or provide for their families<br>However, there are initiatives that can be scaled up to safeguard the women and children<br>• Soap making<br>• Training and business development<br>• Garment making<br>• Vegetable growing in the settlement – currently, there no enough watering cans and the distance from the water point to the kitchen gardens are long.<br>• Awareness creation on GBV prevention.<br><br>**Agriculture – seed distribution and production**<br><br>• Flooding – farms were submerged (both refugee and host community)<br>• Flooding affected the income and farm yields<br>• Seed distribution not fair – not everyone is given the seeds<br>• Insecurity at the farm, rape cases from unknown people. Some refugees are already traumatized.<br>• Tractor should be provided early enough for farm preparation.<br>• Only 2 tractors serving both Ajuong Thok and Pamir,<br>• Some farmlands are very far and not accessible. It can take up to 2 hours on foot. It is also difficult to transport the crops to home<br>• Committees for tractors are not efficient – poor management |

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| | **Leadership**<br>• Clear leadership structure at block and zone level – with various committees.<br>• Existing challenges comprise insecurity in the camp, hunger and poverty due to inadequate food, goats stolen, theft incidences increasing,<br>• Lack of food resulting to other social vices including prostitution, theft<br>• Health facilities not equipped with the required medicine<br>• lacking medicine, refugees buy medicine from the market<br>• ECD section is currently closed<br>• There are 10 zones and 60 blocks.<br>• Elders and persons with disability represented in the leadership structures – comprise 7 individuals.<br>• Average household- size 1-16 (it varies). |
| | APC – mainly host communities |
| | • APC is registered by the GoSS<br>• 48 members<br>• Members were trained on peaceful coexistence between host and refugee communities, as well as climate change and climate smart agriculture.<br>**Challenges**<br>• Access roads are poor<br>• APC has no office, currently holding meetings in the seed storage facility.<br>• Population is increasing rapidly while the existing facilities and equipment are not sufficient, e.g there are only 3 tractors.<br>• Tractors should be made available early enough before the rains<br>• Risk of food shortage leading to rise of insecurity and theft, specifically by the refugees who lack food.<br>• Refugees are usually given priority during distribution of seeds.<br>• No capacity to respond to emergencies and control pests.<br>• IRC used to undertake mobilization and preparation for planting, up to now there is no preparation or communication, worried about the food production for the refugee. |

## CHAPTER SIX: ANALYSIS OF PROJECT ALTERNATIVES TO THE PROPOSED PROJECT

### 6.1. Introduction

This section analyses the project alternatives in terms of technology scale and waste management. Alternatives to a proposal can be generated or refined, either directly or by reference to the key issues identified. A comparison of alternatives will help to determine the best method of achieving project objectives while minimizing environmental impacts or], more creatively, indicate the most environmentally friendly or best practicable environmental option.

Based on an environmental standpoint, not carrying out the development ("No Project Alternative") may be the best option, as the sites would remain relatively undisturbed. However, it is also clear that the sites will continue to be impacted by influx of refugees, returnees and host communities.

Besides, from a socio-economic perspective the "no action" alternative may not be the best alternative as the numerous benefits to be gained from the development both locally and nationally would not be realized and the resources in the area would continue to be underutilized and/ or degraded. In addition, incidences of conflicts between refugees, returnees and host communities over access and control of the existing resources would be rampant. Poverty levels will increase and access to basic services such as decent shelter, health, food and water will not be achieved.

The consultant team assessed several alternatives to the proposed project and associated activities to seek different ways of minimizing impacts on the environment and at the same time achieve its objectives. This not only justifies the course of action (base case) but also enables the risk management to follow a hierarchy of:

- Avoidance: Temporal and spatial;
- Elimination and minimization: non-structural *ex-ante* mitigation
- Elimination and minimization: structural *ex-ante* mitigation
- Elimination and Response: structural *ex-post* mitigation
- Elimination, Recovery and Development: non-structural *ex-post* mitigation

The Alternatives were reviewed considering the following aspects: spatial and temporal aspects, design and technology to be employed, inputs, existence and the base case with mitigation. The stakeholder consultation and site visits during the ESIA provided basis for identifying and qualifying the alternatives.

### 6.2. Alternative sites

This option involves pursuing the project and the project activities but on a different site to prevent environmental and social impacts that are relevant to the proposed sites. The avoidance of any potential impacts was identified as the main benefit, but this will require

the identification of a different site away from the current sites. In the context of the proposed SCRSSP, identification, demarcation and allocation of land/sites for installation of facilities for the refugees, and returnees is a lengthy process that is coordinated by the GoSS through the CRA. The land transfer of ownership of these sites were already completed, while some are underway.

Therefore, alternative sites are also not readily available since availability of land is limited and the proposed sites have pre-existing infrastructure for the refugees, returnees and host communities. The selected sites are within or adjacent to the refugee settlements, and completion of the projects would greatly improve well being, peaceful co-existence and integration of the host and refugees. There are no foreseen relocation or destruction of vital ecosystem systems.

In addition, UNHCR and CRA would spend a long period of time on design and approval of the plans by the relevant government departments and host communities. This will increase the cost and require time extension. On the other hand, the war in Sudan is ravaging resulting into influx of refugees and returnees to South Sudan. These people require urgent assistance and infrastructure to safeguard their rights, the environment and the society where they settle.

### 6.3. Alternative schedule

This option entails carrying out the proposal at a later time thereby offsetting its impacts to that time. The only benefit is if there are improvements in baseline conditions and technologies that may be involved with the proposal. However, in this case, there are no guarantee, and it may only lead to delays in development, therefore carrying out the proposed project with mitigation would be a preferred option due to this uncertainty. In addition, carrying out the proposed project at a later time may lead to more operational and logistic costs due to increasing inflation and standards of living.

### 6.4. Alternative design

This option entails undertaking the project but with different infrastructural designs that encompass buildings layouts and location of supporting infrastructure. The presented project design was however achieved by considering the options available that would ensure achieving the humanitarian objectives and avoid or reduce environmental and social impacts as much as possible.  in collaboration with CRA settled on the proposed design after thorough consultation with different within the humanitarian context.

### 6.5. Resource alternative

The materials used to construct the project structures are coarse aggregates of different sizes, fine aggregates, cement, water, angle iron, sand and selective materials. These materials are sourced from the project surrounding areas. To prevent the occurrence of

impacts on the natural environment excessive retrieval of construction materials from one source should be avoided.

The goods and services will be provided by suppliers pre-qualified by UNHCR. The prequalification is based on strict measures that include adherence to the environmental and social safeguards of the UNHCR and AfDB.

The alternatives are analyzed based on the technical feasibility; economic viability and environmental acceptability conditions. They are also compared and analyzed in terms of site location, design type, time schedule, raw materials (resources) availability, climate smart technologies. Finally, the "No Action" alternative has been rejected, and the project implementation option is accepted by examining the project benefits to the local community and due to low negative impacts of the project on the environment and the community.

### 6.6. The no Project Alternative

The No Project Alternative option in respect to the proposed project implies that no humanitarian intervention relating to the SCRSSP will be achieved. This option is a suitable alternative from an extreme environmental and social impact perspective as it ensures returning the site to its previous natural condition. Under the No Project Alternative, the proposed project would not be constructed, and services will be foregone and the anticipated impacts, however minimal resulting from provision of goods and services, and civil works will not occur. This option, however, involves several losses not only to the project but also to the GoSS, the refugees, host communities and returnees.

The socio-economic impacts resulting from the site activities will not be realized, and the vision for a peaceful coexistence, economic stability and safe integration of the returnees will be foregone. The economic benefits especially during provision of services and goods aimed to alleviate suffering as well as provision of jobs for skilled and non-skilled workers, vocational training and expansion of the agricultural sector will not be realized.

The anticipated country's response to humanitarian need and refugee crisis may not be realized. On the other hand, the anticipated insignificant environmental impacts resulting from construction, and operation activities would not occur. From the above analysis it becomes apparent that the No *Project Alternative* is the least favorable to the UNHCR, GoSS, local population, returnees and refugees in general. This option is best adopted more so if the project sites are ecologically fragile. However, based on site investigations and stakeholder consultations, the sites are not fragile and have been carefully selected in collaboration with the host communities and the CRA.

The advantages of 'No Action Alternative' include:

- Minimum environmental and social disturbance

Disadvantage of 'No Action Alternative' include:

- The humanitarian gains as a result of implementation of the proposed SCRSSP project in Jamjang are foregone
- The refugees who are arriving from Sudan as well as returnees and host communities in South Sudan continue to live in deplorable environment, overstretched facilities such as health, education and sanitation facilities.
- Prevalence of conflicts between the host communities and refugees, for example, a serious conflict that happened on January 17th, 2025, leading to destruction of properties.

**6.7. The proposed development**

This option means that the ESIA report for the proposed SCRSSP will be presented to the AfDB and the ESMP will be implemented during the entire project cycle to prevent any adverse social and environmental impacts. The implementation to ensure that all environmental measures are complied with during provision of goods and services, and civil works. The alternative consists of the CRA's final proposal with the inclusion of the AfDB and GoSS guidelines and regulations and procedures.

This Environmental Assessment report addressed both environmental and socio-economic issues concerned with its development and operation. Environmental issues have been given due consideration during project design, making the benefits of the project maximized, while reducing the environmental and social cost of the development.

Considering environmental and social-economic concerns, the project sites were determined to be more suitable due to availability of land, the land use system, accessibility, potential use and acceptability by all the stakeholders.

**6.8. Analysis of alternative construction materials and technology**

There is a wide range of construction and furnishing materials which can be sourced locally, most of which shall be low maintenance and environmentally sound. The proposed project components that entail civil works will be constructed using concrete, natural stones for the foundation, cement for plaster works, structural steel, metal scaffolds (height access) and formwork. The concrete foundation will be built using locally sourced sand, cement, metal bars and fittings that meet the GoSS standards.

The metal scaffolds will be advantageous than timber because it will reduce the wasting of precious trees, has a longer lifetime, provides a steady and firm standing, easily assembled and dismantled and it increases the work efficiency.

The goods and services will be provided by prequalified suppliers, selected by UNHCR through a vigorous and competitive process.

### 6.9. Domestic wastewater management alternatives

**Two most suitable technologies are discussed below:**

***Alternative one: Connection to sewer system***

Connection to a main sewer line will solve the wastewater management issue at a very minimal cost and in an environmentally efficient manner. Currently this option is not possible since the sewer is not available. The recommended course of action for this site would be to consider connection to soak pits

***Alternative two: Use of Soak pits/Pit latrine***

This involves digging a pit and filling it with gravel/stones of different sizes in order to absorb wastewater. In the absence of a sewer line, this remains the most appropriate option for the developer.

***Solid waste management alternatives***

An integrated solid waste management system is recommendable. First, the proponent will give priority to Reduction at Source of the materials. This option will demand a solid waste management awareness programme in the management and the residents. Secondly, Recycling, Reuse and compositing of the waste will be the second alternative in priority. This will call for a source separation programme to be put in place. The recyclables will be sold to waste buyers within the surrounding areas. Finally, disposal in dumpsites will be the last option for the proponent to consider.

## CHAPTER SEVEN: IDENTIFICATION, ANALYSIS AND ASSESSMENT OF POTENTIAL IMPACTS

### 7.1. Introduction

This part includes impacts during implementation/civil works, operation phase and decommissioning phases on the following issues: soil degradation; air quality; noise; water resources; solid and liquid waste management; drainage, terrestrial ecology, visual and landscape; public comfort; occupational health and safety. Most of these key issues were identified during the scoping exercise and are clearly elaborated as follow:

### 7.2. Impact Identification

***Sources of Impacts***

The impacts associated with the proposed project components in Jamjang, will emanate mainly from *project inputs, activities and outputs.*

These will be related to the following activities

- Sourcing and extracting materials
- Transportation of materials to the site
- Construction activities
- Handling of construction wastes
- Decommissioning activities

***Receptors of Impact***

**i. Social Environment**

The components of human environment that will be affected by the proposed activities are:

- Settlements within project vicinity (mainly comprising host communities and returnees)
- General public occupying and visiting the area
- Public health concern during construction and operation stages

**ii). Physical environment**

- Soil, water and air are potential of the negative impact.

**iii) biological environment**

- These are primarily the vegetation of the area

### 7.3. Expected Impacts

The expected impacts of the project vary based on the specific activity e.g goods and services, or civil works. Table 9 is a summary of all the project components, estimated risk level and impacts.

**Table 9: Summary of project components and impacts**

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| **Component 1: Enhancing jobs and livelihood amongst the refugees and host** | | | | |
| **Sub-component 1.2: Micro credit and business support for enterprise development** | | | | |
| Provide micro-credit support to agro enterprise along the agriculture value chain | | Goods | Low | **Positive** – Increased agricultural productivity due to accessibility to farm inputs, improved food security, increased income and living standards among the farmers, peaceful coexistence among the communities,<br>**Negative** – The farmers may default to repay the loans causing debt burden in the region. |
| Provide business development credit for enterprise capitalization | | Goods | Low | **Positive** – Creation of job opportunities, Entrepreneurship growth in the region, the funds will enable economic diversification, peace and security due to stable and strengthened economy.<br>**Negative** – Corruption leading to biased distribution of the finances, mismanagement of the funds that might affect ability of beneficiaries to repay the loans, this can also be caused by poor market condition in the region. |
| Support to sectoral community structures | | services | Low | **Positive** – Enhance local service delivery, Capacity development of local administration to respond to emergencies, local leaders can help in mitigating the conflicts in the region.<br>**Negative** – Ungoverned sectoral structures might lead to wasting of the resources through duplication of the work done. |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| **Sub-component 1.3: Strengthen capacity community-based enterprise groups for Resilience** | | | | |
| Establish enterprise groups at village/boma for capacity development on climate smart cropping system | | Goods | Low | **Positive** – Strengthened community resilience to the effects of climate change, adoption of climate smart technologies in agriculture, access to farm inputs and resources, improved farm yields, accessible market for the farm produce, increased food security, learning exchanges among the local farmers on climate smart techniques. |
| Procure mechanized equipment (tractors) for on farm mechanized operations including incountry logistics | | Goods | Low | **Positive** – Mechanization enables cultivation of larger farm areas, leading to increased production, improved food security. Adoption of the climate smart technologies among the communities, cost and labour efficiency,<br>**Negative** – Maintenances of the machines can be a challenge due to lack of the skilled technicians. Poor infrastructure in the region may hinder the operations of the machines. |
| Procure and distribute climate adapted seed kits for farming for refugees and host community | | Goods | Low | **Positive** – Capacity building on climate smart practices, climate resilience, improved farm yields, improved food production, reduction of overreliance on humanitarian services, Enhanced livelihood, peaceful coexistence among the communities, and reduction of social issues such as Gender Based Violence. |
| Livestock restocking programme for the host | | Goods | Medium | **Positive** – Improved livelihood of the communities through economic diversification, response to climate change and impacts, peaceful coexistence among the communities, boost economic development, job opportunities, food security reducing |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | malnutrition cases and hunger in the region.<br>**Negative** – Environmental degradation such as soil erosion as a result of overgrazing, conflicts over access to pasture and water especially during the dry season, Disease risks due to lack of veterinary services in the region. |
| Drilling of water wells | | Civil Works | Medium | **Positive** – Enhancing a climate resilient community ground water is often reliable in dry seasons, improved water access to the community, improved health due to accessibility to clean water, enhanced climate smart agricultural practices such as irrigation hence improving food security.<br>**Negative** –Poor management of the wells might lead to despair, Eruption of community conflict over the resource (water). |
| Support to sectoral community structures | | services | Low | **Positive** - Improved capacity of the community to manage their own communal affairs/development, learn conflict resolutions, awareness creation on peacebuilding, enhance security, HIV/AIDS prevention, teenage pregnancies, Gender Based Violence, early/forced marriages among girls. Enhance inclusion of all community members in decision making.<br>**Negative** – Corruption and power imbalance among the elite. |
| **Sub-component 1.4: strengthening private sector seed multiplication for certified** | | | | |
| Engage private sector for seed multiplication using foundation seeds targeting out growers' farmers | | Services | Low | **Positive** – Enhanced coordination for seed multiplication technologies leading to production of better affordable quality seeds, improved farm production, food security, |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | reduction of hunger and malnutrition cases, capacity building of the out growers farmers. |
| Establish seed production blocks' | | Civil works | Medium | **Positive** – Improved quality of certified seed availability in the region, creation of job opportunities among the farmers involved in the seed production, capacity building of the farmers and the local experts on the best agricultural practices, reduced cost/ time of transporting and distribution of seeds.<br>Reduced post-harvest losses by reducing spoilage of the produce, improved quality of the produce due to better handling/storage, Increased income among the farmers, increase market linkages among the farmers and the buyers.<br>Reduced conflict among the communities over land use and ownership, Access to credit among the community members since they can use the documents as collateral, improved agricultural practices among the farmers.<br>**Negative** – Mismanagement of the facility resulting to disrepair of the facility thus reducing its effectiveness and efficiency. Noise pollution during construction activities and generation of solid wastes from the construction debris. Unpredictable weather patterns can disrupts the seed production cycles. |
| Construction of post-harvest handling storage (seeds storage, showroom, mills/farm market) | | Civil works | | |
| Demarcation of agricultural farmland | | Civil works | | |
| Support to sectoral community structures | | Services | Low | **Positive** - Improved capacity of the community to manage their own communal agricultural affairs, learn conflict resolutions, awareness creation on peace building, enhance security, HIV/AIDS prevention, |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | teenage pregnancies, Gender Based Violence, early/forced marriages among girls. Enhance inclusion of all community members in decision making.<br>**Negative** – Corruption and power imbalance among the elite. |
| **COPONENT 2: Restoration and improvement of basic social services in the refugee** | | | | |
| **Sub-component 2.1: Rehabilitation and upgrade of school infrastructure** | | | | |
| Construction of new classroom blocks (pre-school) in existing schools | | Civil works | Medium | **Positive –** Improved infrastructure for education, student safety and wellbeing, enhanced literacy and skills development, employment opportunities for the constructors<br>**Negative –** Dust and noise pollution during civil works, increased water demand during construction, health and safety hazards disrupting the school activities |
| Rehabilitation of vocational center | | Civil works | | |
| Renovation of classrooms in existing schools | | Civil works | | |
| Providing vocational skills trainings to refugees and host community members | | Services | Low | **Positive-** Increased economic empowerment for both the refugees and the host communities, reduced unemployment cases, enhances social inclusion improving mutual interaction between the refugees and the communities , capacity development of the local people, improved living standards, reduced mental health cases and prevention of social immoralities such as youth radicalization, crime, prostitution<br>Enhanced community ownership of the education infrastructure, this will help in maintenance of the structures, promotes inclusivity of community members in decision making process, promotes capacity building among the communities on matters education.<br>**Negative-**Limited job opportunities due to market saturation, legal |
| Support to sectoral community structures | | Services | | |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | barriers which might bar the refugees from working in South Sudan. Community disputes over issues such as power dynamics, bias |
| **Sub-component 2.2: Improvement of WASH facilities for sustainable water services** | | | | |
| Construction and solarization of boreholes | | Civil Works | Medium | **Positive**-Reduced tensions between the communities over water resources, improved access to clean water, reduced waterborne ailments, improved agricultural practices and increased agricultural food production raising the standards of living of the communities.<br>**Negative**- Noise pollution during construction, poor maintenance leading to disrepair, increases waste generation (electrical waste) |
| Distribution of hygiene kits (in kind or cash) | | Goods | Low | **Positive-** Prevention of the water borne diseases such as Cholera, enhanced community awareness forums on best hygiene and sanitation practices, addressing women/girls unique hygiene challenges, increased climate resilience among the communities.<br>**Negative**-Risk of over dependency in kits if no sustainable solution is provided, improper disposal of the packaging materials of the sanitary kits imposing environmental hazard. |
| Support to sectoral community structures | | Services | Low | **Positive**-Enhance a sense ownership of the WASH projects/ facilities hence their sustainability. Promotes inclusivity of the community in the WASH campaigns, sectoral community structures will help mobilize communities and enable grassroots WASH awareness in case of an emergency. |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | **Negative-**Corruption among those in power, misallocation of the WASH resources/kits/facilities |
| **Sub-component 2.3: Community empowerment and psychosocial (Mental health) support** | | | | |
| Construction of safe house to accommodate the GBV survivors with heightened risks. | | Civil works | Low | **Positive-**provision of safe space for the GBV survivors- the houses can be used as counseling centers for the victims, encourages women/girls empowerment, community capacity building on the dangers of GBV and ways prevention, the houses (centers) will help reduce stigmatization discrimination from the society.<br>**Negative-** Noise and dust Pollution during construction |
| Construct a community multipurpose center (including solarization) | | Civil works | Low | **Positive-**Provides safe spaces for the mental health victims, can act as counseling and recovery centers, community empowerment programs, accessibility of the services, the centers can be used as peace building and conflict resolution centers.<br>**Negative-** The center can be targeted by the armed groups, dust and noise pollution from the construction works. |
| Organize sports events and celebrations of 16 days of Activism and International Women's Day to connect with their cultural heritage and promote inclusivity | | Goods | Low | **Positive-** Enhance community engagement and cohesion, promotes inclusivity of women/girls in communal forums .Create awareness on gender equality and prevention of Gender based Violence, Sports enhances the physical and mental wellness of the community. |
| Support to sector community structures | | Services | Low | **Positive-** The structures can help in early detection of the mental health related issues in the community. Capacity building on mental health |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | management, they offer the psychosocial support system at the grassroots level. Encourages collaboration and cohesion in fight against mental health issues.<br>**Negative-**Lack of capacity among the community structures to offer adequate mental health support system. |
| **Sub-component 2.4: Facilitate access to integrated health and nutrition services** | | | | |
| Provide cash assistance and livelihood support for nutritional support to vulnerable households | | Goods | Low | **Positive-**Improves the health and nutrition of the community, reduction of the malnutrition cases. Boost the economy due to increased cash flow in the economy, reduced fatality rate<br>**Negative-**Mismanagement of funds, fluctuation of food prices due to inflation. Cash is likely to attract theft. |
| Support to sectoral community structures | | Service | Low | **Positive-** Capacity development of the leadership and community structures to provide basic education services on good nutrition and health practices. The structures enhance faster response to the needs of the local community. Community ownership of the health and nutrition programs in the region thus ensuring the sustainability of the projects. |
| **Sub-component 2.5: provide sustainable lighting energy solutions for improved settlement security** | | | | |
| Installing solar lighting in settlement (community structures). | | Goods | Low | **Positive –** Access to (clean) source of energy, improved health due to use of clean energy sources, reduction in risks such as fire, better lighting in the household, improved security and safety especially for women during the night. Improving the economy of the region, since most businesses can operate for long hours. Enhancing |
| Provide solar lamps to vulnerable households | | Goods | Medium | |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | the academic performance of school going kids.<br>**Negative –** E waste management challenges especially worn-out parts of the solar lamps |
| Support to sectoral community structures | | Services | Low | **Positive-** Community ownership of the project, this enables sustainability and continuing of the projects, capacity building of the community on green energy.<br>**Negative-** Mismanagement due to lack of skills and technical know how to handle the solar panels. |
| **COMPONENT 3: Restoration of environment in the refugee and host** | | | | |
| Sub-component 3.1: Community preparedness for disaster risk reduction and early warning systems | | | | |
| Set-up community committees for disaster risk reduction and setup early warning systems or community networks | | Goods | Low | **Positive**-Capacity build the community members on disaster risk reduction, and early warning systems, increased disaster preparedness among the community members, quick response to disaster by the community members in case of an emergency, wellbeing of the project beneficiaries. Building a resilient community against the effect of climate change. Local knowledge and ownership of the disaster risk initiatives.<br>**Negative-** Regular maintenance challenge of the early warning signs |
| Construct flood protection infrastructure (Hafirs/drainage) | | Civil works | Medium | **Positive** – Restoration of the degraded land, climate resilience and flood protection, improved public health due to reduced water borne diseases resulting from floods, improved agricultural productivity due to soil protection<br>**Negative** – Cost of regular maintenance, noise, dust pollution and waste generated during |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | construction, accidents as a result of not adhering to occupational safety, health practices, increased water demand, destruction of grassland |
| Cash for labor intensive public works for flood mitigation and preparedness | | Goods | Low | **Positive** – Income support for the affected household, building a resilient community, improved income and wellbeing of the community, alternative source of income ,enhanced food security, improve the local economy due to cash circulation,<br>**Negative-** Mismanagement of the funds, rise in food prices due inflation |
| Support to sectoral community structures | | Services | Low | **Positive-**Facilitate quick response to the local emergencies, community empowerment enhances continuity of the initiatives, community ownership of the projects |
| **Sub-component 3.2: Enhancing access to clean cooking options and training on clean cooking access.** | | | | |
| Support women to produce fuel efficient stoves and distribute among refugee women | | Goods | Low | **Positive** – Improved health due to clean cooking technology, environmental conservation due to use of fuel-efficient stoves, creation of awareness on clean energy. Empowerment and inclusion of women in decision making, increased income generation among the women, reduced use of firewood, hence reduced deforestation.<br>**Negative** – Increased demand of the stove leads to overexploitation of the raw materials causing environmental degradation |
| Support to sectoral community structures | | Services | Low | **Positive-** Increase in community awareness on matters clean cooking , Capacity development, improved livelihoods among community members, it enables ownership and |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | fast adaptation of the clean cooking initiative, this ensures the project is sustainable |
| **Sub-component 3.3: Build community capacity to promote Environment protection agroforestry and community tree planting** | | | | |
| Produce and distribute of fruit and medicinal tree seedlings | | Goods | Low | **Benefits-**Encouraging trees plantation, reducing deforestation, restoring of the degraded land due to soil erosion, enhances climate resilience , improved health and nutrition among the community members, economic empowerment among the people, fruits can be sold as a source of income, enhance peace and cohesion in the region.<br>**Negative-**Poor climatic condition can affect the growth and survival of the seedlings. |
| Establishment of woodlots and reforestations | | Goods | Low | **Positive-**Promotes climate resilience, control soil erosion, restoration of the degraded land community being empowered to plant trees, harvest the produce and sell as source of sustainable livelihood, trees act as home to various biodiversity<br>**Negative-** Poor climatic condition can affect the growth and survival of the seedlings |
| Construction/opening of Access roads to the farming area | | Civil works | Low | **Positive-**Boost local economy of the region, Market accessibility due to easy transportation of the harvest, capacity building and training of the farmers using a hands on experience .<br>**Negative-** Dust and noise pollution during road construction, biodiversity loss as they pave way for the road |
| Support to sectoral community structures | | Service | Low | **Positive-** Increase in community awareness on reforestation, improved livelihoods among |

| SCRSSP Project Component – Jamjang' | No. Of units | Category | Risk rating | Comments |
|---|---|---|---|---|
| | | | | community members through selling the fruits and timber from the trees, it enhances ownership and fast adaptation of the tree planting culture, this ensures the project is sustainable |
| COMPONENT 4: Project management and capacity building | | | | |
| Sub-component 4.1: Local/county government capacity building and infrastructure improvement | | | | |
| Provision of equipment (laptops, printers, etc.) including in country logistics | | Goods | Low | **Positive-**Enhance work efficiency, improved communication, capacity building in emerging technologies to enhance work in the county government. Time saving, faster compared to manual, improved ways of data keeping compared to the old manual system. Enhance environment conservation due to reduced paper usage thus reduced felling of trees.<br>**Negative-** Risk of misuse of the gadgets for individual purposes. |
| Sub-component 4.2: CRA institutional capacity building | | | | |
| Provide incentive cash support for Peace building community activities | | Services | Low | Capacity development of the local communities to ensure peaceful coexistence conflict resolution, encourages participation in the peace building initiatives, boosting the local economy through the existing cash flow.<br>**Negative-**Mismanagement of the funds. |

Both the positive and negative impacts of the project components based on assessment Table 9 above are discussed below.

### 7.3.1. Positive Impacts

Implementing the South Sudanese Community Resilience and Stability Support Project (SCRSSP) components in the Ruweng Administrative Area will generate several positive impacts on refugees. Returnees and host communities. These components collectively

enhance social cohesion, economic resilience, and environmental sustainability, contributing to a more stable and peaceful community in the Ruweng Administrative Area.

***Component 1: Enhancing Jobs and Livelihoods***

**Economic Growth**

Strengthening Community-Based Enterprise Groups enhances resilience and promotes self-reliance among refugees and host communities, similar to successful social enterprise projects in other parts of the world. The poverty levels is quite high considering the difficult socio-economic, political instability and lack of holistic institutional structures for economic growth. The refugees, host community and returnees mainly survive on food rations and other humanitarian support from UNHCR and partners. However, taking into account the global funding cuts and the need to transition from dependence on aid to self reliance, the SCRSSP will greatly lead to long-term economic growth. Private sector seed multiplication and certified seed production can increase agricultural productivity, providing economic opportunities and improving food security.

**Infrastructure development**

SCRSSP components targeting improvement of the infrastructure for water supply, seed production and storage are valuable to the project beneficiaries in the Ruweng Administrative Area. Specifically, drilling water wells and constructing post-harvest handling facilities improve access to clean water and enhance agricultural productivity, benefiting returnees, refugees and host communities. The project will also help address food insecurity in the area that has been characterized by the drop in food supply by WFP. In addition, food security is linked to improved health and wellbeing, reduction of GBV, child mortality and insecurity.

***Component 2: Restoration and improvement of basic social services***

**Education and Skills Development**

Rehabilitation and construction of school infrastructure, including vocational centers, enhance educational opportunities and skills development for refugees, returnees and host communities. The two VTCs located in Pamir and Ajuong Thok Refugee Settlements lack the required infrastructure in the form of workshops and lecture halls for training, which limits the number of learners that are enrolled and courses offered.

The school infrastructure is fairly developed (comprising ten primary schools and three secondary schools) in the project areas. However, there is congestion due to the increasing refugee population, with each class now accommodating up to 150 learners

instead of the expected 50 learners. The school administrators have introduced short-term measures shifts where some learners attend lessons in the morning and others in the afternoon to accommodate the growing student population.

It is also important to take note that the ECD section is shut down due to lack of financing. Therefore, the project should also consider other aspects of ECD education such as operation and maintenance of the existing facilities.

**Health and Hygiene**

Improvement of WASH facilities through borehole construction and solarization ensures sustainable access to clean water, reducing health risks. The boreholes are the main sources of water. However, the community is grappling with acute shortage of portable water resulting from over abstraction of water in the existing boreholes. Therefore, drilling additional boreholes and solarization will improve access to clean water.

**Psychosocial Support**

Community empowerment and psychosocial support, including safe houses for GBV survivors, improve mental health outcomes and community cohesion.

***Component 3: Restoration of the Environment***

**Disaster Risk Reduction**

Constructing flood protection infrastructure and supporting community structures enhance resilience against natural disasters, protecting both refugees and host communities. In the previous years, floods resulted to damage of properties, roads and crops. The risk of flood is still high considering the topography and lack of proper infrastructure for flood control. Therefore, the proposed project components will be crucial in managing flood and related risks.

**Environmental Protection**

Promoting agroforestry and community tree planting helps restore the environment, supports biodiversity, and contributes to climate change mitigation. There are small scale initiatives by the UNHCR in the form of woodlots and tree nurseries and tree planting initiatives in the community. These are demonstration that agroforestry is a doable intervention that will benefit the community and restore degraded land.

**Accessibility and Infrastructure**

Opening access roads to farming areas improves connectivity and facilitates economic activities, benefiting both refugees and host communities. It is also one of the steps towards ensuring food security and transition from dependence on aid to self-reliance by the project beneficiaries.

### 7.3.2. Negative effects

The proposed development may produce some negligible negative environmental and social impacts that may necessitate appropriate mitigation measures. These include but are not confined to;

***Noise and Vibration***

Relatively low noise levels are expected in all projects involving civil works. Noise control measures should be implemented in the construction area if the noise levels exceed 90dB (A) for a continuous 8 hours exposure. In addition, protection against the effect of the noise exposure among the workers should be monitored. Noise pollution is not foreseen during the operation phase.

***Soil Erosion***

The project sites are generally dry and there is the increased risk of erosion and increased dust during excavation and movement of the machinery in the proposed sites. Soil movement is also common during laying of foundations (earthworks) for the projects and site clearing. The contractors should adopt comprehensive soil erosion measures that include the following;

***Increased Water Demand***

The increase in demand for water will occur for all the project components that entail civil works e.g proposed construction and rehabilitation of the various facilities under the SCRSSP. Water will be sourced from existing water yards and boreholes in the project sites. The consultant will also be advised to undertake rainwater harvesting during the rainy season to supplement the water supply from the common sources, namely boreholes and water yards.

***Air Quality (dust pollution)***

The civil works on the proposed sites will result to increased dust and gas emissions. Dust particles caused by vibrations of machines and vehicle movement suspends in the air mostly during dry spells.

***Fire***

Wildfires are common occurrences in areas adjacent to the proposed project sites in Jamjang. Some of the wildfires are started by human activities or natural causes due to the extreme heat. In addition, fire may be caused by the machinery used during civil works or operations of the installations.

***Solid waste***

Huge quantities of solid wastes are normally generated from construction activities. Such wastes include stones, wood, broken glasses, containers, rods of metal, pieces of iron sheets etc. There is need for proper management (proper disposal) of the solid wastes expected from the site during construction phase.

Besides, other wastes such as medical waste, menstrual hygiene kits, and other solid waste materials and other sanitation wastes will be generated from provision of goods and services under the project. The situation is further affected by lack of a functional solid waste management system by the public or private sector. Therefore, it is important to put into place practical measures and infrastructure for waste minimization, material recovery, reuse and safe disposal of all types of wastes in the project sites.

***Ecological impacts***

The sites in Jamjang have no vegetation of conservation value hence the project will have no impact on ecology. It is however prudent to consider introduction of vegetation on site as part of environmental conservation initiative during the operation phase.

***Occupational Health and Safety (OHS)***

During civil works there will be increased dust, air and noise pollution. These are considered as negative impacts as they significantly lower the quality of the environment.

***Security***

The security condition in the proposed project sites is generally volatile. Therefore, it is imperative for the relevant stakeholders comprising UNHCR, GoSS, and contractor to reinforce security measures to avoid any losses or destruction of materials and facilities. This involves employing a guard to control movement within the site especially for the intruders. During Occupation/completion of the project, security of the premise occupants is also paramount

## CHAPTER EIGHT: MITIGATION MEASURES

Mitigation measures for the potential adverse impacts are summarized in the Table 10

**Table 10: Mitigation measures**

| Type Of Impact (S) Measures | Proposed Mitigation |
|---|---|
| **Destruction of soil structure and ground profile** | • Provision of soil conservation structures on erosion prone areas to control occurrence of soil movement.<br>• Avoid unnecessary movement of soil materials from the site.<br>• Good management of the runoff/storm water to reduce its impact on loose soil especially during the rainy season.<br>• Control construction activities especially during rainy / wet conditions.<br>• Landscaping: Re-surface open areas on completion of the project and introduce appropriate vegetation where applicable.<br>• Provide appropriate drainage systems to manage surface runoff. |
| **Noise and Vibration** | • Construction work should be carried out during the specified time i.e. from 0730 hrs to 1700hrs; noise generated during the day is not quite disturbing as compared to it being generated at night hours<br>• Sensitize construction vehicles driver and machinery operators to switch off engines of vehicles when not in use.<br>• Workers should be provided with relevant Personal Protective Equipment (PPE)/ materials such as earmuffs and earplugs; when operating noisy machinery and when in noisy environment. These provide a physical barrier that reduces inner ear noise levels and prevent hearing loss from occurring.<br>• Suppressors or silencers on equipment or noise shields; for instance, corrugated iron sheet structures.<br>• Machineries should be maintained regularly to reduce noise resulting from friction. |

| Type Of Impact (S) | Proposed Mitigation Measures |
|---|---|
| | • Manual labour is recommended in the construction phase, to reduce the noise emitted by construction machinery |
| **Increased Water Demand** | • Encourage water reuse mostly during construction phase.<br>• Roof catchments of the building structures should be provided with rainwater harvesting systems (gutters, down pipes and water storage facilities) to enhance collection and storage of the run-off. Such water can be used in watering flower gardens, cleaning etc.<br>• Provide notices and information signs i.e. *„keep/leave the tap closed'*, etc. This will awaken the civic consciousness with regard to water usage and management.<br>• Install water-conserving taps that turn-off automatically when water is not in use. |
| **Loss of vegetation cover** | • Designing and implementation of a landscaping programme to help re-vegetate the site after construction activities are completed<br>• Introduction of vegetation (trees, grasses) in open spaces and after completion of construction activities with proper maintenance |
| **Blockage of storm water drains along the road alignment** | • Use of reinforced concrete culverts at points of access and exit from the main road alignment<br>• All dug up soil and other loose material on site resulting from site clearance to be promptly removed and appropriately disposed off<br>• Control of construction works during rainy season |
| **Increased surface run-off and soil erosion** | • Installation of drainage structures properly and proper management of excavation activities<br>• A storm water management plan that minimizes impervious area infiltration by use of recharge areas and use of detention and/or retention with graduated outlet control structures will be designed. |

| Type Of Impact (S) | Proposed Mitigation Measures |
|---|---|
| | • Surface run-off and roof water to be harvested and stored in underground water reservoirs for use in general site cleaning and in the lavatories. |
| **Land degradation / Piling of loose soil and other debris on site** | • Use excavated soils (spoils) to fill up abandoned quarries and neighboring gullies that have been left open (backfilling purposes).<br>• All dug up soil to be removed promptly and disposed of to appropriate areas approved by GoSS<br>• Construction materials to be supplied on demand and right quantities for use in time to avoid pilling of materials on site |
| **Fire Risk** | • Workers to be trained on fire preparedness and response<br>• An elaborate fire risk policy to be adopted by the proponent<br>• Liaise with the County fire department in case of emergency<br>• Contractor to station an Environment, Health and Safety Officer in charge during the project implementation period to supervise and monitor implementation of the ESMP specifically environment, health and Safety Components<br>• In addition to the above, the project management should consider the following:-<br>✓ Conduct regular fire drills/simulations to sensitize workers during construction phase. Adapt an emergency response plan for the entire project during operational phase.<br>✓ Ensure that all firefighting equipment are strategically positioned, regularly maintained and serviced.<br>✓ Provide fire hazard signs such as 'No Smoking' signs, Direction to exit in case of any fire incidence and emergency contact numbers should be provided. |

| Type Of Impact (S) | Proposed Mitigation Measures |
|---|---|
| | ✓ Provisions of marked fire exits and ensure that all fire exits are unobstructed at all times.<br>✓ and CRA should collaborate to provide basic fire training targeting selected members from the refugee, returnee and host community to support emergency responses. |
| **Solid Wastes generation** | • Install bins for separate collection of dry and wet waste or different fractions of waste in the respective facilities that are constructed or rehabilitated and within the refugee settlements.<br>• Encourage youths in the refugee settlements, and host communities to embrace waste collection and material recovery as an alternative source of income and where possible train them on value addition, recycling, or repurposing.<br>• Use of an integrated solid waste management system i.e. through a hierarchy of options: reduction, sorting, re-use, recycling (where applicable) and proper disposal<br>• Refuse must be placed in designated skips or bins which must be regularly emptied. These should remain within the demarcated areas and should be designed to prevent refuse being wind-blown<br>• Incorporate suitable facilities for collection, segregation and safe disposal of solid wastes.<br>• Temporary toilets to be provided to construction staff and the toilets must not cause pollution to water sources<br>• Ensure a continuous review of waste management procedures with changing technology and regulatory changes.<br>• Use of construction materials that need minimal packaging to reduce packaging wastes on site<br>• Through accurate estimation of the sizes and quantities of materials required, order materials in the sizes and quantities they will be needed, rather than |

| Type Of Impact (S) | Proposed Mitigation Measures |
|---|---|
| | cutting them to size, or having large quantities of residual materials.<br>• Creation of awareness on proper solid waste disposal methods among the construction staff. |
| **Air pollution** | • Sprinkling stockpile with water regularly or cover with a membrane to prevent them from being blown away. Sprinkling water on the unpaved surface over which construction vehicles and machinery driven<br>• Workers on site to use nose-muffs during construction works<br>• Covering of all materials/loads leaving or entering the site<br>• Switching off vehicles' engines while refuelling or awaiting to refuel<br>• Regular maintenance of standby generator and run it on good quality fuel; perhaps low sulphur fuel<br>• The Proponent is to install vapour recovery system and train employees on correct filling procedures<br>• Soil compaction |
| **Occupational Health and Safety risks** | <u>During construction</u><br>• Appropriate signage and a demarcated construction area must be established around the construction site creating awareness of employees on-site and the public of the potential health and safety risks<br>• All construction employees on-site must be trained in the implementation of effective Health and Safety policies<br>• A First Aid Team must be appointed, trained and equipped with adequate equipment should a health and safety incident occur |

| Type Of Impact (S) | Proposed Mitigation Measures |
|---|---|
| | • All workers and visitors should be provided with appropriate safety/ protective equipment and gear while on site<br>• Contractor to station an Environment, health and Safety Officer in charge during the project implementation period to supervise and monitor implementation of the EMP specifically environment, health and Safety Components<br>• Unattended public access to the construction site to be highly restricted<br>• Ensure that provisions for reporting incidents, accidents and dangerous occurrences during the entire period of construction using prescribed forms obtainable from the Directorate of Occupational Health and Safety Office.<br><br>**Operation Phase**<br><br>• Develop and enforce OHS safety procedures, Safety kits and emergency facilities should be provided in case of any accidents and incidents common to projects of such a nature. These should be placed in strategic locations on site<br>• All H&S regulations required in Kenya must be adhered to<br>• Develop and implement workplace health and safety plan<br>• First aid team should be appointed, trained and equipped<br>• Train the employees on workplace safety<br>• Regular inspection and servicing of the equipment must be undertaken by a reputable service provider and records of such inspections maintained<br>• Always ensure general safety and security by providing day and night security guards and adequate lighting within and around the project site |

| Type Of Impact (S) | Proposed Mitigation Measures |
|---|---|
| | • Establish liaison with the NGOs and Civil Society Actors, GoSS and other emergency service providers such as Hospitals and the police. |
| **Insecurity** | • Consider installing solar lighting systems and backup generator to ensure steady supply of power to the facilities.<br>• Provide lighting systems that illuminate the area well. Security alarms should be installed in strategic points all over the site area after completion of the project.<br>• Contractor should provide adequate security during the construction period when there is no work going on at the site. E.g. during the night and weekends.<br>• Station some guards to man the facilities and install steel gate and regulate movement in and out of the site |
| **Decommissioning of the project** | • Develop and implement decommissioning and Rehabilitation Management Plan<br>• This report recommends that an elaborate ESIA must be carried out for the decommissioning activities so as to effectively address the negative impacts that may result from the same.<br>• Assisting those who will still be employed on site to search for alternative employment elsewhere<br>• Contracting of qualified persons to carry out the demolition works<br>• Proper collection, sorting and disposal of all types of resultant wastes<br>• Ensuring that materials that can be re-used are well stored and or transported elsewhere.<br>• Ensuring that any hazardous wastes are carefully removed, sorted and properly disposed of if any |

**Summary of recommendations for the prevention and mitigation of adverse impacts**

- Install signage and cnstruc8tion board in the proposed project site
- Since the project will provide employment opportunities especially during construction phase, the locals should be given priority during recruitment of local labor force. In relation this, the contractor to work closely with the local administrative in recruitment
- Minimize accidents through proper warning signs, establishing proper emergency handling procedures during construction and operation phase, Warning signs should also deliberately target motorist, the general public and the employees
- Ensure that worker's occupational health and safety standards are maintained through capacity building, proper training, and providing protective clothing
- The proponent/contractor should ensure that the proposed Environmental management plan is fully implemented
- All activities concerning construction and maintenance such as, work execution, site inspection, and material testing, shall be strictly monitored by a qualified engineer and/or project manager. This is important to ensure quality of maintenance works. Engineers and/or project manager shall be trained and experienced enough to judge the appropriateness of the work executed in order to carry out the monitoring.
- Construction activities must be undertaken only during the day i.e. between 08:00 hours to 17:00hours. This will minimize disturbance to the general public within the proximity of the project site.
- All solid waste materials and debris resulting from construction activities must be disposed offsite to approve dumpsites. There should be proper waste segregation to allow for recycling. Some excavation waste such as stone materials should be used for backfilling.
- The Contractor should station an environment, Health and Safety officer to enforce and Supervise the implementation of the ESMP as provided and stipulated in this ESIA report

## CHAPTER NINE: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

### 9.1. Introduction

The Environmental and Social Management Plan (ESMP) has been developed to assist in prioritizing the key findings of the EIA, suggesting necessary mitigation actions and allocating responsibilities and the estimated cost of implementation. From EMP, a schedule for the project implementation could also be drawn that takes into consideration all issues that could develop into serious risks to environment, health and safety during construction and operational phases.

The key aspects of the environmental management plan are based on the following:

- Environmental policy
- Nature and scale of operations,
- Pollution prevention strategies,
- Legal compliance,
- Objectives and targets,
- Employees' involvement

**Planning**

- Identification of potential impacts and their sources,
- Setting objectives and targets,
- Developing an environmental management programme

**Implementation and operations**

- Allocate responsibilities and cost involved,
- Undertake training and capacity building,
- Ensure communication at all levels.
- Corrective actions
- Scheduled monitoring and measurements,
- Identification of area not conforming to standards,
- Carry out prevention and corrective measures/actions,
- Carry out environmental audits.

### 9.2. Construction Phase ESMP

The necessary objectives, activities, mitigation measures, and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts and maximization of positive impacts associated with the construction phase as indicated in ***Table 11***.

Table 11: Environmental Management Plan (Jamjang)

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| **1. Minimize extraction site impacts and ensure efficient use of raw materials in construction** | | | | |
| **High Demand of Raw material** | **1.** Source building materials from local suppliers who use environmentally friendly processes in their operations. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Ensure accurate budgeting and estimation of actual construction material requirements to ensure that the least amount of material necessary is ordered. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Ensure that damage or loss of materials at the construction site is kept minimal through proper storage. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **4.** Use at least 5%-10% recycled, refurbished or salvaged materials to reduce the use of raw materials and divert material from landfills | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **2. Reduce stormwater, runoff and soil erosion** | | | | |
| **Increased storm water, runoff and soil erosion** | **1.** Surface runoff and roof water shall be harvested and stored in underground reservoir for reuse. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 15,000 |
| | **2.** A storm water management plan that minimizes impervious area infiltration by use of recharge areas and use of detention and/or retention with graduated outlet control structure will be designed. | The Civil Engineer, Mechanical Engineer and UNHCR | Throughout construction period | |
| **3. Minimize solid waste generation and ensure efficient solid waste management during construction** | | | | |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| **Increased solid waste generation** | **1.** Use of an integrated solid waste management system i.e. through a hierarchy of options: 1. Source reduction 2. Recycling 3. Composting and reuse 4. Combustion 5. Safe disposal in designated sites | UNHCR, Project, Management Unit, contractor | Throughout construction period | 12,000 |
| | **2.** Accurate estimation of the sizes and quantities of materials required, order materials in the sizes and quantities they will be needed, rather than cutting them to size, or having large quantities of residual materials. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Ensure that construction materials left over at the end of construction will be used in other projects rather than being disposed off. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **4.** Ensure that damaged or wasted construction materials including doors, plumbing and lighting fixtures, and glass will be recovered for refurbishing and use in other projects | UNHCR, Project, Management Unit, contractor | Throughout construction period | 5,000 |
| | **5.** Donate recyclable/reusable or residual materials to local community groups, institutions and individual local residents or home owners (within the refugee settlement and host communities) | UNHCR, Project, Management Unit, contractor | Project completion | 0 |
| | **6.** Use of durable, long-lasting materials that will not need to be replaced as often, thereby reducing the amount of construction waste generated over time | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **7**.Provide facilities for proper handling and storage of construction materials to reduce the amount of waste caused by damage or exposure to the elements | UNHCR, Project, Management Unit, contractor | Throughout construction period | 7,000 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | **8.** Use building materials that have minimal or no packaging to avoid the generation of excessive packaging waste | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **4. Reduce dust emissions** | | | | |
| **Dust emission** | **1.** Ensure strict enforcement of on-site speed limit regulations | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Avoid excavation works in extremely dry weather | UNHCR, Project, Management Unit, contractor | Throughout construction period | 10,000 |
| | **3.** Sprinkle water on graded access routes when necessary to reduce dust generation by construction vehicles | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| | **4.** Personal Protective equipment to be worn | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| | 5.construction materials on site to be covered to prevent to be blown off by wind | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| **5. Minimization of exhaust emissions** | | | | |
| **Exhaust emission** | **1.** Vehicle idling time shall be minimized | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | **2.** Alternatively fueled construction equipment shall be used where feasible equipment shall be properly tuned and maintained | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Sensitize truck drivers to avoid unnecessary racing of vehicle engines at loading/offloading points and parking areas, and to switch off or keep vehicle engines while at the site | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| **6. Minimization of Noise and Vibration** | | | | |
| **Noise and vibration** | **1.** Sensitize construction vehicle drivers and machinery operators to switch off engines of vehicles or machinery not being used. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Sensitize construction drivers to avoid gunning of vehicle engines or unnecessary hooting especially when passing through sensitive areas e.g the refugee settlement, market, host community | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **3.** Ensure that construction machinery are kept in good condition to reduce noise generation | UNHCR, Project, Management Unit, contractor | Throughout construction period | 9,000 |
| | **4.** Ensure that all generators and heavy-duty equipment are insulated or placed in enclosures to minimize ambient noise levels. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 10,000 |
| | **5.** The noisy construction works will entirely be planned to be during games time when most learning sessions are not on. Also, can be done during weekends (these refer to | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | construction and rehabilitation of school infrastructure, classrooms) | | | |
| **7. Minimization of Energy Consumption** | | | | |
| **Increased energy consumption** | **1.**Ensure electrical equipment, appliances and lights are switched off when not being used | UNHCR, Project, Management Unit, contractor | Throughout construction period | 0 |
| | **2.** Install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy | UNHCR, Project, Management Unit, contractor | Throughout construction period | 5,000 |
| **8. Minimize water consumption and ensure more efficient and safe water use** | | | | |
| **High Water Demand** | **1.** Promptly detect and repair of water pipe and tank leaks | UNHCR, Project, Management Unit, contractor | Continuous | 8,000 |
| | **2.** Ensure taps are not running when not in use | UNHCR, Project, Management Unit, contractor | Continuous | 0 |
| | **3.** Install a discharge meter at water outlets to determine and monitor total water usage | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| | **4.**proper re-use of water from other uses for sprinkling dusty pavements | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| **9. Minimize occupational health and safety risks** | | | | |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| **Unavailability and wrong use of Personal Protective Gear (PPG)** | ▪ Always ensure the general safety and security by providing day and night security guards and adequate lighting within and around the premises. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| | ▪ Suitable overalls, safety footwear, dust masks, gas masks, respirators, gloves, ear protection equipment etc should be made available and construction personnel must be trained to use the equipment | UNHCR, Project, Management Unit, contractor | Throughout construction period | |
| **Accidents resulting from disregard of Health and safety impacts** | • Implement all necessary measures to ensure health and safety of workers and the general public during construction | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| **Injuries** | Well stocked first aid box which is easily available and accessible should be provided within the premises | UNHCR, Project, Management Unit, contractor | Throughout construction period | 2,000 |
| | Provision must be made for persons to be trained in first aid, with a certificate issued by a recognized body. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 2,000 |
| **Fire incidents** | Firefighting equipment such as fire extinguishers should be provided at strategic locations such as stores and construction areas. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 8,000 |
| | Regular inspection and servicing of the equipment must be undertaken by a reputable service provider and records of such inspections maintained | UNHCR, Project, Management Unit, contractor | Every 3 months | 4,000 |

| Expected Negative Impacts | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) |
|---|---|---|---|---|
| | Fire escape routes and assembly point to be marked | UNHCR, Project, Management Unit, contractor | Throughout construction period | 4,000 |
| | Signs such as "NO SMOKING" must be prominently displayed within the premises, especially in parts where inflammable materials are stored | UNHCR, Project, Management Unit, contractor | Throughout construction period | 3,000 |
| **GBV, teen pregnancy and forced marriages, HIV/AIDs** | Awareness creation on thematic issues including prevention of GBV, teenage pregnancies, HIV/AIDs<br>Strengthening local leadership structures to respond to emergencies as well as training on effective conflict resolution both at household level and among the refugees, host communities and returnees. | UNHCR, Project, Management Unit, contractor | Throughout construction period | 6,000 |
| **Total** | | | | 126,000 |

### 9.3. Project Operation Phase ESMP

The necessary objectives, activities, mitigation measures, and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts and maximization of positive impacts associated with the operational phase of project components are outlined in Table 12

**Table 12: Operation Phase ESMP**

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| **1. Fire risks** | 1. Install fire extinguishers<br>2. Clearly mark fire exit points and the fire assembly area<br>3. Provide sand buckets at strategic locations<br>4. Workers should be trained on firefighting skills by a qualified trainer<br>5. Fire drills should be conducted at least once a year<br>6. A firefighting team should be established<br>7. Warning and informational signs be displayed appropriately<br>8. Regular testing and servicing of fire-fighting equipment and appliances | UNHCR & Project management Unit | Operation phase | 9,000 |
| **2.Solid waste Management (Littering, soil and surface water pollution).** | 1. Provision of waste collection bins<br>2. Segregation of wastes at the source<br>3. Waste should be disposed at the designated site<br>4. Solid waste should be managed according to the waste management regulations.<br>5. Prepare a waste management plan;<br>6. Stop deposition of waste in open pits; open burning or burying of waste | UNHCR & Project management Unit | Operation period | 5,000 |

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| | 7. Clearly designate and construct an appropriate waste collection facility or provide covered refuse skips;<br>8. Monitor waste volumes; | | | |
| **3.Waste water management** | 1. Conduct wastewater monitoring to check compliance | UNHCR & Project management Unit | Continuous | 4,000 |
| **4.Workers Welfare (risks such as accidents, disregard of safety and wellness)** | 1. Provide workers with PPEs<br>2. Provide adequate washrooms and changing rooms for workers<br>3. Training of workers<br>4. Provision of first aid and other welfare facilities<br>5. Provision of an Insurance cover<br>6. Regular medical check-ups<br>7. Wellness services for workers | UNHCR & Project management Unit | Operation period | 5,000 |
| **5.Air pollution** | 1. Ensure that diesel generators are maintained to manufactures specifications, records maintained and availed whenever, there is need;<br>2. Ensure that tank vents are located away from sensitive receptors; | UNHCR & Project management Unit | Continuous | 3,000 |
| **6. Increased Energy Resource Utilization** | 1. Switch off electrical equipment, appliances and lights when not being used | UNHCR & Project management Unit | Continuous | 0 |
| | 2. Install occupation sensing lighting at various locations such as storage areas which are not in use all the time | UNHCR & Project management Unit | Operation phase | 0 |

| Expected Negative impact | Recommended Mitigation Measures | Responsible Party | Time Frame | Cost (USD) per annum |
|---|---|---|---|---|
| | 3. Install energy saving fluorescent tubes at all lighting points within the flats instead of bulbs which consume higher electrical energy | UNHCR & Project management Unit | Operation phase | 4,000 |
| | 4. Monitor energy use during the operation of the project and set targets for efficient energy use | UNHCR & Project management Unit | Operation phase | 3,000 |
| | 5. Sensitize occupants of the facilities and communities to use energy efficiently | UNHCR & Project management Unit | Operation phase | 3,000 |
| **7. Increased water demand/Water consumption** | 1. Promptly detect and repair water pipe and tank leaks | UNHCR & Project management Unit | Operation phase | 6,000 |
| | 2. Ensure taps are not running when not in use | UNHCR & Project management Unit | Operation phase | 0 |
| | 3. Install water conserving taps that turn-off automatically when water is not being used | UNHCR & Project management Unit | Operation phase | 4,000 |
| **8. Increased incidences of social vices (GBV, theft, social intolerance, HIV/AIDs)** | Awareness creation on the thematic sectors namely prevention of GBV, HIV/AIDs)<br>Strengthening of local institutions and leadership structures on conflict resolution, emergency response.<br>Promoting coordination between different actors – NGO and civil society, police and GoSS agencies to promote peaceful coexistence, and minimize insecurity. | UNHCR & Project management Unit | Operation phase | 5,000 |
| Total | | | | 51,000 |

### 8.4. Project Completion and Decommissioning

Information pertaining to the decommissioning of the project at the end of its life cycle and associated impacts, proposed measures to return the site as far as possible to its suitable state, or rehabilitation measures has been elaborately provided in the Table 13

**Table 13: ESMP for Project decommissioning**

| Parameter | Impacts | Mitigation Measures | Phase | Responsible entity | Estimated cost (USD) |
|---|---|---|---|---|---|
| Noise and Dust | Noise and dust pollution | Working during daytime<br>Provide breathing masks to workers | During demolition phase | UNHCR & Project management Unit | 6,000 |
| Solid waste | Environmental pollution | Putting in place proper waste management Systems including waste recycling and reuse of debris | During decommissioning phase | UNHCR & Project management Unit | 6,000 |
| Workers' Health | Exposure of workers to pollution and accidents during demolition | Workers to be provided with PPEs<br>Training on safe demolition Methods and handling of hand tools. | At the Beginning of decommissioning phase. | UNHCR & Project management Unit | 4,000 |
| Rehabilitation | Visual intrusion | Re-contouring by trimming slopes to safe angle<br>All topsoil areas will be vegetated | Decommissioning phase | UNHCR & Project management | 5,000 |

| | | | | | |
|---|---|---|---|---|---|
| Re-vegetation of site | Visual Intrusion | Re-grassing of open areas must be completed according to land- scaping plans<br>Areas identified as potential subject to erosion must be vegetated with indigenous grass species | Decommissioning phase | UNHCR & Project management | 5,000 |
| Removal of all waste building materials and machinery | Land pollution<br>Visual intrusion | Demarcation of rehabilitated site to prevent access to these areas<br>Appropriate disposal of debris or any other material that is likely to be harmful to persons and nature<br>Removal of all materials that will not be used for other purposes to designated disposal sites | Decommissioning phase | Proponent | 10,000 |
| **Total** | | | | | **36,000** |

### 8.5. Grievance Redress Mechanism

Grievance Redress Mechanism (GRM) as a systematic process for receiving, evaluating and facilitating resolution of affected people's project-related concerns, complaints and grievances about the borrower's/client's social and environmental performance on a project.

The project promoter should be aware of and respond to stakeholders' concerns related to the project in a timely manner. In OS 1, the Bank requires the borrower/client to establish a "credible, independent and empowered local grievance and redress mechanism to receive, facilitate and follow up on the resolution of the affected people's grievances and concerns regarding the environmental and social performance of the project. The local grievance mechanism needs to be sufficiently independent, empowered and accessible to the stakeholders at all times during project cycle and all responses to grievances shall be recorded and included in project supervision formats and reports."

The process by which the GRM is designed should be integrated into the overall approach to project preparation as prescribed in the Bank's ISS. AfDB Guidelines Notes provides guidance on development and Implementation of GRM. It should also be included in the concrete actions required in the Environmental and Social Management Plan (ESMP) for Category 1 projects and, on a case-by-case basis, for Category 2 projects that exhibit specific potential social tensions, in particular risks of the presence of particularly vulnerable groups (refugees, returnees and host communities) in the project's area of influence.

AfDB has also established its own accountability mechanism, the Independent Recourse Mechanism (IRM). The IRM seeks to assess whether a Bank approved project complies with relevant sections of the AfDB's ISS. The IRM makes itself accessible to any group (a minimum of 2 persons living in the project's area of influence) actually or potentially negatively affected by a Bank- funded project. The IRM reports to the Bank's Board of Directors and is thus independent of Bank management. The IRM has been set up by the Bank to achieve more transparency. It is also a costly mechanism to trigger. The establishment of local GRMs can help to alleviate the need for plaintiffs to resort to the IRM, while problem-solving can be more rapidly and cost-effectively done locally. The cultural context in which GRMs operate also helps to defuse complaints and to find appropriate and commensurate solutions.

The grievance redress mechanism will adapt the UNHCR community feedback and referral mechanism while making provision for two tier amicable mediation and settlement. The first tier will involve the grievance redress committee resolving the issue at the community level involving the host community, refugees and returnees. If the issue is not resolved at the local level, then the 2$^{nd}$ tier should involve CRA, UNHCR and the partners to constitute an appropriate team including regional/national stakeholders

including the Administration head for the area (or his/her representative) to resolve the matter. When these two tiers of amicable mediation arrangement fail, the complainant is free to seek redress at the court of law.

### 9.5.1. GRM at project level

The GRM in the proposed project will be adapted under the guidance provided in the Bank's ISS through its (ESIA) Guidelines Notes. The first step is to determine the primary goal of the GRM which would generally be to resolve specific grievances in a manner that meets both project management and community needs, but with important local variations. The scope of the grievances that may legitimately be brought forward by the communities and/or individuals affected shall be defined in advance. That scope will generally cover most, if not all, of the issues raised in a typical Environmental and Social Assessment: natural resources, pollution, cultural property, land acquisition, the welfare of vulnerable groups, etc.

The second step is to design the GRM by:

- Preparing a preliminary design.
- Selecting ways and means to receive, register, assess and respond to grievances.
- Select grievance resolution approaches.
- Design a means to track and monitor grievances.
- Develop the grievance mechanism infrastructure.
- Review and refine the design.

The GRM shall be designed based on the following principles:

1. Involvement of individuals of mixed levels and functions from the entity (refugees' settlements, Payam, returnees and host community). Staffing the design team from just one function such as community relations or human resources is unwise.
2. The inclusion of a balanced group of representatives from target beneficiaries in Jamjang while keeping the team small enough to be responsive.
3. GRM Relying upon clear terms of reference and a work plan that outlines team goals, roles, and responsibilities, level of decision-making authority, reporting lines, tasks, time frame, and products.
4. Making the use of multiple channels (e.g., face to face, phone conversation, mail, text or e- mail, message on a dedicated website), sensitive to cultural customs and traditional methods that may influence or impede the expression of grievances.
5. The existence of a central point of contact that will receive complaints and log them into a central register.
6. Existence and operation of designated complaint resolution staff.
7. Processes for acknowledging the receipt of a grievance and informing the complainant about the time frame in which a response can be expected.

### 9.5.2. Appointing members of Grievance Redress Committees (GRC)

The project will involve the formulation of Grievance Redress Committees (GRCs) at project level in Jamjang. The consultant recommends the use of existing structures such as within the Payam e.g the Peace Committee. Generally, the stakeholders including UNHCR funded partners, CRA and UNHCR will take on grievance handling as a responsibility. The GRM members should be qualified, experienced, and competent personnel who can win respect and confidence of the affected communities. It is also important to maintain a gender balance within the GRMs. Criteria for selecting members of GRMs will include the following

- Knowledge of the project, its objectives, and outcomes
- Technical knowledge and expertise to understand project design and requirements;
- Understanding of the social, economic, and cultural environments and the dynamics of the communities;
- Capacity to absorb the issues dealt with and to contribute actively to decision-making processes;
- Social recognition and standing; and
- Equitable representation of males and females.

The GRC at project level shall constitute among other members, members from the (UNHCR, CRA, returnees, refugees, and host communities). The GRC shall have the right to request the project technical staff to attend the meetings and provide information. A complainant has the right to appear in person, to be accompanied by a community member, and/or to request to be represented by a community elder. GRCs shall be established at the project level to assure accessibility for aggrieved persons.

### 9.5.3. Procedures, complaints channels and time frame for Grievance Redress Mechanisms

As there is no ideal model or one-size-fits-all approach to grievance resolution, the best solutions to conflicts are generally achieved through localized mechanisms that take account of the specific issues, cultural context, local customs, and project conditions and scale. The process by which a complaint will be accepted or rejected needs shall be carefully designed, and shall maximize interactivity and cultural sensitivity. The acceptance/rejection of a complaint will go through a discussion stage where the plaintiff and the **GRM staff** interact on the grounds and motives of the complaint, after which the plaintiff should clearly and transparently be told whether or not the complaint is eligible and will be processed.

The acceptance/rejection of the complaint shall be based on objective criteria that are posted by the GRM, including a written copy displayed in the public access area of the GRM in an appropriate language.

The processing of the complaint, if accepted should go through various phases:

- Filing of the complaint and labelling with an identification code communicated immediately to the plaintiff.
- Assessment of the complaint (including severity of the risk/impact).
- Formulation of the response.

Selection of the grievance resolution approach is a key. There are four general approaches to choose from:

- The project's management proposes a solution.
- The community and the project's management decide together.
- The project's management and the community defer to a third party to decide.
- The project's management and the community utilize traditional or customary practices to reach a solution.

The Bank ISS recommends the application of a "Decide together" approach that is usually the most accessible, natural and unthreatening ways for communities and a project's management to resolve differences. With the potential to resolve perhaps the majority of all grievances, "decide together" should be the center-piece of any grievance mechanism's resolution options.

The grievance mechanism will comprise of the following primary components:

- ✓ Receive and register a complaint.
- ✓ Screen and validate the complaint (based on the nature and type of a complaint).
- ✓ Formulate a response.
- ✓ Select a resolution approach, based on consultation with affected person/group.
- ✓ Implement the approach.
- ✓ Settle the issues.
- ✓ Track and evaluate results.
- ✓ Learn from the experience and communicate back to all parties involved.

The time for the Grievance Redress Committees to be held shall be agreed and documented, depending on the nature and severity of the complaint. A number of mechanisms will be available to aggrieved parties to access redress. These shall include institutions specific (internal) to a project and set up from its inception or others that might have emerged over time in response to needs identified while the project evolved. Other institutions which are already established within a country's judicial, administrative, and/or political systems and exist outside a project shall also be used. These include the government bureaucracy; judicial institutions; and political institutions such as District Councils, Village Councils, etc. In addition, the Bank itself sometimes shall provide a forum for grievance redress. GRMs shall include avenues for resolving conflicts between aggrieved persons or other stakeholders and can provide information sought by the public on the project.

The channels of presenting complaints could include the presentation of complaints via third parties (e.g., village elites/traditional leaders, community-based organizations, lawyers, non- government organizations [NGOs], etc.); face-to-face meetings; facsimile, telephone, and email communications; written complaints; etc.

If the complainant is not satisfied, the complainant will have to appeal. A summary of the Grievance Redress Mechanism is shown in Table 14.

Table 14: Grievance Redress Mechanism

| Step | Process | Description | Time frame | Other information |
|---|---|---|---|---|
| 1 | Identification of grievance | Face to face; phone; letter, e-mail; recorded during public/community interaction; others | 1 Day | Email address; hotline number; Responsible: community leader (host, returnees, refugees) |
| 2 | Grievance assessed and logged | Significance assessed and grievance recorded or logged (i.e. in a log book) | 4-7 Days | Significance criteria Level 1 – one off event; Level 2– complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or this ESIA provisions. |
| 3 | Grievance is Acknowledged | Acknowledgement of grievance through appropriate medium | 7-14 Days | Responsible: staff, CRA and contractor |
| 4 | Development of response | -Grievance assigned to appropriate party for resolution;<br>-Response development with input from management/ relevant stakeholders | 4-7 Days<br>10-14 Days | UNHCR, CRA, Payam |
| 5 | Response signed off | -Redress action approved at appropriate Levels | 4-7 Days | |
| 6 | Implementation and communication of response | -Redress action implemented and update of progress on resolution communicated to Complainant | 10-14 Days | |

| | | | | |
|---|---|---|---|---|
| 7 | Complaints Response | -Redress action recorded in grievance log book<br>-Confirm with complainant that grievance can be closed or determine what follow up is necessary | 4-7 Days | Payam, peace, committee, UNHCR, CRA |
| 8 | Close Grievance | Record final sign off of grievance<br>-If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third- party arbitration or resort to court of law | 5 days | Payam, UNHCR, CRA |

## CHAPTER TEN: CONCLUSION AND RECOMMENDATIONS

**Conclusion:**

The Environmental and Social Impact Assessment (ESIA) for the SCRSSP in the Ruweng Administrative Area highlights both positive and negative potential impacts. While the project aims to enhance livelihoods, improve basic services, and restore the environment, it also poses risks such as environmental degradation, social disruptions, and health concerns.

**Recommendations:**

**Environmental Mitigation:**

- Implement sustainable practices in water management and agricultural activities to prevent overuse of resources and environmental degradation.
- Ensure proper waste management and pollution control measures during construction and operation phases.
- Conduct regular environmental monitoring to assess the effectiveness of mitigation strategies.

**Social Impact Mitigation:**

- Develop and implement a comprehensive stakeholder engagement plan to address community concerns and ensure inclusive decision-making.
- Integrate HIV/AIDS awareness and prevention programs, as well as GBV prevention measures, into community activities.
- Establish a grievance mechanism to handle any social or environmental complaints promptly.

**Economic and Livelihood Enhancement:**

- Support local entrepreneurship and job creation through capacity-building programs for community-based enterprise groups.
- Ensure equitable access to economic opportunities and resources for both refugees and host communities.

**Institutional Strengthening:**

- Strengthen local government capacities to manage and monitor project impacts effectively.
- Foster partnerships with local organizations and international stakeholders to leverage resources and expertise.

**Monitoring and Evaluation:**

- Establish a monitoring and evaluation framework to track project progress, assess impact effectiveness, and adjust strategies as needed.
- Conduct regular assessments to identify emerging issues and implement corrective actions promptly.

## Annexes

### Annex 1: Ajuong Thok Refugee Settlement Map

| ID | Name | Category | Block |
|---|---|---|---|
| 1 | Airfield | airfield | Out of the Camp |
| 2 | Boba Secondary School | school | Out of the Camp |
| 3 | Reception Centre | reception | Out of the camp |
| 4 | WFP Warehouse | store | Out of the Camp |
| 5 | IRC cell Store | store | Near UNHCR field office |
| 6 | UNHCR Field Office | UN | Out of the Camp |
| 7 | Ingmiwa | NGO | Out of the Camp |
| 8 | IRC | NGO | Out of the Camp |
| 9 | Ajoung Thok Market | market | Out of the Camp |
| 10 | Nyaaja Primary school | school | Between Block 5 and Block 16 |
| 11 | Awa Primary School | school | Between Block 78 and Block 91 |
| 12 | Al Hilu CFS | Child development centre | Block 17 |
| 13 | Yousif Kuwa CFS | Child development centre | Near Block 30 |
| 14 | Borehole 4 | water point | Near Block 28 |
| 15 | IRC Women Centre | community centre | Near Block 13 |
| 16 | FEMA Store-AjoungThok | Store | Behind AjoungThok Market |
| 17 | AWA Community centre | community centre | Near Block 30 |
| 18 | Makuria Primary School | school | Between Block 26 and Block 29 |
| 19 | Hakam Yakoub Health Centre | health centre | Near Block 17 and Block 18 |
| 20 | Borehole 3 | water point | Near Block 21 |
| 21 | Vocational Training Centre | training centre | Near Block 45 |
| 22 | Merowe Primary School | school | Near Block 43 |
| 23 | DRC Community Centre | community centre | Near Block 42 |
| 24 | Warehouse | store | Near Block 37 |
| 25 | IRC Women Centre 3 | community centre | Near Block 44 |
| 26 | Bankee Primary School | school | Near Block 80,5E,63,61 |
| 27 | Mubaraka Al-mashra Primary School | school | Between Block 97 and Block 98 |
| 28 | Tiam Tima Secondary School | school | Near Block 63 and 56 |
| 29 | Samaritan Purse | NGO | Near to UNHCR field Office |
| 30 | AWA PPHCU | health centre | Near reception center |
| 31 | Ajoung Thok Police post | community centre | Near reception center |

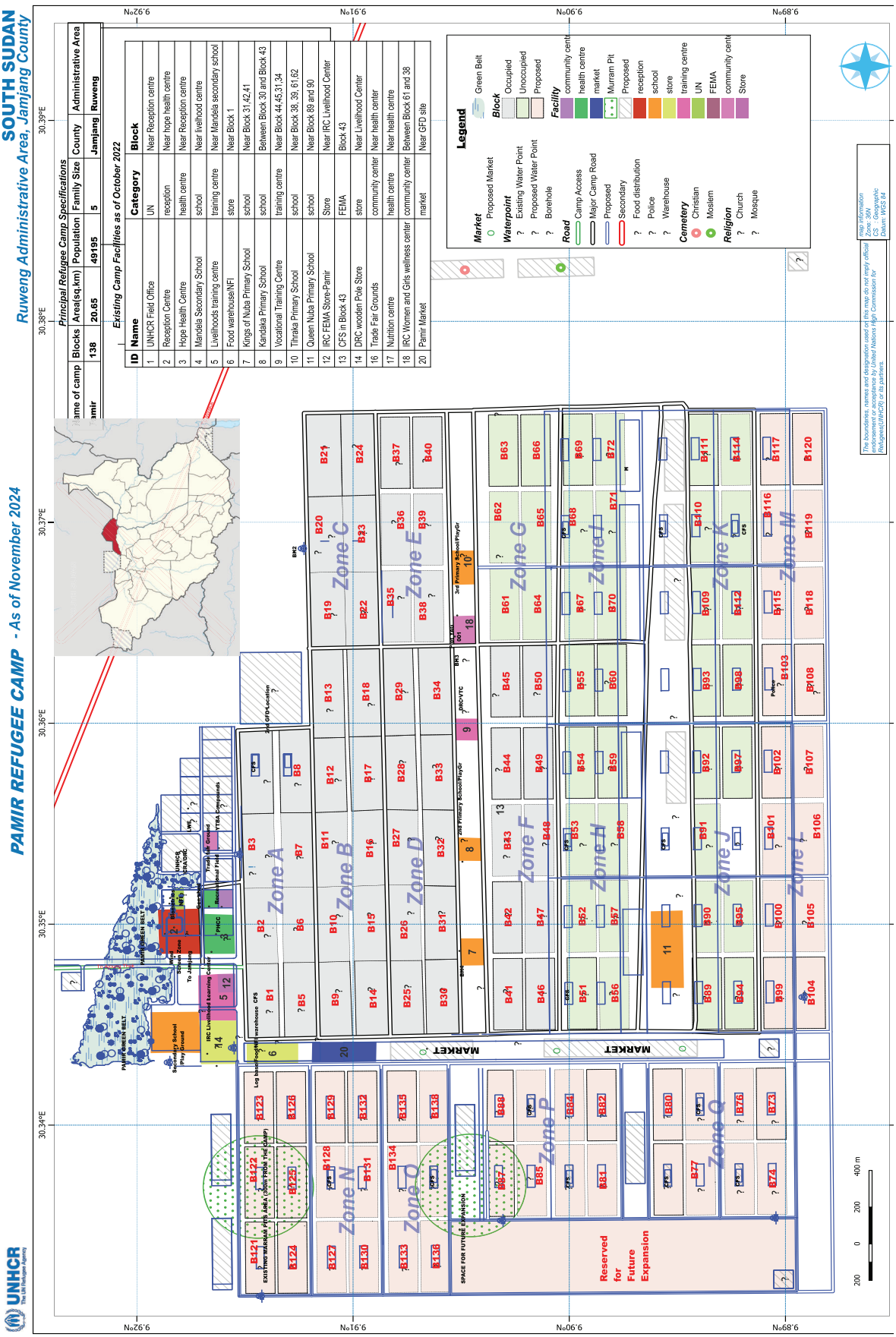
| Name of camp | Blocks | Area(sq.km) | Population | Plot Size | Family Size | County | Administrative Area |
|---|---|---|---|---|---|---|---|
| Ajoung Thok | 122 | 12.25 | 46,766 | 20x20 | 5 | Jamjang | Ruweng |

The boundaries, names and designation used on this map do not imply official endorsement or acceptance by United Nations High Commission for Refugees(UNHCR) or its partners.

Map information
Datum: WGS 84
CS : Geographic
System: WGS 84

100 0 100 200 m

# Annex 2: Pamir Refugee Settlement Map



Annex 3: Stakeholder/Participant list

SETAC ENGINEERING CONSULTANCY

UNHCR The UN Refugee Agency

| | Name | Organization | Contact (mobile/email) | Signature and stamp |
|---|---|---|---|---|
| 1. | Hon. William Manyiel Kiir | CRA-Jamjang | 0923222414 minyielkiirthianiak@gmail.com | [signature] |
| 2. | Hon. Rev. Sarial Arou Miyom | RRC RAA. | 0924404545 / 0915019803. WhatApp. | |
| 3. | Kuol Thon Ayar Dongwai | RRC member | 0929868108 0916709533 | [signature] |
| 4. | Gabriel Naonyjok Miyen | RRC Director for admin. finance | 0920290007 | [signature] |
| 5. | Thon Mabek Mabek | Director for Ministry of Agric | 0918888301 0920060601 | [signature] |
| 6. | Afmach Afiing Nyok | An/D/G For Health | 0917770556 | [signature] |
| 7. | Piok Kur Arop | RRC | 0915552534 | [signature] |

SETAC ENGINEERING CONSULTANCY

UNHCR The UN Refugee Agency

| | NAME | ORGANIZATION | CONTACT | SIGNATURE |
|---|---|---|---|---|
| 8. | Akrandi Hassan Atair | Deputy youth Leader | 0924355762 | |
| 9. | Arwina Al-amin Al-awad | Head of women Council | 0921397387 | |
| 10. | Timothows Noah Hafi | Secretary for Admin | 0921385189 | |
| 11. | Sadik Mohammed Abakar | Camp executive | 0928163490 | |
| 12. | Makling YOUSIF Kambacho | Deputy women Leader | 0925039265 | |

SETAC
ENGINEERING CONSULTANCY

UNHCR
The UN Refugee Agency

| | Name | Organization | Contact (mobile/email) | Signature and stamp |
|---|---|---|---|---|
| 1. | Besma Ismail Kalo | Health | | |
| 2. | Hessen Ahmed Dodar | Camp member | 0927097026 | |
| 3. | Ibrahim Zakaria Abdalla | Chairperson (camp) | 0921385051 | |
| 4. | Hasna Amur Tutu | Chair Lady | 0921613741 | |
| 5. | Nass Tia Said | Youth | 0923459988 | |
| 6. | Mufir Ahmed Fakali | Agricultural | | |
| 7. | | | | |

SETAC ENGINEERING CONSULTANCY

UNHCR The UN Refugee Agency

| | NAME | ORGANIZATION | CONTACT | SIGNATURE |
|---|---|---|---|---|
| 8. | Mubarak Hamin Abkai | Agriculture committee | - | |
| 9. | Musa Ismail Kafi | Camp Deputy Secretary | 0925039396 | |
| 10. | Mahdi Musa Sanduk | Head of Pramani chief | 0928163534 | |
| 11. | Araga Abdulrahman Fargallah | Head of Block Agriculture | 0929862075 | |
| 12. | | | | |

SETAC ENGINEERING CONSULTANCY

UNHCR The UN Refugee Agency

| | NAME | ORGANIZATION | CONTACT | SIGNATURE |
|---|---|---|---|---|
| 8. | CHARLES MABEK AHIEU | CHAIRMAN-APC | 0925190038 | |
| 9. | MABIL AYIAI | MEMBER - APC | 0925697353 | |
| 10. | CHABENY MALUAL | MEMBER-APC | 0925190038 | |
| 11. | SIMON MABOR CHOL | HEAD OF COMMITTEE AWUVL BOOMA | 0929902926 | |
| 12. | ANGER MADING | MEMBER - APC | — | |
| 13 | NYANJOK KUETH | MEMBER-APC | 0921403298 | |
| 14 | AROP MUCHOL | MEMBER - APC | 0921485307 | |