

Project title: ***Watershed Approaches for Climate Resilience in Agro-pastoral Landscapes***		
Country: Republic of South Sudan	**Implementing Partner (GEF Executing Entity):** World Vision South Sudan	**Execution Modality***: Civil Society (CSO), including Non-governmental Organization (NGO)*
Contributing Outcome (UNDAF/CPD, RPD, GPD)*:* ***UNSDCF outcome 2: Local economies are recovered, and conditions and coping strategies are improved to end severe food insecurity.*** ***UNDP Strategic Plan outcome 1: Advance poverty eradication in all its forms and dimensions.***		
UNDP Social and Environmental Screening Category: Substantial	**UNDP Gender Marker:** *2*	
Quantum Award IDs: 00122467.1, 1133121, 1214337	**Quantum Project ID: 00122467**	
UNDP-GEF PIMS ID number: 6011	**GEF Project ID number: 10178**	
LPAC meeting date: 23 May 2023		
Last possible date to submit to GEF: 18 June 2021		
Latest possible CEO endorsement date: 18 December 2022		
Project duration in months: 60		
Planned start date: 23 December 2023	**Planned completion date: 22 December 2028**	
Expected date of Mid-Term Review: 22 June 2026	**Expected date of Terminal evaluation: 23 May 2029**	
Expected Operational Closure Date: 22 September 2029	**Expected Financial Closure Date: 22 March 2030**	
Brief project description: 95% of the population of South Sudan depends on climate sensitive natural resources, including agriculture. Even though 90% of the land is in South Sudan is arable, long periods of conflict have led to the highest levels of food insecurity in the world. Climate change induced increases in temperature, variation in rainfall and increased frequency and intensity of extreme events are causing losses in crops and livestock and increasing pests and disease. Extension agencies lack capacities to support communities in adapting to these		

emerging challenges. Maladaptive coping strategies are triggering environmental degradation, undermining ecosystem function and services. Inappropriate farming practices are depleting soils in farms and rangelands, forcing their expansion and increasing conflict. Markets in South Sudan are underdeveloped, and value chains have unraveled in the decades of conflict.

This project will build long term climate resilience among agro-pastoral communities using participatory watershed-based approaches that restore ecosystems. It will re-establish and strengthen market linkages and agricultural value chains and equip extension agencies to support communities in adopting gender-responsive, climate smart agricultural practices and diversifying livelihoods using hands-on, farmer-field based approaches. Climate change will be mainstreamed into management plans and programmes in agriculture and NRM and proactive collaboration and knowledge sharing will build synergies with other relevant initiatives.

FINANCING PLAN	
Least Developed Countries Fund	USD 6,896,461
GEF Trust Fund	USD 913,242
(1) Total Budget administered by UNDP	**USD 7,809,703**
CO-FINANCIERS THAT WILL DELIVER PROJECT RESULTS INCLUDED IN THE PROJECT RESULTS FRAMEWORK (FUNDS NOT ADMINISTERED THROUGH UNDP ACCOUNTS)	
UNDP TRAC resources (only if included in the Total Budget and Work Plan for this specific GEF project)	USD 24,000
(2) Total confirmed co-financing to this project not administered by UNDP	**USD 25,432,632**
(3) Grand-Total Project Financing (1) + (2)	**USD 33,392,335**

SIGNATURES:

NOTE: IF THE PROJECT DOCUMENT IS IN FRENCH OR SPANISH, THE FINAL PROJECT DOCUMENT MUST BE CLEARED BY THE RTA BEFORE SIGNATURE.

Signature: Hon. Dr. Bak Barnaba Chol Minister of Finance and Economic Planning Government of South Sudan	**Agreed by Government Development Coordination Authority**	**Date/Month/Year:**
Signature: Titus Osundina UNDP Resident Representative a.i.	**Agreed by UNDP**	**Date/Month/Year:**

I. TABLE OF CONTENTS

I. Table of Contents 3
Table of Contents ..... **Error! Bookmark not defined.**
II. Development Challenge 7
Problem Statement 7
High levels of food insecurity and livelihood vulnerability of communities in South Sudan 7
Women and vulnerable groups lack access to resources to cope with climate change 7
Climate change is likely to severely affect agricultural production and food security 8
Technical and operational constraints on agricultural extension 10
Weak and underdeveloped private sector and markets in agriculture 10
Consistency with National Strategies 10
National Policies, Strategies and Plans 10
Regional and International Conventions 12
III. Strategy 15
Problem Analysis 18
Key assumptions 20
Appropriateness of the strategy 21
Alignment with GEF Focal Area Strategy 23
Global Environmental Benefits 23
IV. Results and Partnerships 25
Expected Results 25
A summary of the components, outcomes and outputs is presented below with a list of activities under each. All outputs except those specifically mentioning UNIDO in the output title will be implemented by World Vision. 26
Component 1: Institutional capacities for gender-responsive climate change adaptation across the agricultural sector. 26
Outcome 1: Strategies and capacities to implement community based and gender-responsive climate change adaptation for agriculture and food value chains across South Sudan. Budget: 1,029,358 26
Component 2 Climate change resilient agriculture and food value chains. 30
Component 3 Community based natural resources management to offset the impacts of climate change on ecosystem goods and services. 35
Partnerships 40
Baseline projects 41
Risks 44
Financial, operational and regulatory risks: 45
Security and instability 45
Limited capacities may prevent duty bearers from discharging their duties and responsibilities 46
Limited Private Sector Involvement 46
Conflict and displacement 46
Risk of co-financing commitments not being met 47

Social Risks 47
Potential economic displacement 47
Increased social tensions 48
Gender exclusion 48
Child labor and worker rights 49
Misuse of traditional knowledge 49
Exclusion of indigenous peoples and vulnerable groups 49
Environmental Risks 50
Habitat destruction 50
Introduction of invasive alien species 51
Over extraction of ground water and alteration of natural stream flow 51
Climate change impacts 52
Increase in vectors and spread of diseases 52
Emergent risks due to the COVID-19 pandemic 52
Introduction and spread of the COVID-19 virus due to project activities 52
Disruptions and delays due to lockdowns 53
Disruption of value chains and markets 54
Stakeholder engagement and south-south cooperation 54
Gender equality and Women's Empowerment 56
Innovativeness, Sustainability and Potential for Scaling Up 56
V. Project Results Framework 61
VI. Monitoring and Evaluation (M&E) Plan 63
VII. Governance and Management Arrangements 66
VIII. Financial Planning and Management 71
IX. Total Budget and Work Plan 74
X. Legal Context 117
XI. Risk Management 117
XII. Mandatory Annexes 122
Annex 1: GEF Budget Template 124
Annex 2: GEF execution support letter 127
Annex 3: Project map and Geospatial Coordinates of project sites 128
Annex 5: Monitoring Plan 131
Annex 6: UNDP Social and Environmental Screening Procedure (SESP) 136
Annex 7: UNDP Risk Register 169
Annex 8: Overview of Project Staff and Technical Consultancies 172
Annex 9: Stakeholder Engagement Plan 182
Annex 10: Environmental Social Management Framework (ESMF) and other SES frameworks/plans if required 182
Annex 11: Gender Analysis and Gender Action Plan 182
Annex 12: Procurement Plan 182
Annex 13: GEF focal area specific annexes: Feasibility Study 182
Annex 14: Additional agreements: 182

Annex 15: GEF Core indicators 182
Annex 16: GEF 7 Taxonomy 182

List of Figures

Figure 1: Problem tree. 11
Figure 2: Proposed solution pathway. 13
Figure 3: Theory of change. 16
Figure 4: Project organization structure. 45

List of Tables

Table 1: Project sites and targeted beneficiaries. 17
Table 2: Summary of relevant projects and potential partnerships. 31
Table 3: Social and environmental safeguard elements. 34
Table 4: Monitoring and evaluation plan and budget. 43

CAMP	Comprehensive Agricultural Development Master Plan
CBD	United Nations Convention on Biological Diversity
CBO	Community Based Organization
CCA	Climate Change Adaptation
CSA	Climate Smart Agriculture
CSO	Civil Society Organization
FAO	Food and Agriculture Organization of the United Nations
FSP	Full Sized Project
GAP	Gender Analysis and Action Plan
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GoSS	Government of the Republic of South Sudan
GPS	Global Positioning System
ICRAF	World Agroforestry Centre
ICT	Information and Communication Technology
IDP	Internally Displaced People
IDPs	Internally Displaced Persons
ILM	Integrated Landscape Management
IWRM	Integrated Water Resources Management
LDCF	Least Developed Countries Fund
LDN	Land Degradation Neutrality
LULC	Land Use and Land Cover
MAFS	Ministry of Agriculture & Food Security
MoEF	Ministry of Environment and Forestry
MoGCSW	Ministry of Gender Child and Social Welfare
MoHADM	Ministry of Humanitarian Affairs and Disaster Management
MoLF	Ministry of Livestock & Fisheries

MSP	Medium Sized Project
MoTI	Ministry of Trade and Industries
MoWRI	Ministry of Water Resources & Irrigation
NALEP	National Agriculture and Livestock Extension Policy
NAP	National Action Programme
NAPA	National Adaptation Programmes of Action
NBG	Northern Bahr el Ghazal
NGO	Non-Governmental Organization
NRM	Natural Resource Management
PIF	Project Identification Form
PIR	GEF Project Implementation Report
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PWD	People with Disabilities.
SHEP	Stakeholders Engagement Plan
SMoAEF	State Ministry of Agriculture, Environment and Forestry
SMoARFT	State Ministry of Animal Resources, Fisheries and Tourism
SMoCRD	State Ministry of Cooperative and Rural Development
SoNRES	School of Natural Resources and Environmental Studies – University of Juba
STAP	GEF Scientific Technical Advisory Panel
SWC	Soil and Water Conservation
TBWP	Total Budget and Work Plan
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organisation
WSD	Watershed Development

II. DEVELOPMENT CHALLENGE

Problem Statement

High levels of food insecurity and livelihood vulnerability of communities in South Sudan

Livelihoods of ninety five percent of South Sudan's population depend on climate sensitive natural resources including rain-fed agriculture, livestock raising[1] and forests, which also provide all the energy needs of households[2]. Eighty five percent of the workforce is employed in subsistence agriculture and crop production is largely done by women on small hand-cultivated plots[3]. About 60% of the population is dependent on livestock rearing[4] and animal husbandry, which, together with crop farming are the primary source of livelihood for 85% of households[5]. About 81% of households in South Sudan cultivate land, 74% own livestock and 22% engage in fishing. In Northern Bahr le Ghazal (NBG) about 85% households cultivate land, 65% own livestock and 12-15% are engaged in fishing[6]. Livelihoods of communities and their food security is therefore highly vulnerable to impacts of climate change.

Women and vulnerable groups lack access to resources to cope with climate change

A high proportion of the population in South Sudan is comprised of women and vulnerable groups[7]. The latter includes Internally Displace Peoples (IDP), and Persons With Disabilities (PWD) who are directly affected by decades of violence and insecurity. Two ethnic groups, the Dinka and the Jur Chol traditionally reside in the region. The latter largely in Bar Mayen, Awada and Aroyo payams[8] of Aweil Centre county. Customary laws and traditional leadership patterns are endorsed by the constitution[9] and exist in parallel with democratic governance and legal structures. Many of these laws and customs are patriarchal and discriminatory against women, particularly in rural areas, who consequently lack access to and ownership of productive resources and are heavily burdened by non-remunerative family responsibilities and duties (See Annex 11: Gender Analysis and Action Plan (GAP), for details). Women rely more on NTFP to supplement food[10], [11]. Like women, IDP and vulnerable groups in South Sudan also lack representation on traditional governance structures which control land and natural resources in most rural areas[12]. This is coupled with limited access to productive resources, information and services, leaving them highly dependent on natural resources for income and food. This makes women and vulnerable groups particularly vulnerable to climate change. Women rely more on natural resources to meet the daily requirements of fuel wood and water. Coping strategies pursued by women during crisis are also markedly different from those of men. It is therefore

[1] Nihal Fernando and Walter Garvey, "The Rapid Water Sector Needs Assessment and a Way Forward."
[2] Republic of South Sudan, "Intended Nationally Determined Contribution."
[3] Republic of South Sudan, "Developing Capacities for Trade Integration and Economic Diversification."
[4] Food and Agriculture Organisation of the United Nations and World Food Programme, "Crop and Food Security Assessment Mission to South Sudan 2019."
[5] Ministry of Agriculture, Forestry, Cooperatives and Rural Development and Ministry of Livestock and Fisheries Industries, "Comprehensive Agricultural Development Master Plan (CAMP)."
[6] Nihal Fernando and Walter Garvey, "The Rapid Water Sector Needs Assessment and a Way Forward."
[7] We understand 'vulnerable communities' and/or 'vulnerable groups' as a term which describes both the condition and the processes that prevent individuals or groups from reaching sustainable development goals, or fully participating in social, economic and political life. In this document "vulnerable communities/groups" describes individuals or groups of people that face higher exposure to climate change, disaster risk and poverty, including but not limited to women, youth, children, elderly, differently-able people, indigenous peoples, disadvantaged families and those living in high risk areas and danger zones. 'Vulnerable' does not mean that the group is vulnerable per se, but that this vulnerability is the result of social, economic and political processes.
[8] According to the Local Government Act, 2009, county, payam and boma comprise the three tiers of local government in South Sudan. Payams are 'the coordinating unit of a County which exercises delegated powers from the County' and bomas as the basic administrative unit 'which shall exercise de-concentrated powers within a county'.
[9] Government of South Sudan, "The Transitional Constitution of the Republic of South Sudan, 2011."
[10] Mai, Jok, and Tiitmamer, "Climate Change and Gender in South Sudan."
[11] Data from community engagements presented in Annex 9: Stakeholder Engagement Plan (SHEP) and Annex 9a: Stakeholder Report.
[12] National Legislative Bodies / National Authorities, "The Local Government Act 2009"; National Legislative Bodies / National Authorities, "The Land Act, 2009."

necessary that the proposed project organizes and provides representation to these groups at all stages of implementation and ensures activities are responsive to their needs.

Climate change is likely to severely affect agricultural production and food security

Rainfall variability is the greatest determinant of agricultural production in South Sudan, causing droughts across the country and floods along the floodplains. Nearly 70% of the variability in the production of cereals and grains can be explained by variations in rainfall. Climate change is also driving deforestation to meet increased demands for fuelwood and land for agriculture leading to loss of ecosystem services and increased soil erosion. The latter coupled with overgrazing and bushfires is causing a decline in agricultural productivity. Increased temperatures are leading to reduced flows, lowering of water tables and drying up of swamps and forests[13]. Productive agricultural lands in selected project counties, Aweil Centre and Aweil East in NBG, are further threatened by encroaching desertification from the north. Excessive rains and consequent floods caused significant loss of crops and livestock in 2019[14]. A year earlier year, below average and erratic rains constrained yields[15] and were accompanied with an outbreak of the fall army worm. Yet again, abundant rains in 2013 and in 2015 facilitated high yields of cereals and improved livestock conditions[16]. There has been a 10 to 20% decrease in the long rains since the 1970's coupled with warming by over a degree which is equivalent to another 10-20% reduction of rainfall[17]. In the past four decades, the rate of warming in South Sudan was two and a half times greater than global averages. The area receiving over 500mm of rainfall necessary to sustain agricultural livelihoods will contract by 30% of what it was during 1960-1990 if this trend continues. This warming has amplified the impact of water shortages and drought, further reducing both crop harvests and pasture quality. Trends suggest that South Sudan will be warmer by one degree by 2060 and drying impacts could extend into the NBG by 2025[18] - which coincides with the concluding years of the proposed WACRAL proposal.

The (negative) impact of these trends on yields of the staple sorghum are expected to be between 5-20%. Climate change may trigger changes in migratory patterns of pastoral groups. The area in South Sudan receiving over 500mm of rain - necessary for agro-pastoral livelihoods, has reduced by 18% since 1960[19]. Possible impact of temperature increases includes[20]:

1. Increased evapotranspiration leading to
    a. Increased water demand/need for crops, failing which losses and crop failures will occur.
    b. Coupled with long dry periods causing drying of wetlands and rivers affecting both pastoralists and fisheries.
2. Thermal stress in crops (particularly sorghum and wheat) leading to lowered yields and increased pest loads.
3. Increased desertification, including in the NBG region with changing rainfall patterns. This in turn will:
    a. Reduced tree densities, diversity and growth.
    b. Increase wildfires, further affecting vegetation.
    c. Soil degradation.
    d. Habitat degradation, including quality of rangelands.
4. Increased rainfall variability and shortening of the growing seasons is likely to lead to:
    a. Potential increases in droughts, floods and onset of the rainy season, negatively impacting agriculture.

[13] Philip Omondi and Elliot Vhurumuku, "Climate Risk and Food Security in South Sudan."
[14] FAO/WFP, "2019 FAO/WFP Crop and Food Security Assessment Mission to the Republic of South Sudan."
[15] FAO/WFP, "FAO/WFP Crop and Food Security Assessment Mission to South Sudan."
[16] FAO/WFP, "Fao/Wfp Crop and Food Security Assessment Mission to South Sudan"; FAO/WFP, "Fao/Wfp Crop and Food Security Assessment Mission to Southern Sudan. Special Report."
[17] Funk et al., "A Climate Trend Analysis of Sudan"; USAID, "Climate Change Risk Profile South Sudan."
[18] USAID, 'Climate Change Risk Profile South Sudan'.
[19] Ministry of Foreign Affairs of the Netherlands, "Climate Change Profile South Sudan."
[20] Colin Quinn et al., "South Sudan Climate Vulnerability Profile."

b. Increased crop failure and reduced water availability for livestock, leading to increased competition and conflict over water resources between pastoral and farming communities.

c. Reduced water tables in boreholes, increased competition for water between communities, people and livestock.

d. Reduced water quality in ponds due to stagnation.

5. Floods leading to loss of grazing areas and access to water for pastoralists.

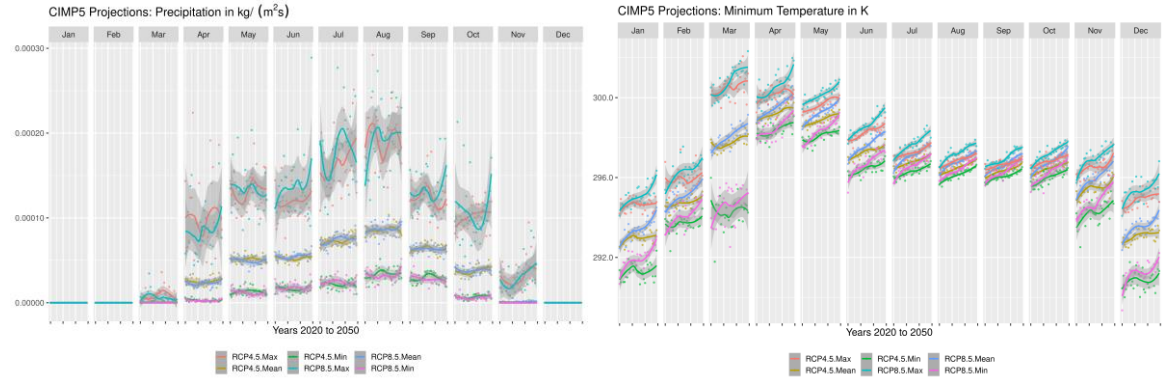
The mean values of intermediate scenario (RCP 4.5), and the worst-case scenario (RCP 8.5) for key climate variables over Aweil projected from current levels to 2090 are:

Sl.	Climate Variable	RCP 4.5 (Intermediate case scenario)	RCP 8.5 (Worst-case scenario)
1.	Average temperature increase.	1.5	3.5
2.	Cumulative annual precipitation increase	73mm/yr (7%)	176mm/yr (17%)
3.	Days of extreme heat.	13	36
4.	Days of extreme precipitation	1	3

Summary of project climate change for Aweil. Source: Colin Quinn et al., "South Sudan Climate Vulnerability Profile."

Any advantages from the projected increase in precipitation will be wiped away by the increases expected in temperatures. Warming of over a degree celcius is equivalent to 10-20% decrease in rainfall for crops[21], and, on average, reduce yields of wheat by 6.0%, rice by 3.2%, maize by 7.4%, and soybean by 3.1%[22].

An analysis of the CMIP5 model ensemble projections over Aweil using an updated dataset (the same dataset used by the IPCC and by Quinn, above) was done for Aweil. Our results for variations of precipitation and minimum temperature on a seasonal basis are presented below (details in Annex 13 section 2). These are significant because a large seasonal variation in rainfall is projected, coupled with a steady increase in minimum temperature.



Both the intermediate (RCP4.5) and the worst case scenario (RCP 8.5) show similar trends, with the variability projected in the worst case scenario being consistently higher. This increasing variability in rainfall, coupled with significant increases in temperatures can have devastating effect on agriculture and food security in the future. Farmers will have to cope with unseasonal and delayed rains leading to poor germination or crop damage. Pastoral groups will be faced with altered seasonal conditions of traditional rangelands and will probably need to expand grazing areas or increase migrations.

The chronic food insecurity in this region is therefore likely to increase unless the communities are able to adapt to these conditions. As yields and productivity from farms and livestock decline, the dependence of communities on natural resources as part of their coping strategies is likely to increase. This will trigger further environmental degradation and disruption of ecosystem services which provide long term resilience to climate change impacts.

[21] Funk et al., 'A Climate Trend Analysis of Sudan'.

[22] Zhao et al., 'Temperature Increase Reduces Global Yields of Major Crops in Four Independent Estimates'.

The need for building resilience to climate change impacts among the agro-pastoral communities is therefore not only necessary but also urgent. While the project sites face a high level of food insecurity, they also possess a very high potential productivity (Annex 13 section 3). Interventions in climate change adaptation and resilience building have a very real potential to not only address food insecurity but also to increase rural productivity and prosperity in this region of South Sudan.

Technical and operational constraints on agricultural extension

Extension services in South Sudan lack technical capacity and resources to effectively support farming and pastoral communities in climate change adaptation (CCA). Local level institutional mechanisms and arrangements are weak, preventing necessary coordination, planning and implementation of programmed and projects for CCA.[23]. The 2011 agriculture and livestock extension policy[24] listed constraints on availability of qualified and trained extension staff, lack of training and transport facilities, poor engagement with private sector and markets, poor technical backup and low salaries of extension staff. A more recent analysis showed that many of these challenges persist and that producers, particularly small holders, face constraints in access to inputs and seeds, post-harvest and storage technologies and to financial services, which ought to be part of the extension package[25]. Training and equipping community-based extension services and community animal health workers[26] requires private-public linkages and institutional capacity enhancement. These decentralized systems, which include farmer field school and progressive farmer/pastoralist led demonstrations, can help bypass the high costs and difficulty of accessing extension services and conventional delivery channels such as radio or mobile phones. However, these too have their challenges in terms of cost, elite capture and sustained institutional support and a supportive policy environment.[27]. Extension services are also constrained by the lack of information and training to use available climate information products and services.

Weak and underdeveloped private sector and markets in agriculture

Years of insecurity in South Sudan has led to disruption of value chains and suppressed markets in most regions. This directly affects the level private sector engagement in crucial areas of agriculture including agricultural inputs, procurement, post-harvest technologies and equipment, agricultural extension such as veterinary services as well as financial services. For example, the availability of agricultural inputs is severely constrained. This includes drought and pest resistant varieties of seeds, disease resistant and heat tolerant livestock, supply and servicing of irrigation equipment and of storage and post-harvest equipment. Farmers and pastoral groups currently rely on limited channels for sales of produce and livestock which severely limits their access to financial resources.

Consistency with National Strategies

The project addresses these challenges in line with the policies and plans of the GoSS (Annex 13 Feasibility Study section III-2 for more details).

National Policies, Strategies and Plans

<u>Revitalised Agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS)</u>

The R-ARCSS[28] was a milestone in the long running peace process in South Sudan. The agreement was signed on the 12th of September and was an outcome of negotiations lead by the Intergovernmental Authority on Development (IGAD). The R-ARCSS brought a formal end to the war since 2013, prescribed a power sharing agreement and provided a roadmap to peace and development. Key features of the agreement were the formation of the Revitalised Transitional Government of National Unity (RTGoNU), formed in February 2020. The agreement outlined a new power-sharing arrangement along with infrastructure to monitor and evaluate the ceasefire and implementation of

[23] Philip Omondi and Elliot Vhurumuku, "Climate Risk and Food Security in South Sudan."
[24] Agriculture and Livestock Extension Task Force, "National Agriculture and Livestock Extension Policy (NALEP)."
[25] Bernard B. Obaa and Stephen Angudubo, "Engendered Value Chain Assessment for Sorghum, Groundnuts, Milk and Gum Arabic in the Former Northern Bahr El Ghazal State, South Sudan."
[26] Jeffrey C. Mariner and Roger Paskin, "FAO Animal Health Manual 10 - Manual on Participatory Epidemiology - Method for the Collection of Action-Oriented Epidemiological Intelligence."
[27] Gershon Feder et al., "Promises and Realities of Community-Based Agricultural Extension"; Climate Technology Center & Network, "Community-Based Agricultural Extension | Climate Technology Centre & Network."
[28] Inter-Governmental Authority for Development (IGAD), 'Revitalised Agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS)'.

the pre-transitional provisions. It provides procedures for accessing humanitarian assistants, management for the country's resources[29]. In spite of delays and set-backs, the R-ARCSS provides an avenue for lasting political settlements between political actors. The proposed project is in close alignment with a number of provisions of the R-ARCSS. This includes:

- Provisions for representation and reservation for women in executive positions to the Council of Ministers and transitional justice institutions, the emphasis on gender and youth empowerment and position against gender based violence and protection of the needs of women, girls and those of other groups with special needs. These are expected to provide policy support and impetus to the gender-responsive strategies proposed in the project.

- The provision to establish a Women Enterprise Development Fund for provision of subsidized credit for women-based enterprise development and capacity building of women entrepreneurs is closely aligned with the project strategy to support women in livelihood diversification and could provide formal mechanisms to access credit, funds and government subsidies for activities under Output 2.4.

South Sudan National Development Strategy 2018-2021 and Revised National Development Strategy (SS-NDS)

The National Development Strategy of South Sudan[30] succeeded the South Sudan Development Plan in providing strategic guidance for national planning in the unique country context of South Sudan. The strategy, revised in 2021 has the goal to consolidate peace, stabilize the economy and return to sustainable development. The project aligns and will contribute to four of its five objectives of 1) Strengthening institutions for transparent and inclusive governance; 2) Diversification of the economy; 3) Support to the social sector and protection to vulnerable populations and 4) Mainstreaming of gender and youth in development. The proposed project is also aligned with the following strategic actions of the first National Development Strategy (2018-2021):

- Enabling conditions and integration of displaced South Sudanese: The project, through component 2, will specifically involve internally displaced persons and other marginalized communities.

- Ensure secure access to adequate and nutritious food: Climate smart interventions in agro-pastoral landscapes are the core of the proposed project's strategy. These will directly contribute towards food security and climate resilient livelihoods of agro-pastoral communities.

Furthermore, the project is aligned with the communication strategy proposed under the SS-NDS wherein participatory processes are used to identify activities based on inputs of diverse stakeholders and the use of multiple modes of communication including print and electronic media. The project will also contribute towards strengthening coordination between government and citizens and ensure institutional and human resource development, which are strategic priority actions under the SS-NDS under the governance cluster. Under the economic cluster, the project will contribute towards the cluster goals of improving food security and livelihoods and the strengthening of economic development infrastructure by supporting construction of water harvesting and irrigation infrastructure as well as improving basic infrastructure for post-harvesting and storage of agricultural produce. Furthermore, the integration of environmental conservation measures and optimizing associated adaptation benefits are a key priority of the development strategy which resonate with the integrated watershed management and value chains development approach of the proposed project. Furthermore, climate resilience, together with gender and capacity development are key cross-cutting issues identified in the NDS to which the project is closely aligned.

Vision 2040

The South Sudan Vision 2040[31] provides the framework and strategic direction to the policy making process of the GOSS. The proposed LDCF project is aligned with a number of the strategies for the delivery of the vision including building of institutional capacities, promotion of gender equity and social change, increasing agricultural productivity

[29] Maphasa, Thulani. 'Finding Peace in Uncertain Times: South Sudan and the Revitalised Peace Process', 2020.
[30] Government of the Republic of South Sudan. 'South Sudan National Development Strategy'. Juba: Government of the Republic of South Sudan, 2018. http://www.mofep-grss.org/wp-content/uploads/2018/11/NDS-4-Print-Sept-5-2018.pdf.; Republic of South Sudan, 'Revised National Development Strategy 2021 -2024: Consolidate Peace and Stabilize the Economy'.
[31] Government of the Republic of South Sudan, "South Sudan Vision 2040."

and enhancing food security and to enhance disaster preparedness and management capabilities. The implementation arrangements of the project align with the implementation matrix of the document.

The Comprehensive Agricultural Development Master Plan - 2015 to 2040

The LDCF project proposal will identify and address gaps in climate change resilience and adaptation in the implementation priorities and projects listed in the CAMP. It will build institutional capacities in agricultural extension and at the grassroots level by introducing drought resistant varieties, crop diversification, strengthening and creation of farm based CBOs and introduction of low-cost technologies for tillage and irrigation, all of which are prioritized in the CAMP. The project will also build institutional capacities for designing participatory integrated watershed development plans.

Irrigation Development Master Plan

The IDMP specifically seeks to reduce vulnerability of agriculture to climate change and variability. Small scale/micro irrigation systems are integral to the plan. The plan includes an assessment of hydrology and aquifers across South Sudan which can inform the use of ground water and water harvesting for irrigation proposed in the LDCF proposal. The LDCF project also seeks to replicate the use of low-cost lift irrigation through portable treadle pumps and other means.

National Environment Policy and Environment Protection Bill of 2014

The policy and bill promote sustainable development and provides guidance on mainstreaming the environment and natural resource management in development programs which are outlined in the 2018 South Sudan: First State of Environment and Outlook Report[32]. The proposed project will implement activities pertaining to environmental management and dissemination of environmentally sound agricultural technologies.

Agricultural Sector Policy Framework for 2012- 2017

The Framework aimed to enhance measures to mitigate the adverse impacts from climate change in the medium and long term. It attempted to mainstream gender in agricultural activities and recognizes the limited institutional and infrastructural capacities in South Sudan to cope with climate variability. The Framework mandates the Ministry of Agriculture to support policy measures outlined in the NAPA, focus on development of diversified crops adapted to extreme climate conditions and to design policies that tap global initiatives to provide "green growth". The proposed project is closely aligned with these priorities of the framework.

Forest Policy, 2015

The draff forest policy based on the 2012 forest policy recognizes the role of forest in maintaining ecosystem and hydrologic services. It provides a framework to ensure optimal benefits from forestry and agro-forestry activities for food security and to poverty alleviation among our rural communities. It also integrates forest sector actions with rural development efforts to ensure that the rural population has access to basic needs. The project is aligned with the following principles of the policy: Sustainable management of forests to ensure benefits to present and future generations; establishment and strengthening of forestry institutions and services to increase productivity, achieve household food security and alleviate poverty; sustained commitment to forest related regional and international agreements and Conventions; and best knowledge and information used to guide management of forests and tree resources. It will develop a Policy for Community Based Forest and Natural Resources Management for the state of NBG.

Regional and International Conventions

The GoSS is signatory to the following conventions:

1. CBD[33] (23 April 2013) UNCCD (25th April 2013)
2. UNFCCC and the Kyoto Protocol to the UNFCCC
3. Montreal Protocol to the Vienna Convention on Substances that Deplete the Ozone Layer.
4. International Plant Protection Convention (IPPC)

[32] Ministry of Environment, Republic of South Sudan and United Nations Environment Programme, "South Sudan First State of Environment and Outlook Report 2018."

[33] Ministry of Environment, Republic of South Sudan, "Fifth National Report to the Convention on Biological Diversity."

5. The Ozone layer convention.
6. Ramsar Convention on wetlands of international importance (23 April 2013)

The project is consistent with the following frameworks that were developed to meet these commitments.

National Adaptation Programmes of Action (NAPA) under UNFCCC

The project is aligned with three of the five key thematic areas of the NAPA of South Sudan[34], developed with support from the GEF.

- Environment: i) Promote agro-forestry practices to diversify land production systems and livelihood options. ii) Promote afforestation of degraded landscapes/watersheds using multi-use forest species to increase community safety-nets and diversify livelihoods. iii) Develop management plans to protect watersheds and improve future water availability. iv) Increase awareness of local communities on climate change and environmental protection. v) Introduce an integrated natural resource management approach. The LDCF will directly contribute to two key areas of the NAPA:
- Water Resource Management: i) Undertake assessments to identify areas prone to shortages under climate change and inform integrated water resources management. ii) Develop water harvesting structures, including dykes and water reservoirs to increase water availability. iii) Develop supplementary irrigation systems in rural areas to improve agricultural production and increase food security.
- Agriculture: i) Implement rangeland management plans to control overgrazing and ensure fodder availability under climate change conditions. ii) Identify and promote the use of drought-resilient livestock varieties. iii) Protect and preserve water resources, including the regulation and management of such water bodies. iv) Introduce supplementary irrigation technologies to improve agricultural production and increase food security. v) Strengthen agricultural and veterinary extension services. vi) Introduce conservation agriculture techniques to improve production. vii) Promote the implementation of projects identified in the CAMP that benefit vulnerable communities.

Intended Nationally Determined Contributions (INDC) under UNFCCC

GoSS submitted its first INDC to the UNFCCC in 2015. This was updated by the second Nationally Determined Contribution in 2021 to include the country's changing climate and its development considerations. The project builds on the following national adaptation objectives of the GoSS highlighted in the INDC[35]: i) Prioritize the enhancement of climate resilience in the agricultural sector (crop production, livestock) through the promotion of climate-smart agriculture, livestock improvement and soil erosion control. ii) Promoting the harvesting and retention of water for different uses implemented through community-based watershed management with a focus on maintaining the quality and quantity of water resources for multiple uses and stakeholders. In order to reduce vulnerabilities to climate reduced hazards, the project will: i) Enhance access to water in light of growing climate threats through integrated watershed management. ii) Enhance food security under a changing climate through the introduction of climate-smart agricultural techniques. iii) Promote agro-forestry practices as a way of diversifying land production systems and promoting alternative livelihood options. iv) Promote afforestation of degraded landscapes/watersheds using multi-use forest species to increase community safety-nets and diversify livelihoods. v) Increase awareness of local communities on climate change. vi) Introduce an integrated natural resource management approach. vii) Introduce water saving technologies and introduce rural infrastructure for water conservation, recycling, harvesting, irrigation and water management for agricultural purposes.

National Biodiversity Strategy and Action Plan (NBSAP) under UNCBD

The RSS NBSAP (2018-2027), published in 2018[36], and supported by the GEF, integrates biodiversity concerns into public, private, and community policies, plans, programs and projects. It fulfills the GoSS commitments to the UNCBD made in February 2014 and became the 94th party to global treaty on biodiversity and sustainable development.

[34] United Nations Environment Programme and Ministry of Environment South Sudan, "Republic of South Sudan."

[35] Republic of South Sudan, "Intended Nationally Determined Contribution."; South Sudan Ministry of Environment and Forestry, 'South Sudan's Second Nationally Determined Contribution'.

[36] Ministry of Environment and Forestry, The Republic of South Sudan, "National Biodiversity Strategy and Action Plan (2018-2027)."

National Biodiversity Strategy and Action Plan (NBSAP) recognize the Strategic Plan of the CBD (2011-2020) and the Aichi Targets set in October 2010.

The project is closely aligned with the two of the seven strategic objectives of the NBSLUP:

- Strengthen capacity for and conduct resource assessments, spatial, ecological and land use planning and benchmarking of the value of biodiversity in South Sudan to support sustainable use and management of biodiversity in South Sudan.
- Restore degraded ecosystems and promote access and benefit sharing of biodiversity and ecosystem services, including for protected areas and non-protected areas of South Sudan. Other than these areas, the LDCF project will support many of the targets of the NBSAP and will collaborate and gain from relevant initiatives of the government in the area of biodiversity conservation.

National Action Program (NAP) under UNCCD

The first National Adaptation Plan (NAP) was submitted to the UNCCD in 2021[37]. It fulfills the mandate of the Government of South Sudan to strategies climate change adaptation and efforts to reduce community vulnerability and variability to climate change. The NAP embodies South Sudan's commitment to overcome these challenges and will guide efforts from the national level, down to communities and households. The NAP consists of three priority pillars: 1. Building climate resilient communities; 2. Building a climate resilient economy and development trajectory; and 3. Building a climate-resilient environment and ecosystems. The proposed project is closely aligned with all three of these pillars.

Land Degradation Neutrality (LDN)

The LDN targets set for the Republic of South Sudan were the augmentation of the LDN targets at national scale with the sub-national and hotspot level targets. The proposed time horizon for the attainment of LDN targets is the year 2030. This is so as to align it to the 2030 Agenda for Sustainable Development (SDG target 15.3)[38].

The LDCF project is closely aligned with the national measures to achieve Land Degradation Neutrality (LDN) by 2030 as compared to 2015 with 10% net gain (improvement) in national territory. At the sub-national scale, the project is aligned with the target to achieve LDN in the semi-arid areas, northern borders of South Sudan, where this project sites are located. Among the specific as detailed in the final report on LDN Target Setting[39] the project will contribute to achieving the following targets set in the report:

- Improve productivity in 21,950.6 km2 and 2,194.4 km2 SOC stocks in lands of South Sudan by 2030 as compared to 2015.
- Rehabilitate 27,019.6 km2 of degraded and abandoned land of South Sudan by 2030.
- Halt the conversion of forests and wetlands to other land cover classes by 2030.
- Increase forest cover by 20% by 2030 as compared to 2015.

National Communications (NC) under UNFCCC

The Initial National Communication (INC) under the UNFCCC[40] was presented by the Government of South Sudan in 2018, marking an important step for South Sudan in meeting its international obligations and ensuring that climate change is considered in national policies, activities and development plans. The INC points out that even though South Sudan is a minor emitter of GHGs, the country is negatively impacted by climate change in nearly all its key economic sectors, such as agriculture, transport and forestry. The INC recognizes that besides conflict and insecurity, climate change is expected to be the country's single most important contributor to food insecurity. Chapter 3 of the INC summaries the measures to facilitate adequate adaptation to climate change.

[37] South Sudan Ministry of Environment and Forestry, 'First National Adaptation Plan for Climate Change - Republic of South Sudan'.

[38] UNCCD National Focal Point and LDN National Working Group, 'Governmental High-Level Note of Measures to Achieve the National LDN Targets'.

[39] UNCCD National Focal Point and LDN National Working Group, 'Republic of South Sudan Land Degradation Neutrality Target Setting Final Report'.

[40] Ministry of Environment and Forestry, Government of South Sudan, 'Republic of South Sudan Initial National Communication to the United Nations Framework Convention on Climate Change'.

The proposed LDCF project is aligned with the priority projects listed in in the Greater Bahr el Ghazal sorghum and cattle and the Western groundnuts, sesame and sorghum livelihood zones:

- In Water Resources Management: i) Introduction of climate change resilient, participatory and sustainable forest management; ii) Introduction and expansion of irrigated agriculture (for crop and livestock production); iii) Enhancing resilience to rainfall variability through rangeland rehabilitation and water resources management.
- In Agriculture: i) Promotion of climate-smart agricultural techniques to improve livelihoods and food security under changing climatic patterns; ii) Enhancing agricultural production under climate change conditions through infrastructural development and strengthening of agricultural extension services; iii) Development of the livestock sector through enhanced rangeland management, increased knowledge and improved animal health systems to reduce pastoral communities' vulnerability to climate change
- In Disaster Risk Reduction: i) Reforestation and tree planting to combat desertification; ii) Increasing knowledge on climate change and environmental issues through a national awareness-raising campaign.
- and in Policy and Institutional Frameworks: i) Building institutional arrangements for climate change adaptation at the state, county, payam and boma levels; ii) Integrating climate change adaptation and mitigation measures into sectoral policies; iii) Building or strengthening institutional arrangements to develop climate change resilience and iv) Support for an enabling policy environment on climate change.

Intergovernmental Authority on Development

The GoSS is also part of the Intergovernmental Authority on Development (IGAD) whose objectives are to achieve regional food security and encourage and assist efforts of member States to collectively combat drought and other natural and man-made disasters and their natural consequences. The LDCF project strategy is closely aligned with these objectives and guidelines.

The IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI)

The IDDRSI was formed in September 2011 in the wake of a drought that affected more than 13 million in the IGAD region. Its objectives are to address the catastrophic phenomenon of recurrent droughts and worsening environmental concerns in a sustainable manner by introducing innovative sustainable development strategies, policies, and programs at the Member States. IDDRSI helped finalize the South Sudan Country Programming Paper for ending drought emergencies in 2014 which identifies areas of intervention at national and regional level to sustainably build resilience to drought.

The IGAD Climate Prediction and Application Centre

ICPAC, based out of Nairobi, Kenya, provides South Sudan, and the region, access to technologies, training and to data for delivery of climate services. It is one of the principal sources of climate information that is used by South Sudan.

Strategies plans and conventions for which work is underway

- The Ministry of Environmental and Forestry, in 2019, requested for support from the Climate Technology Centre and Network (CTCN) for technical guidance and support for conducting a Technology Needs Assessment.
- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD is under preparation and is being supported by the GEF.

III. STRATEGY

Theory of Change

The theory of change (Figure 1) proposed for the project will be revised and updated as the project evolves, in response to the inherently fluid ground realities in South Sudan. These are both in terms of climate change related impacts, as well as the changing security environment which has steadily been improving and allowing greater participation of the private sector, thereby creating new opportunities for incomes from agricultural produce and livestock. The project will address the barriers by integrating climate change adaptation into policies both for natural resources management as well as for industry. It will target and address concerns of the most vulnerable groups while providing innovative and sustainable mechanisms to finance adoption of climate change mitigation and

adaptation measures among farming and pastoral communities and local institutions. This includes revival of agricultural supply and value chains and support for entrepreneurs among these communities who wish to engage in diversifying income streams through agro-processing and value addition to local produce. Finally, the project will invest substantively to enhance capacities of local institutions, particularly agricultural extension and veterinary services, so they are technically and logistically equipped to support climate smart agricultural interventions among these communities on a sustained basis.

One of the key strategies of the project design is the use of watershed approaches. This strategy recognizes that functioning ecosystems are integral to livelihood security.[41] This is one of the basis of the millennium ecosystem services framework (MA)[42] which replaces the concept of carrying capacity with a broader and more comprehensive understanding of how ecosystems work. This strategy dictates that interventions are integrated and synergies between the activities and their impacts are maximized. The project will focus its interventions within hydrologic boundaries of selected catchments. This includes the strengthening and creation of local institutions to manage and sustain these activities past the project period. The watershed approach will facilitate emphasis on integrated approaches in the conservation and effective use of soil and water. Watershed restoration is recognized as an effective strategy for disaster risk reduction through building resilience of communities against climate change and eventualities such as the slow onset of droughts. The project takes this further by strengthening both the practices and interactions between producers, entrepreneurs and traders who are part of the agricultural supply and value chains.

[41] Bruce and Mearns, "Natural Resource Management and Land Policy in Developing Countries"; World Resources Institute, "World Resources 2005."

[42] Millenium Ecosystem Assessment, "Ecosystems and Human Well-Being."

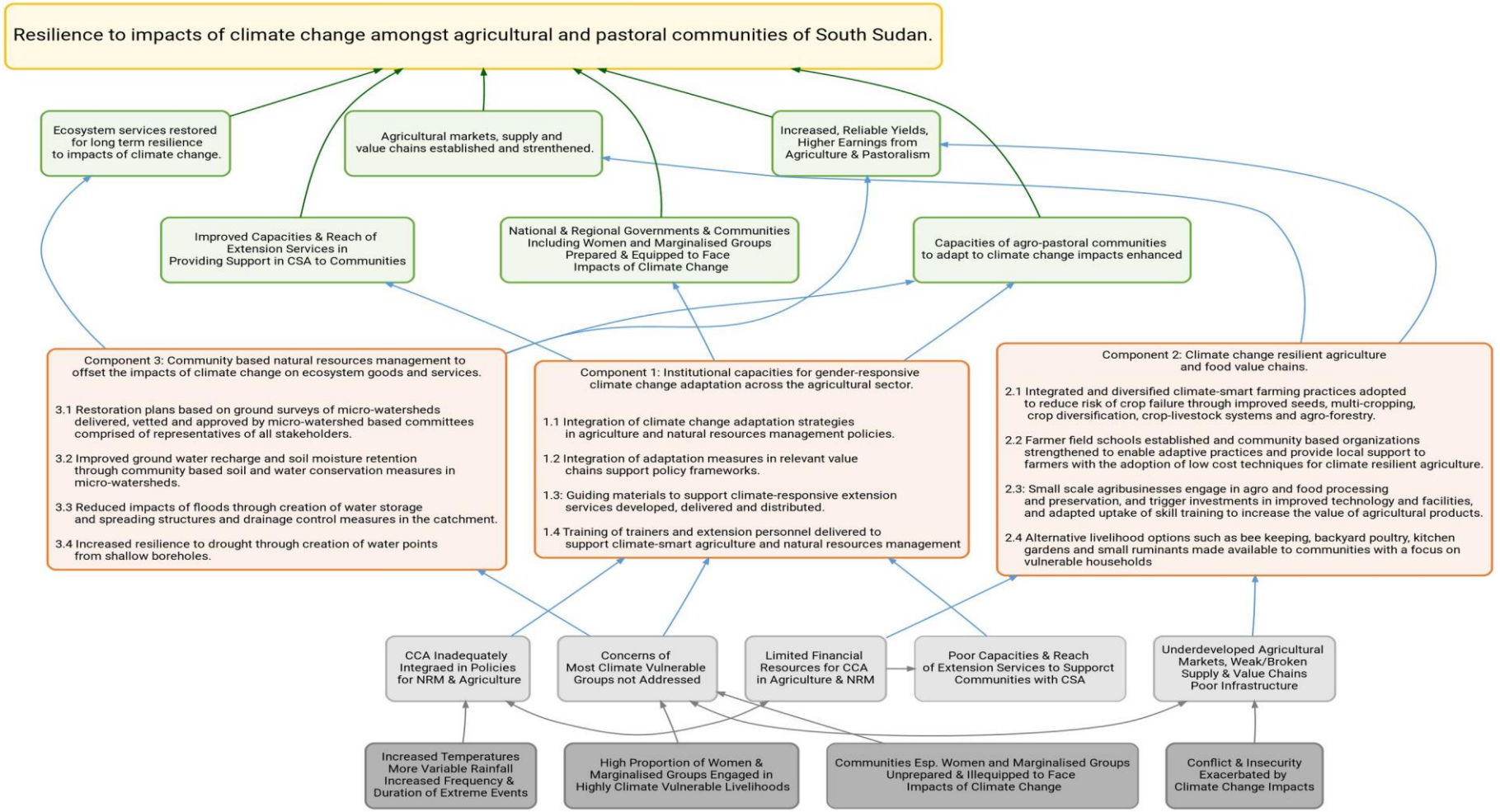


Figure 1: Theory of Change.

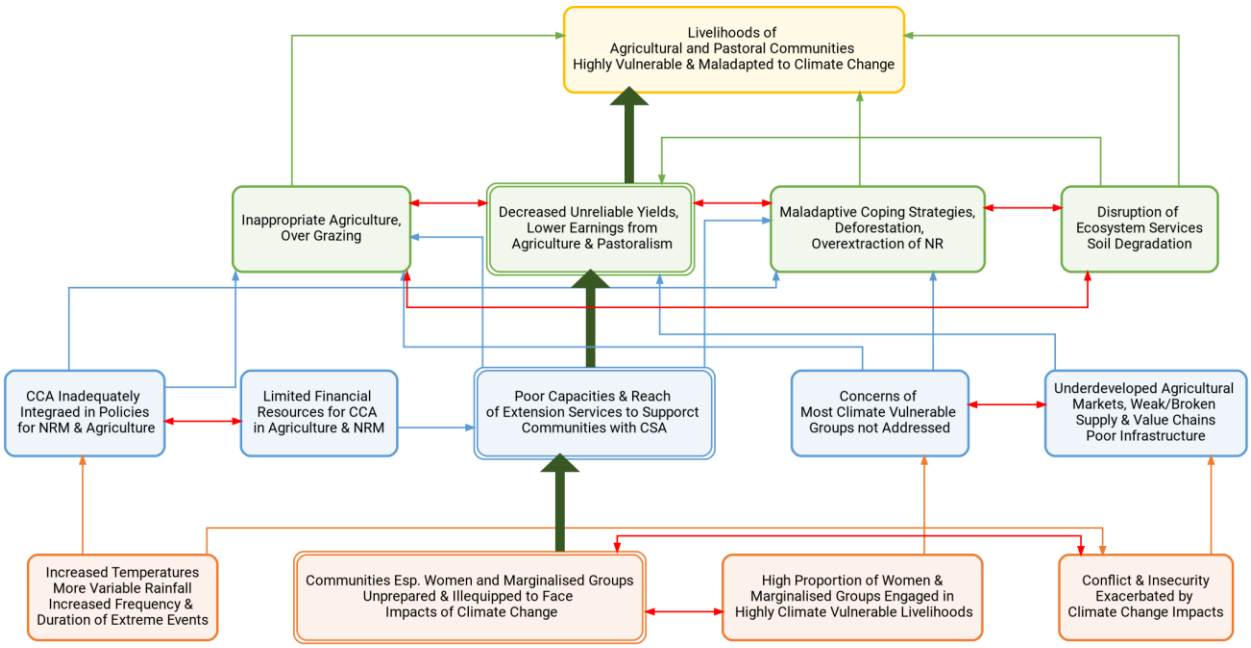


Figure 2: Problem tree.

Problem Analysis

Critical Development Challenge

There is an urgent need to build resilience among agricultural and pastoral communities in South Sudan to present and projected impacts of climate change on agriculture and natural resources. Climate change presently threatens livelihoods and food security across the country (figure 2).

Root Causes

The root causes of the present crisis is the impact of climate change wherein increasing variability in rainfall, increasing temperatures and frequent floods further exacerbate food insecurity and environmental degradation. Livelihoods of 95% of communities in South Sudan and its economy are dependent on climate sensitive natural resources and agriculture which have been disrupted by years of conflict and insecurity. These livelihoods can only be rebuilt and sustained if communities are able to adapt to climate change by adopting locally relevant CSA techniques and technologies. Long periods of conflict and insecurity have also severed market linkages and broken value chains in agriculture, leaving communities isolated and without access to markets and resources to source inputs or sell produce. Communities in NBG traditionally have unequal gender relations and a high population of vulnerable groups including IDP, PWD and unemployed youth. Thus, a large section of society is highly vulnerable to climate change but without access to means for mitigation or adaptation to its impacts. Political institutions remain weak and traditional authorities dominate governance at the rural level. These often do not provide adequate representation to the vulnerable groups.

Underlying Causes

Climate change is not adequately addressed in agricultural policy and plans. Allocation of the limited financial resources of the government to agricultural extension, development or natural resource management are meager. This severely constrains the reach of government line agencies and institutions leading to poor on-ground extension and development support to communities. The large-scale re-organization of the administrative structures combined with years of conflict have led to a political vacuum and hampered the development and the role of non-government agencies and community-based organizations. The conflict has also led to the breakdown of existing

infrastructure. Facilities and basic amenities are lacking in rural areas and are severely limited in larger towns. There are no facilities for markets, storage or processing of agricultural produce or livestock. Agro-industries have been unable to establish in this environment. Research institutions in South Sudan have also been badly affected by the insecurity and conflict. Applied research, especially in rural areas, has been scaled down and data that is needed to develop strategies for climate smart agriculture or natural resource management is lacking[43]. There are severe constraints on institutional and community capacities which hinder development, transfer and adoption of adaptation technologies in agriculture. The private sector in rural areas is underdeveloped. Traditional livestock markets and routes have closed down due to insecurity and value chains and market links for agricultural produce remain fragile.

Immediate causes

The root and underlying causes have led to communities pursuing inappropriate, maladaptive and environmentally destructive coping strategies. These include unsustainable harvest of timber, fuel wood, charcoal production and sand mining from riverbeds. Consequent environmental degradation including that of forests and rangelands, of soils through depletion of nutrients, moisture and its erosion have led to loss of fertility and has disrupted ecosystem services and goods. Limited irrigation and poor moisture management, poor fertility management, use of poor quality and even pest infested seeds and excessive tillage especially where machinery is available are common agricultural practices being followed by both women and men farmers[44]. This has created a downward spiral of decreasing productivity and degradation of forests and pastures. Climate change related variability in rainfall, increased frequency and duration of extreme weather events and increased temperature combined with maladaptive approaches have led to widespread loss of livelihoods and food insecurity.

Solution Pathway

The present situation perpetuates and reinforces climate vulnerabilities. The climate sensitive nature of livelihoods will lead to declining returns and increased uncertainty of returns from agriculture and livestock. Poor representation of vulnerable groups combined with conflict and insecurity will perpetuate food insecurity among the most vulnerable. Poor integration of CCA in national and regional policies coupled with weak institutional capacities and lack of funding for CCA will force communities to continue maladaptive strategies and unsustainable extraction of natural resources to cope. Conflict and insecurity will constrain and contract agricultural markets and disrupt value chains, further decreasing the economic viability of agriculture. As larger areas degrade due to unsuitable agriculture and over extraction of natural resources, farm and range lands will degrade further and conflict over resources will increase as communities are forced to expand and move their farms, pastures and migratory patterns to compensate for poor productivity and yields from traditional areas.

Earlier projects have shown that substantial progress can be made by addressing the challenges in the problem tree. UNDP will provide necessary oversight to World Vision South Sudan (WVSS), the implementation partner selected for the project. WVSS has a field office in Aweil where there is trained staff with expertise in climate smart agriculture and conservation agriculture, climate change adaptation and disaster risk reduction, participatory watershed and landscape management with emphasis on surface water as well as in livestock development and fisheries. WVSS also has experience in market and value chain development.

Key advantages that UNDP has in providing oversight to the IP are:

1. UNDP has a field office in Aweil, the center of the proposed sites. Here it is implementing programs to boost the local economy, resolve and manage conflicts and to address challenges of gender-based violence and inequity. UNDP has been building capacities of community-based organizations in Aweil which includes social and economic initiatives and training in M&E and reporting. The economic initiatives include activities with women entrepreneurs in agro-processing. The field office provides UNDP a huge advantage in terms of logistical support and necessary infrastructure for supporting interventions needed in the proposed project. Also, the contacts established with local government agencies, CBOs and NGOs in the region, will provide UNDP a head start in project implementation.

[43] Ministry of Agriculture, Forestry, Cooperatives and Rural Development and Ministry of Livestock and Fisheries Industries, 'Comprehensive Agricultural Development Master Plan (CAMP)'.

[44] Qureshi, Abdallah, and Tombe, 'Farmers Perceptions, Practices and Proposals for Improving Agricultural Productivity in South Sudan'.

2. UNDP's projects in nearby countries with similar ecological/environmental and climate challenges facilitates access to technical expertise and knowledge. UNDP's partnerships include FAO and WFP, both of whom are actively involved in agricultural development and addressing food insecurity in the NBG state. Other relevant partners include ICRAF who have successfully demonstrated the viability of assisted restoration and afforestation integrated with conservation agriculture.
3. UNDPs work with the GoSS, over the years, puts it in a unique position for policy advocacy, particularly with the ministries of Agriculture and the Environment. This is important considering the need for mainstreaming CCA and gender in South Sudan's policies and for framing policies for community-based forest and natural resources management.

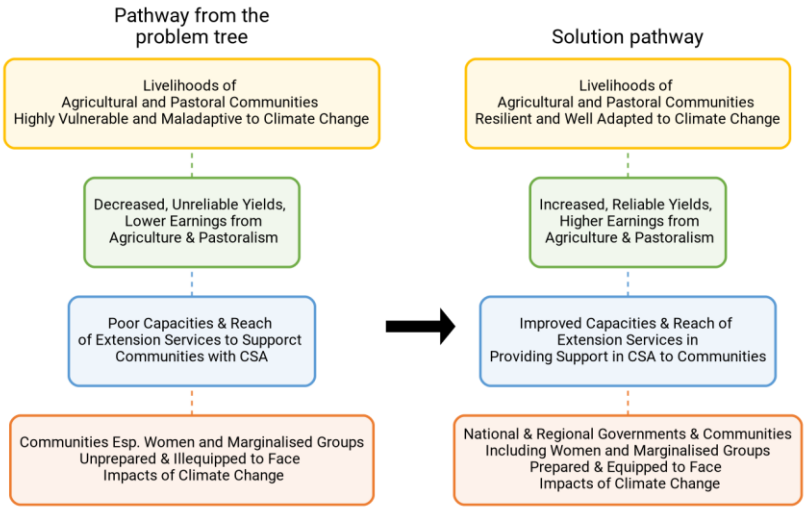


Figure 3: Proposed solution pathway.

Key assumptions

The following assumptions are made in this theory of change.
• The global COVID pandemic will not significantly affect the activities proposed.
• Women and girls as well as vulnerable groups will be provided equal and equitable access to all project related activities and benefits. They will be supported by the communities and government in the sites to represent their needs and participate fully.
• Access to land and available infrastructure for project activities will be provided by the government and communities.
• Long term interventions from existing programs will address issues of peace and security which can otherwise prevent project implementation and negate the interventions made during the project.
• Policy makers will be receptive to the proposed policy interventions at the national and state levels.
• Stakeholders will be receptive to the use of spatially explicit and mobile-ICT tools and techniques proposed.
• Relevant authorities will provide permissions, support and resources at the local level to use technologies such as drone-based surveying and will integrate them with existing management and planning systems.
• Structures created by the project for soil and water conservation, water harvesting, irrigation and for ponds and hafirs will be operated and maintained by communities.
• Management structures and platforms proposed during the project will be dovetailed into any existing frameworks to avoid duplication and redundancy and will be integrated with formal systems of management and coordination at the boma, payam and county levels and at the state and national levels, where necessary.
• Trained technical staff continue to work on the project during its implementation phase and are not transferred or assigned other responsibilities.
Institutions and governance structures of government remain stable through the implementation period to avoid project activities disruptions

• Training and capacity enhancement created by the project among communities and other actors are retained and used for actual implementation of activities.
• Financial services and private sector value chains proposed will receive support from concerned authorities.
• Entrepreneurs and private sector participants will be able to access credit, insurance and other material and technical resources from existing sources in the government and private sector.

Appropriateness of the strategy

In order to address these challenges, the project will operate simultaneously at both the national and the local level. At the national level the project will identify gaps and hold a national dialogue on mainstreaming gender responsive CCA and mitigation in policies and programs in agricultural extension and community-based forest and NRM. Frameworks needed to support and re-build key value chains in the agriculture and agro-processing will be identified and strengthened.

Gaps in the capacities of institutions responsible for and engaged in on-ground extension and development will be identified and key agencies will be provided training, financial and material support, equipping them to intervene and helping communities build resilience and adaptive capacities to address climate change related challenges. Capacity gaps identified during the PPG process are presented in the stakeholder's engagement plan and stakeholders report (Annex 9 and 9a).

This strategy builds on existing knowledge and practices of local communities in the proposed sites. The PPG process included on-ground evaluation of prevalent practices in agriculture as well as coping strategies adopted by communities to address major climate shocks. The surveys revealed a high reliance on varieties of crops and livestock that are vulnerable to climate extremes and pests, use of inefficient and labor-intensive methods of cultivation - largely due to limited access to technology, destructive coping strategies and potentially unsustainable harvesting of natural resources to supplement incomes (Annex 9a).

High external input agriculture is presently the focus of extension agencies. However, this approach disregards the low availability and poor access of communities to agricultural inputs and the fact that most agriculture in South Sudan is rain-fed[45]. The proposed strategy for interventions in agriculture and NRM will therefore be based on a careful assessment of site conditions. during the inception phase. This includes an assessment of productivity potential (soil quality, water availability and prevalent practices). This contextual understanding will be coupled with approaches that seek to enhance natural productivity and resilience, for example conservation agriculture and assisted natural regeneration as opposed to high input agriculture. The inception phase will also build on the initial capacity assessment of on-ground staff (Annex 9a) to provide sustained extension support to communities in appropriate technologies suited to the local context.

Project strategies will focus on the women and vulnerable groups within local communities who are the most vulnerable to the impacts of climate change. Building on prior projects, best practices will be fine-tuned to ensure the meaningful participation of women and vulnerable groups in project activities (Annex 9 and 11). A comprehensive field-based assessment during the inception phase of the project will precede project implementation. Vulnerable households and representatives of communities will be mobilized to ensure representation of women and vulnerable groups. Groups and committees will be formed to plan and participate in project implementation.

The primary government agency at Aweil who will coordinate project activities with their payam counterparts is the State Ministry of Agriculture, Environment and Forestry (SMoAEF). The SMOAEF long with the field PMU at Aweil and the payam officers at Aroyo and Akuem will identify and invite local institutions and CBOs to participate in the watershed committee meetings. This will be in addition to the grassroots agencies who are involved in the project activities and identified on the basis of comprehensive socioeconomic surveys and vulnerability assessments (Activity 1.1.2-1.1.4).

All groups in the watershed committee will need to have a physical presence in the respective watersheds and a direct participation in watershed restoration and related project activities. The watershed committee is meant to be

[45] Ministry of Agriculture, Forestry, Cooperatives and Rural Development and Ministry of Livestock and Fisheries Industries, 'Comprehensive Agricultural Development Master Plan (CAMP)'.

an inclusive platform, however its core group will comprise relevant agency representatives as identified by the local government and the field PMU.

Social and environmental safeguards listed in the SESP (Annex 6) and ESMF (Annex 10) will be fine-tuned based on information from ground surveys undertaken during project inception. These surveys will merge participatory, community-based planning and data collection with geo-spatial technologies and mobile ICT for increased cost effectiveness and efficient communication. The surveys will provide site specific details and continuous monitoring of i) potential productivity of gardens, crop fields and pastureland; ii) status and restoration strategies for natural resources (rangelands and forests); iii) existing use and income generation potential from timber and NTFP; iv) availability and status of fuel-wood and water supplies for human and livestock and v) prevalent income and livelihood diversification strategies with potential for their enhancement. All assessments undertaken by the project will ensure data is gender disaggregated. Team members will include women who seek out and ensure representation of women among respondents and vulnerable groups.

Field surveys will help design a comprehensive strategy for mobilization focusing on gender sensitization, representation of vulnerable groups in CBOs and decision-making bodies and allocation of resources to address their specific needs. Mobilization activities will target both men and women, including traditional leaders and staff from development and government agencies.

Technical and material support will be provided to these CBOs by extension services comprised of government and non-government agencies. Capacities of these agencies, will in turn, be built by the project and linkages with private sector suppliers and service providers will be established. Locally relevant livelihood and income diversification options and adaptation measures will be offered to communities for sustained agricultural and livestock productivity. Awareness generation and mobilization within communities will seek to ensure representation of women and vulnerable groups in committees and associations tasked with project implementation. Participatory approaches will be followed for implementing project activities that ensure meaningful contribution by the community and build upon and strengthen existing social institutions.

The project will adopt a hands-on, demonstration-based approach for transfer of climate smart technologies which have proven to be successful elsewhere[46]. Farmer field schools and demonstration plots will be set up in selected villages and cattle camps. These will be hosted by progressive farmers and pastoralists who are identified and facilitated to play the role of mentors. Women farmers will specifically be asked to lead demonstrations of activities preferred and identified by women during the stakeholder engagements. These include crop and vegetable farming and income diversification through dairy cows, small ruminants, agro-processing and harvest and processing of NTFP such as gum and honey.

The project will help formulate norms for resource sharing and management between farming and pastoral communities and will strengthen and create multi-stakeholder platforms and mechanisms for addressing disputes and reducing conflict which threatens to derail the development efforts in the region[47]. The increased social capital and institutional capacities among both CBO, government and non-government stakeholders and the private sector is expected to sustain and strengthen these mechanisms. Strengthening market linkages and value chains will be a key focus of project. Post-harvest losses in South Sudan are reported to be as high as 40% due to lack of storage and other factors[48]. This is an area where the private sector can play a key role. Project activities will include enhancement and creation of relevant low-cost infrastructure for storage, agro-processing and agri-enterprises, working both with the produces and traders in major markets.

The project will collaborate closely with the ongoing humanitarian and development efforts of the FAO and WFP. Data from assessments, monitoring and evaluations will be made available to the partners which will ensure formats and methods used are compatible. Information on market linkages and value chains could prove valuable for operational aspects of the project. Finally, the core activities of building capacities of communities in CSA will strengthen the food security of communities in this highly vulnerable region of South Sudan.

[46] Specifically, the GIZ-project "Adapting agricultural production methods to climate change and stabilizing livelihoods in Western Bahr el Ghazal, South Sudan", but also the approach followed by FAO.

[47] BRACED, "Building Climate Resilience in Fragile Contexts"; Colin Quinn et al., "South Sudan Climate Vulnerability Profile."

[48] Glenn Anders et al., "Assessment of Agricultural Development for the Office of Economic Growth, Usaid/South Sudan."

One of the key strategies of the project design is the use of watershed approaches. This strategy recognizes that functioning ecosystems are integral to livelihood security.[49] This is one of the basis of the millennium ecosystem services framework (MA)[50] which replaces the concept of carrying capacity with a broader and more comprehensive understanding of how ecosystems work. This strategy dictates that interventions are integrated and synergies between the activities and their impacts are maximized. The project will focus its interventions within hydrologic boundaries of selected catchments. This includes the strengthening and creation of local institutions to manage and sustain these activities past the project period. The watershed approach will facilitate emphasis on integrated approaches in the conservation and effective use of soil and water. Watershed restoration is recognized as an effective strategy for disaster risk reduction through building resilience of communities against climate change and eventualities such as the slow onset of droughts. The project takes this further by strengthening both the practices and interactions between producers, entrepreneurs and traders who are part of the agricultural supply and value chains.

Alignment with GEF Focal Area Strategy

The strategy is aligned with the broader goal of the GEF-7 Adaptation strategy which is to strengthen resilience and reduce vulnerability to the adverse impacts of climate change in developing countries and support their efforts to enhance adaptive capacity. It is closely aligned with two of the three objectives of the LDCF namely:
CCA-1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation

CCA-2: Mainstream climate change adaptation and resilience for systemic impact

It is further aligned with the Land Degradation Focal Area for GEF-7
LD-1-1: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)

The project strategy is based on a series of field visits undertaken during the development of the PIF and during the PPG phase (Annex 9 - SHEP). It is further supported by an analysis of available geo-spatial data and statistics including climate change trends and bio-physical conditions of the sites (Annex 13 section I). The selection of sites for the project involved careful consideration of vulnerability of communities and environmental conditions of the sites and proposed activities are based on a comprehensive review of best practices (Annex 13 section III) as well as on-ground conditions that determine the viability of these activities in the local context and the perception of local communities on their relevance (Annex 9).

Global Environmental Benefits

The project has specific global environmental benefits in the area of combating desertification, sustainable land management and restoration of ecosystems and ecosystem services which are the focus of component 2. The project will additionally contribute to the conservation of biodiversity and wildlife through its actions in community based forest management envisaged in component 3. Watershed restoration is an acknowledged strategy for disaster risk reduction through building resilience of communities against climate change. Strengthening the sustainable management of ecosystems and implementing integrated environmental and natural resource management approaches remains a priority area of investment in disaster risk reduction for resilience in the Sendai framework[51] . The work proposed will contribute directly to the sustainable management of 15,000 ha of land in a region recognized as being highly vulnerable to desertification. Conserving and restoring ecosystem services, particularly those pertaining to water with a specific emphasis on needs of vulnerable communities will contribute towards "climate change mitigation and adaptation and to combating desertification".[52]

Improved biomass production from restored watersheds as a result of soil and water conservation will lead to higher productivity of livestock, improved catches from fisheries and higher harvests of NTFP for local communities. This

[49] Bruce and Mearns, "Natural Resource Management and Land Policy in Developing Countries"; World Resources Institute, "World Resources 2005."
[50] Millennium Ecosystem Assessment, "Ecosystems and Human Well-Being."
[51] United Nations Office for Disaster Risk Reduction (UNISDR), "Sendai Framework for Disaster Risk Reduction 2015 - 2030."
[52] Secretariat of the Convention on Biological Diversity, "CBD Home."

will also directly contribute towards the objectives of the SLM objectives of the UNCCD in a region that is considered to be highly threatened by desertification.

Output 1 of the project will ensure that on-ground interventions contribute directly towards poverty eradication and combatting food insecurity among the most vulnerable populations. The proposed community mobilization and local institution and policy building, with a focus on natural resources will contribute and indirectly support the efforts in conflict resolution in Aweil and Aroyo which will contribute towards security in local communities and reduced tensions with the nomadic pastoral populations

The project will assist communities in adapting to climate induced disasters by adopting practices that diversify agriculture and reduce the risk of crop failure. The project will additionally reduce post-harvest losses, improve storage of crops and facilitate higher profit margins from food processing. This will contribute directly towards long term resilience against impacts of drought. Diversified income streams will further help reduce food insecurity over long terms.

The project will directly benefit over 18% of the population (75,000 persons) of the two counties in which its sites are located. Its indirect beneficiaries are expected to be substantially larger as the project will revive and strengthen local institutions for sustainable management of their resources and will enhance capacities of government extension and veterinary services to support farmers and pastoralists in the other payams of these counties. The strategy of the project specifically prioritizes support to vulnerable groups and women who will gain from a slew of income generation activities further strengthened by training, innovative financial services and mentorship.

Contribution of the project to the COVID-19 recovery

South Sudan, is highly vulnerable to the COVID-19 pandemic. The country is still recovering from the effects of civil war, and is constantly battling with various diseases including Ebola, malaria, cholera, HIV-AIDS and tuberculosis. The Government of South declared a national lockdown and closure of its international borders on 16 March 2020. This affected the movement of people, goods, and trade into the country. However this did not stop the pandemic from spreading. As per the WHO, In South Sudan, from 3 January 2020 to 4:50pm CEST to 11th October2022, there have been 17,780 confirmed cases of COVID-19 with 138 deaths, reported to WHO. As of24 September 2022, a total of 2,119,583 vaccine doses have been administered.

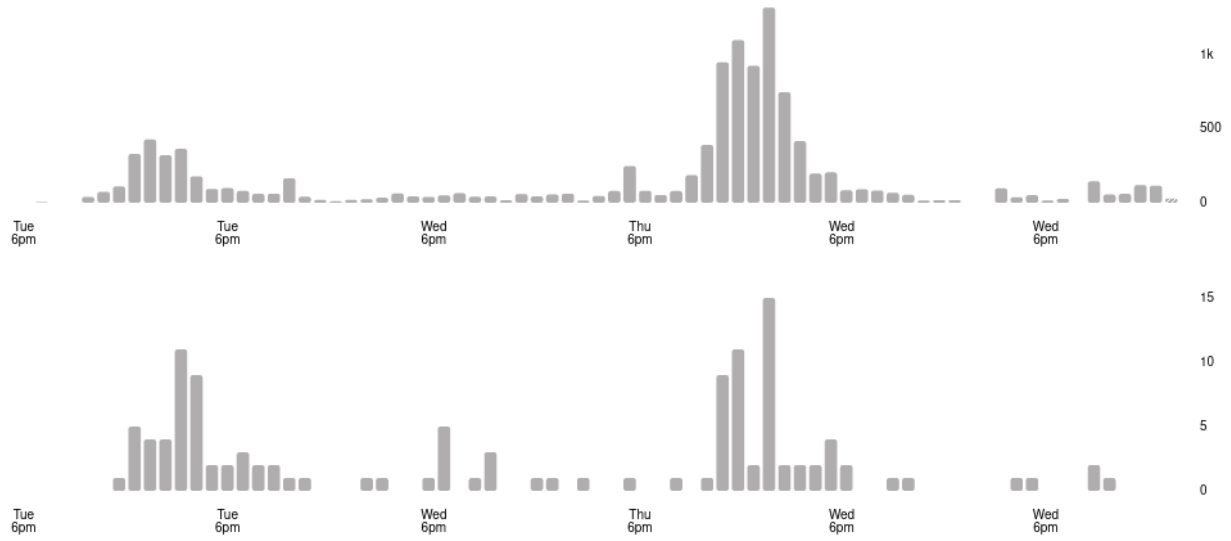


Figure 1 *Daily change in COVID-19 infections (top) and deaths(bottom) in South Sudan from 30th March 2020 till 31st August 2021. Source: WHO < https://covid19.who.int/region/afro/country/ss>.*

However, it is likely that these reported figures are underestimated given the constraints on testing, inaccessibility of health care, misdiagnosis and unreported deaths. Impacts of the COVID-19 shutdowns on the economy have been severe. A UNDP labor market study in 2020 found it had led to business slowdowns, stifling of trade and limiting access to commodities and outputs. The latest economic update for South Sudan by the World Bank estimates a contraction of its economy by 4.1% due to concurrent shocks of COVID-19, floods, and subnational conflict. In a more

detailed report[53], it is argued that concurrent shocks with the COVID-19 pandemic, low oil prices, floods, and locust infestation have drastically changed the economic outlook and threaten to derail the economic recovery and peace building process. The report further highlights that COVID-19 has resulted in the loss of jobs, especially in the non-farm self-employed activities and income generation has become "an immediate question of survival for many households". The COVID-19 pandemic has resulted in declining revenue from trade, including food markets. The report highlights the importance of supporting job activities, particularly the processing and trading food products. The project addresses a key recommendation of the World Bank report: "Support agricultural sector investments to address food insecurity and revive market-linked production providing pathways to economic diversification."

The LDCF project strategy is closely aligned with these priorities and therefore, the project can contribute significantly to tackling the impacts of the COVID-19 in the project sites, by reviving local agricultural production and creating new opportunities for employment and income. The specific actions of the project will result in improved and stabilized agricultural and livestock production through widespread adoption of climate smart techniques among farmers and pastoralists. The project will increase the resilience of local agricultural supply and value chains through strengthened linkages between producers, small industries involved in food processing and traders.

Local institutions and CBOs of producer groups, including women, will be strengthened through training on both technical as well as business management, accounting, bookkeeping and management. Agro-processing centers will be set up in the selected catchments and institutional structures for their management will be established. These centers will be equipped with relevant equipment and materials for storage, processing and packaging. Linkages with private operators, trader associations and middlemen will be established. The project will also train over 450 persons from among produces, traders and government officials.

This is likely to facilitate post-pandemic economic recovery as well as buffer the impacts of the economic slowdown in the project sites. Improved systems of communication between agencies and local institutions at both government and non-government level and among CBOs will greatly increase efficiencies of transactions and has the potential to support the establishment of mobile payments and credit. The improved communication will greatly help access of producers to traders, markets and information about markets for agricultural inputs and produce. This would also support economic recovery and enhance opportunities for local entrepreneurship. Improved communication between government agencies and communities that is proposed for the project will facilitate the effectiveness of extension services, particularly veterinary services and surveillance among migratory pastoral groups.

IV. RESULTS AND PARTNERSHIPS

Expected Results

Three closely integrated components will build resilience to climate change risks among 75,000 people from agricultural and pastoral communities and bring 15,000 ha of land under improved practices. The latter includes two micro-watersheds or catchments[54] across 15,963ha, covering six payams and 12 bomas in the Aweil East and Aweil Centre counties of Northern Bahr el Gazhal state[55]. Vegetable farmers within the jurisdictions of Aweil East and Aweil Centre counties in the Wardit catchment will additionally be targeted. The project site lies in one of the most food-insecure regions of South Sudan which is highly vulnerable to climate change impacts. These sites were selected on the basis of extensive consultation and background research on social and environmental conditions and vulnerability as well as criteria which would increase the chances for a successful intervention. An analysis of the biophysical characteristics, available socioeconomic information and key focus of activities for each of the sites is presented in the Feasibility Study (Annex 13, section I). Site maps with coordinates of each boma are provided in Annex 3. Table 1 below lists the micro-watersheds and estimated beneficiaries for improved practices among agro-

[53] Joseph Mawejje et al., 'South Sudan Economic Update Socioeconomic Impacts of COVID-19'.

[54]The term micro-watershed and catchment are used interchangeably across this document are refer to the hydrologic unit in which project activities will be implemented. More details on the watershed approach are provided in Annex 13, Part II.

[55]Data used for the analysis includes maps and statistics from the National Bureau of Statistics (NBS), 2008. The population estimates have been projected to 2020 using the NBS Population Projections for South Sudan by Payam From 2015 - 2020. Note that these figures are provisional as an administrative reorganization is underway and boundaries and jurisdictions are likely to be revised. The number of bomas under the Wardit is assumed to be 2 based on discussions with local officials.

pastoral communities. Administrative jurisdictions in the Wardit catchment, in particular, are unclear and contested. About 100ha of farm areas among 140 vegetable farmers are targeted in this site.

Table 1: Project sites and targeted beneficiaries.

Micro-watershed	County	Payam	Boma	Area under watershed (ha)	Targeted beneficiaries		
					Male	Female	Total
Aroyo	Aweil Centre	Aroyo	Aroyo	878	985	959	1,944
Aroyo	Aweil Centre	Aroyo	Kur-chok	557	824	817	1,641
Chel	Aweil Centre	Chel South	Cham Anguei	4,852	1,301	1,336	2,637
Chel	Aweil Centre	Chel South	Luang Aher	4,165	1,176	1,196	2,371
				10,452	4,285	4,307	8,593
Akuem	Aweil East	Baach	Pariak	429	10,096	10,960	21,056
Akuem	Aweil East	Moyom-wel	Tit-chok Mareeng	204	2,224	2,516	4,740
Akuem	Aweil East	Wunlang	Gaal	1,107	4,857	5,458	10,315
Akuem	Aweil East	Wunlang	Makuei-Agep	580	5,110	5,699	10,808
Akuem	Aweil East	Wunlang	Tong-Goi	1,353	4,916	5,399	10,315
Akuem	Aweil East	Yargot	Hal-bul	1,837	4,181	4,852	9,033
				5,510	31,384	34,884	66,267
Wardit	Administrative boundaries unclear 2 bomas.			100	60	80	140
	Total			15,962	35,729	39,271	75,000

A summary of the components, outcomes and outputs is presented below with a list of activities under each. All outputs except those specifically mentioning UNIDO in the output title will be implemented by World Vision.

Component 1: Institutional capacities for gender-responsive climate change adaptation across the agricultural sector.

Outcome 1: Strategies and capacities to implement community based and gender-responsive climate change adaptation for agriculture and food value chains across South Sudan. Budget: 1,029,358

This component will mainstream climate change adaptation strategies at the policy level in South Sudan. It will target policies for agriculture, natural resource and forest management and agro-industry at the national and state level. It will provide a consistent, enabling framework for climate change resilience building in the development and outreach activities of extension and development agencies. Requisite expertise and resources will be provided to implement measures, train communities and create local level capacities in climate change adaptation. It will support replication and scaling up of successful strategies by facilitating cross learning and knowledge between the entire range of stakeholders from local community representatives to sub-national, national, regional and international agencies.

The inception phase of the project will involve a comprehensive, field based and participatory planning exercise which involves stakeholders from the government, development agencies and communities. This will lead to the mainstreaming CCA in existing policies related to natural resources and agriculture. Market value chains vulnerable to climate change impacts, and associated support policies and frameworks will be identified and specific measures and on-ground actions to strengthen and build their resilience to climate change will be instituted.

A comprehensive assessment of extension services will be conducted with specific focus on the proposed project sites, based on which extension packages will be developed that include locally relevant awareness and training modules as well as supplies to implement climate smart agriculture and natural resource management measures. Relevant training materials and work done by agencies such as FAO will be incorporated and adapted to the local

conditions. Institutional capacities of extension personnel from government and non-government agencies for supporting CCA will thereby be enhanced.

Output 1.1: Integration of climate change adaptation strategies in agriculture and natural resources management policies.

A national dialogue on gender responsive climate mainstreaming in key policies and plans for agriculture and natural resource management will be organised. This will result in a comprehensive review of the National Agricultural and Livestock Extension Policy and the National Agricultural and Livestock Research Policy. A draft Community Based Forest and Natural Resources Management Policy for NBG will also be prepared. A report will be prepared that identifies gaps in gender-responsive climate mainstreaming and will be presented during a national dialogue with representatives from the relevant ministries from national and state governments, NGOs and research institutions. Discussion will be summarized and proceedings and policy briefs with recommendations on gender-responsive climate mainstreaming will be published.

Comprehensive baselines on socioeconomic, ecological, edaphic and topographic characteristics of the site will be developed based on field surveys. This exercise will address the gaps in baseline datasets and provide necessary information for scientific and systematic planning of activities for each of the project sites and will support the development of (1) the Environment and Social Impact Assessment, (2) the Strategic Environmental and Social Assessment and (3) the Environmental and Social Management Plan (and associated thematic plans) that need to be designed and put in place prior to project implementation. A digital dataset including statistical and geo-spatial data will be collated from official and publicly available sources with clear attribution and an annotated bibliography. The data will be analyzed leading to the development of high-resolution land use and land cover (LULC) maps, topographical maps including drainage and flow accumulation, soil maps and maps showing trends and projections of climatic variables building upon prior analysis and reports (see Annex 13 section I). Climate information from local/regional hydromet stations, and local stations, such as the one proposed by the MEF for early warnings[56] will be incorporated into the analysis, if available. All data will be shared with other development partners and agencies using web-based interfaces and public standards.

A ground-based assessment of current and potential productivity will be undertaken through the systematic collection of field samples and observations by 15 key informants and field staff. These informants/staff will be trained in field methods and utilization of mobile ICT tools[57] to collect soil samples, field observations and participatory surveys. This data will be analyzed to identify potential sites for agricultural or catchment restoration interventions including cultivation, integrated farming, water harvesting and small-scale irrigation. Sites prone to floods and erosion and environmentally degraded and vulnerable sites will be identified. Field teams will also be trained in participatory mapping and surveying. This will result in development of detailed, settlement specific resource maps and data on livelihood strategies based on seasonal calendars including i) cropping and agricultural practices; ii) dependence and extraction of natural resources (including water & fuelwood); iii) marketing and value chains iv) coping strategies for adapting to adverse climatic conditions and shocks. All exercises will be conducted separately for women and vulnerable groups. Results of this activity will include spatially explicit socioeconomic and ecological data including: i) soil type; ii) vegetation type; iii) agricultural potential, including potential for integrated farming; iii) seasonal cropping pattern; iv) potential sites for water harvesting and small scale irrigation; v) potential sites for soil and water conservation; vi) potential sites for assisted natural regeneration, agroforestry and afforestation and vii) suitable native species for uses such as timber, fuel, forage, fruit, fodder, grasses and shade. These outputs will be discussed and validated during village meetings by community leaders, user groups and committees discuss and validate site specific interventions. Separate validation meetings will be held with women and vulnerable groups.

Trained field staff (activity 1.1.3) will collect detailed information on income and livelihood diversification options for i) diversification in crops and animal husbandry, including dairy cows and small ruminants; ii) processing and storage of agricultural products for value enhancement and security, iii) processing and sales of NTFP including honey and gum-Arabic. Some of these activities are practiced on a small scale by communities (Annex 9a). Information collected during these surveys will be used to develop illustrated training manual on income generation and

[56] Part of in-kind co-finance from MEF from MEF

[57] For example, the Open Data Kit ODK and ODK-X

livelihood diversification for end users and technical guidelines for trainers in English. The training materials and technical guidelines will build on existing documents, where available, and will be translated into Arabic, Dinka and Luo and podcasts prepared in both languages to assist in dissemination.

Information collected and training materials and documentation produced through these activities and subsequent project monitoring and reporting will be collated and consolidated for knowledge sharing and dissemination at multiple levels. This will be further enhanced by establishing partnerships and data/knowledge sharing agreements with the government, development and aid agencies operating in the project area and with the Partnership for Recover and Resilience at the national level. Annual knowledge sharing events will be organized at Aweil, attended by representatives of communities, CBOs, NGOs and government agencies including groups and committees involved in implementing project activities. This multiple-stakeholder platform will provide the basic coordination mechanism for the project. Information about the project will be shared on social media channels and via print on a quarterly basis. All datasets, analysis and results from field surveys will be formatted to meet specifications of existing repositories such as those hosted by NBS, FAO, WFP and OCHA and will be shared with these agencies. Representatives from the community, NGOs and the government present and share experiences at regional and international fora such as the Global Alliance for Climate Smart Agriculture, the Africa Climate Week and the Community Based Adaptation conference, Africa Solutions Platform, the UN South-South Galaxy knowledge sharing platform and PANORAMA.

Activity 1.1.1: National dialogue on gender responsive climate mainstreaming in key policies and plans for agriculture and natural resource management at all levels of government.

Activity 1.1.2: Building baselines of climatic, socioeconomic, ecological, edaphic and topographical characteristics of the project sites to inform site prioritization.

Activity 1.1.3: Conducting field surveys on productivity potential of different land cover/use and developing site specific intervention strategies and plans for climate smart agricultural interventions and catchment restoration with communities.

Activity 1.1.4: Conducting a field based assessment of income and livelihood diversification options.

Activity 1.1.5: Knowledge sharing at all levels - from communities to county, state, national regional to global.

Output 1.3: Guiding materials to support climate-responsive extension services developed, delivered and distributed

Capacity assessments at the grassroots levels will be conducted for i) Crop and vegetable farming; ii) Livestock and animal husbandry; iii) Pond fisheries and pond culture; iv) Agro-forestry; v) Livelihood and income diversification of agro-pastoral communities and vi) Community based NRM and forest management. Existing capacity assessment tools will be adapted to local conditions and used to identify strengths and weaknesses in government extension services, line departments and NGOs operating at the county levels and below. Assessments of technical, administrative and implementation arrangements and capacities to support agricultural communities through meetings with relevant stakeholders will be conducted. The tool will also assess representation of women and vulnerable groups in the concerned agencies and will ensure social safeguards, as mandated by the ESMF, later assessed in the SESA and addressed in the ESMP and the GAP. In particular, as women are traditionally excluded from decision-making processes, the project will promote adequate measures to ensure that women benefit from support climate-responsive extension services developed, as well as are included in the capacity-support provided to the national and regional institutions. The project will avoid reproducing existing discriminations, including in the design of agriculture and natural resources management policies.

A report with recommendations for training and capacity building of agencies and of representation of women and vulnerable groups will be prepared to facilitate gender responsive extension services and development support to communities. The report will specifically cover training and capacity needs to support: i) crop and vegetable farming; ii) livestock and animal husbandry; iii) pond fisheries and aquaculture and iv) agroforestry and v) integrated farming; vi) rangeland management and vii) community based NRM and forest management.

A comprehensive social inclusion strategy, informed by relevant safeguards management plans, in particular the Indigenous Peoples Plan (IPP) and the Livelihood Action Plan (LAP) and an action plan for extension support and mobilization for communities in agriculture and NRM will be prepared based on outputs of activity 1.1.3. This plan will focus on increasing resilience of women and vulnerable groups in farming and agro-pastoral communities and improving their representation in the management of and access to water, fuel and natural resources. The action plan will include specific recommendations for: i) crop and vegetable farming; ii) livestock and animal husbandry; iii)

pond fisheries and aquaculture; iv) agroforestry and v) integrated farming; vi) rangeland management and vii) community based NRM and forest management.

Gender responsive and site-specific advisory packages will be developed and disseminated. This includes inputs, implements and training materials for: i) Crop and vegetable farmers. ii) Livestock owners and pastoral groups. iii) Pond fisheries and aquaculture. iv) Agro-forestry and v) Livelihood and income diversification, including NTFP and other forest produce. Detailed and illustrated instructions and field guides will be prepared that provide information on pests, diseases, nutrient management, land/nursery preparation, soil and water conservation, raising nurseries and assisted natural regeneration, rangeland restoration and appropriate implements and inputs for these. These packages will build on, extend and localize available materials from other projects and agencies such as the FAO who have implemented similar interventions the region. Rangeland restoration will emphasize the reseeding of native varieties of grasses, such as elephant grass, to restore and increase the productivity of pastureland.

Advisory packages developed under 1.1.3 will be localized after contextual interpretation, illustration and visual representation for semi/non-literate audiences. Materials will be in the form of audio recordings, short videos and screen casts. The training materials produced will be re-packaged and formatted for dissemination among local communities and extension agencies. This will involve i) translations from English to Dinka, Luo and Arabic; ii) creation of audio recordings and audio-visual versions of the packages in English, Dinka, Luo and Arabic and iii) their re-organization and formatting for web pages, social media channels and print. These translated materials will be disseminated to extension agencies (govt. and NGO) as well as community-based organizations such as user groups and committees for distribution and sharing with primary stakeholders.

Activity 1.3.1: Conducting site specific capacity assessment of line departments and extension services at county, payam and boma levels.

Activity 1.3.2: Developing a comprehensive social inclusion action plan and strategy that integrates gender and equity concerns into extension services and mobilization for CCA planning.

Activity 1.3.3: Developing gender-responsive site specific extension and advisory packages including inputs, implements and training materials.

Activity 1.3.4: Disseminating training materials and modules to communities and ground level institutions in local languages.

Output 1.4 Training of trainers and extension personnel delivered to support climate-smart agriculture and natural resources management

Capacities of extension staff and line departments, NGOs and community-based animal-health workers will be built through training on climate smart agricultural practices relevant to local contexts and seasonal calendars, building on traditional knowledge and practices. The incorporation of traditional knowledge and practices into the training modules is expected to improve the acceptability and adoption of the new technologies introduced by the project. Training will cover food crops and vegetables, including diversified agriculture through agro-forestry species. The training of trainers and refresher courses will cover topics including: i) Soil fertility and nutrient management; ii) Tillage and moisture management; iii) Use of disease resistant, fast maturing and high yielding varieties; iv) Multi-cropping and agro-forestry; v) Integrated/mixed farming with dairy cows, small ruminants, poultry and livestock; vi) Conservation agriculture and gardening; vii) Rangeland management and restoration and viii) Community based NRM and forest management including nursery and assisted natural regeneration. Staff from govt. agencies and NGOs as well as community appointed agricultural extension workers will be selected for training through meetings with respective agencies. Representation of women and vulnerable groups among trainees will be encouraged and ensured where possible so that extension services are more easily accessed by women and vulnerable groups within communities. Specific attention will be given to building on and properly documenting and acknowledging traditional practices and knowledge.

Training, including refresher courses, in livestock health and disease surveillance and running pastoral field schools will be held with staff from govt. agencies and NGOs assigned to project extension activities identified along with community appointed veterinary and animal health workers. Training of trainers and refresher courses will be conducted on running pastoral field schools and providing extension support to livestock owners and pastoralists twice a year. This will involve both classroom and hands-on sessions and will cover livestock disease surveillance and animal-health care. Representation of women and vulnerable groups among trainees will be encouraged and ensured where possible so that extension services are more easily accessed by women and these groups. Specific

attention will be paid to building on and properly documenting and acknowledging traditional practices and knowledge.

Persons to serve as technical leads will be identified from the pool of extension workers, including women, to implement catchment-based soil and water conservation and landscape restoration activities. Training and refresher courses will be held for them twice a year involving both classroom and hands-on sessions on participatory watershed restoration including: i) participatory planning and surveying for catchment restoration. ii) appropriate[58] soil and water conservation and water harvesting techniques; iii) agro-forestry including nursery raising; iv) rangeland restoration and management and v) animal health and disease surveillance. Representation of women and vulnerable groups among trainees will be encouraged and ensured where possible.

Capacities of extension agencies, NGOs and community-based extension workers will be built through training, including refresher courses in gender responsive income livelihood diversification based on outputs of activity 1.1.4. Staff will be identified from within govt. extension agencies, line departments and communities. Both classroom and hands-on sessions will be held to cover: i) diversification in crops and animal husbandry, including dairy cows and small ruminants; ii) processing and storage of agricultural products for value enhancement and security, iii) processing and sales of NTFP including honey and gum-Arabic.

Training will be provided on gender-responsive community mobilization that specifically empowers women and vulnerable groups to participate in the project. This will be guided by the Gender Action Plan and supported by the ESMP to be designed in the first six months of project implementation and before any capacity-building activity is implemented. Community development agents, including women will be identified to lead community awareness and organization efforts from within extension and animal health workers. They will be trained in mobilizing and forming gender equitable and responsive community based groups and committees including: i) farmer and pastoral groups; ii) micro-credit and self-help groups; iii) user groups for water points, small scale irrigation, fish ponds and livestock fattening facilities; and iv) organizing micro-watershed development and restoration teams.

Activity 1.4.1: Identifying and training extension staff for climate smart agriculture among crop, vegetable and livestock farmers.

Activity 1.4.2: Training extension and line departments, NGOs and community based animal-health workers.

Activity 1.4.3: Training on soil and water conservation and landscape restoration to extension staff and line departments, NGOs and community based extension workers and volunteers.

Activity 1.4.4: Training on income and livelihood diversification to extension and line departments, NGOs and community based extension workers and volunteers.

Activity 1.4.5: Training on community mobilization for gender equity and social inclusion to extension and line departments, NGOs and community based extension and animal-health workers.

Component 2 Climate change resilient agriculture and food value chains.

Outcome 2: Best practices in climate change resilient agriculture and food value chains adopted by rural communities. Budget 3,591,626 USD

The second component of the project will result in adoption of climate smart agricultural practices which benefit about 25,000 persons (11,910 male, 13,091 female). At a broader scale, this component will facilitate the uptake of a slew of climate adaptation techniques and technologies by local communities that are tested and demonstrated in local conditions and according to local seasonal calendars. These techniques and technologies will be efficient, effective and will build on traditional knowledge and practices for widespread acceptance. They will be implemented using a participatory framework which enhances local institutional capacities and thereby ensures sustainability, replication and scaling up. The component will also introduce relevant post-harvest and storage technologies and establish linkages between producers and the private sector leading to lower losses, higher remuneration and diversified incomes that are resilient to climate change.

Community based organizations - existing farmer and pastoral groups, will be integrated with the project or, new ones created where they don't exist, with a focus on active participation and representation of women and

[58] Appropriate refers to the use of local materials, labor and skills as well as designs of rural infrastructure for soil and water conservation and water harvesting which are suitable for local conditions (soil types, rainfall patterns) and amenable to O&M by communities.

vulnerable groups. Youth from communities will be encouraged to participate. These CBOs will be central to the planning, implementing and monitoring of climate smart agricultural activities. These activities will include community level interventions such as installation of shallow boreholes as well as interventions on private farmers such as setting up small scale/micro-irrigation. Household and farm-based activities will include provision of high quality and drought resistant varieties of crops, saplings and livestock. The purpose of these activities is to increase both production and productivity in agriculture and livestock/pastoral systems.

Farmers will be provided materials, including implements and agricultural inputs coupled with training in their application and use through farmer field schools. Crop diversification, multi-cropping, crop-livestock and agro-forestry systems will be introduced along with best practices for soil and moisture conservation, farm-based production of compost, nutrient/fertility management and micro-irrigation. Appropriate varieties of dairy cows[59], small ruminants and poultry will be introduced along with income diversification options as adaptation measures. Post-harvest food processing technologies will be introduced, and entrepreneurs and cooperatives supported in accessing local markets by technical support, training and strategic investments.

Linkages between communities and local banks, MFIs and NGOs offering financial services and support to community groups will be established. At least 10 financial service providers (FSP), including commercial banks and affiliated local agents operate in the Aweil area[60]. The project will invest in supporting relevant FSPs and NGOs through capacity building, financial literacy training and building baseline credit data, and use of mobile payment systems.

Linkages with financial services, markets and traders will be established (activity 2.4.4) to ensure the income streams are reliable and sustained. Baselines will be developed to understand needs for credit and how credit risks will be reduced among farming and pastoral groups through adoption of climate smart/resilient practices.

Output 2.1 Integrated and diversified climate-smart farming practices adopted to reduce risk of crop failure through improved seeds, multi-cropping, crop diversification, crop-livestock systems and agro-forestry

Widespread adoption of climate smart agriculture among farmers will be ensured by setting up demonstrations of these technologies in villages. One-hectare demonstration sites will be set up to showcase CSA and suitable varieties of food and cash crops by five progressive farmers in each selected boma including women farming groups/cooperatives. Demonstrations will be set up for: i) soil fertility and nutrient management; ii) low tillage and moisture management; iii) use of locally relevant, disease resistant, fast maturing and high yielding varieties of food and cash crops; iv) multi-cropping and agro-forestry; v) integrated/mixed farming with dairy cows, small ruminants, poultry and livestock and vi) conservation gardening practices. Five progressive farmers will be identified from each boma, to demonstrate the cultivation of suitable varieties and seeds and relevant CSA practices listed above. Progressive farmers will receive training and cross learning between them will be facilitated though workshops run by extension staff and agricultural experts. Seed and knowledge exchange between progressive farmers and communities will be facilitated by organizing visits and exchange events. Progressive farmers will be provided suitable seed varieties ahead of planting season. Linkages with private sector suppliers of seeds and implements will be established to ensure these products remain available on a sustained basis. A different batch of progressive farmers will be identified each year to ensure multiple replicates of demonstration sites across larger areas and more settlements.

The project will facilitate the restoration of degraded rangelands and forests as well as planting of multiuse agro-forestry species in homesteads and around villages by engaging communities and extension services in raising plant nurseries. Plant nurseries will be set up with the State Ministry of Agriculture, Environment and Forestry (SMoAEF) and youth/women groups to supply vegetable seedlings and saplings for assisted natural regeneration and agro-forestry among farmers and pastoral groups. Women groups will be identified along with suitable sites to set up plant nurseries based on site characteristics including availability of water, suitable soil and manure. These nursery groups will be trained and facilitated in the germination, grafting and propagation through cuttings of suitable

[59] Referring to breeds that are adapted to local conditions and resilient to pests, diseases and stress due to climate change related impacts. High input, high maintenance varieties will be avoided.

[60] South Sudan Cash Working Group: Financial Service Providers as of June 2020 https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/20200608_cwg_mapping_fsp.pdf

species of forest, agro-forestry, fruit, fodder and forage. Groups will be provided materials for seed collection, germination, protection (fencing and netting), implements and watering.

Agreements and contracts for production of seedlings and saplings with nursery groups will be formalized with progressive farmers, pastorals and watershed development committees. This will serve as a source of income to these groups for the duration of the project. Linkages with NGOs implementing similar projects, private suppliers and traders will also be established so that nursery groups can continue to produce and supply planting materials to individuals and communities past the project period.

Pastoral communities will be provided access to climate resilient practices and veterinary care through demonstrations of best practices and creation of expertise within community. Pastoralists who are willing to participate and share their knowledge with other members of the community will be identified in each boma based on discussions with extension officers and communities. They will be invited to workshops to share their knowledge and interact with veterinarians and livestock experts to receive training and enhancement of their capacities in basic veterinary care, disease surveillance, livestock production, rangeland management, products and marketing. Each progressive pastoralist will be asked to share this knowledge and techniques with other members of the community on a continual basis and also through bi-annual pastoral field schools or camps which be held with their support (Activity 2.2.5). Veterinary and livestock extension services will furthermore facilitate the sharing of information on and of climate resilient livestock and breeds by participating in cattle markets along with progressive pastoralists. Finally, the project will identify and establish networks between progressive pastoralists and private sector suppliers of veterinary products and services, including markets for superior breeds and drought resilient livestock.

Activity 2.1.1 Establishing demonstration sites for climate smart agricultural practices.

Activity 2.1.2 Establishing plant nurseries with women and youth groups and at the SMoAEF.

Activity 2.1.3 Identifying pastoralists and hosting pastoral field schools for adaptive solutions.

Output 2.2 Farmer field schools established and community-based organizations strengthened to enable adaptive practices and provide local support to farmers with the adoption of low cost techniques for climate resilient agriculture

Existing CBOs will be strengthened and integrated or new ones created to provide a community centered mechanism for implementation of project activities, their replication and sustainable delivery of benefits. Awareness generation materials developed earlier (activities 1.1.3 & 1.1.4) will be used to and meetings to elicit support from traditional leaders and representatives of CBOs in project villages will be organized to share the project mobilization strategy and identify potential members for user groups and committees. Criteria for identifying possible members of CBOs will include their primary livelihoods, proximity of land holding and clan/family relationships. Representation of women and vulnerable groups will be ensured, in line with UNDP's safeguards and with the Free Prior Informed Consent (FPIC) protocol to be defined as part of the Indigenous Peoples Plan (IPP). This protocol will be defined on a participatory basis and apply to all activities impacting vulnerable groups' needs and interests, as per Standard 6. In particular, it will seek and obtain consent on any modification to the access pastures and fields in project areas, and any potential restriction of availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups. Specific attention will be given to the involvement of each community, and in particular to youth and women in these communities.

Active mobilization of these groups and committees for proposed activities will be done based on their livelihoods, proximity of land, kinship and willingness to work together. Specific attention will be given to ensuring representation of women in mixed gender groups and formation of exclusive women groups in both mainstream and vulnerable communities. Village meetings and workshops will be held targeted at CBO members to provide them an overview of proposed project activities and made aware of gender issues and affirmative action proposed. Representatives of CBOs will be selected by its members to receive training in leadership and organizational functions and procedures to fulfill their roles and responsibilities. This includes groups comprising only women members from within both host/indigenous communities and other vulnerable groups such as IDPs, Refugees, PWDs and Widows living within selected sites.

These user groups, associations and committees will be involved in participatory planning and implementation of project activities. CBOs will be facilitated in registering themselves with local authorities. Organizational training will be provided to office bearers of these CBOs covering basic administration, accounting, management and monitoring of proposed activities. They will be helped in establishing and adopting rules, systems of cost sharing and fee for

project benefits such as irrigation. Members will be asked for commitments for participation in project activities and for contribution of time, labor and materials. Low-value grants will be provided to CBOs as matching funds provided i) they are registered with local authorities; ii) have in place a formal fee structure for members to access benefits such as water for domestic use or irrigation and iii) have a clear O&M plan which includes financial allocations for materials and labor. The groups will be assisted by the project to meet these criteria.

In situ tests on suitable varieties[61] of cereal and vegetable crops, including seeds of both traditional and new varieties will be conducted on farmer fields. This will help establish the viability and resilience of these varieties to local conditions of drought and flood, and to develop guidelines for best practices in terms of irrigation, soil and nutrient management. These trials will serve as demonstration plots and will be set up in fields of progressive farmers, which includes women farmers, for hands on training and demonstrations of CSA. Visiting farmers will receive training materials and inputs for CSA including seeds and seedlings for drought tolerant and disease resistant varieties of crops, hardy milch animals and small ruminants and saplings for agro-forestry and afforestation. Seasonal farmer field schools will be held in progressive farmer owned plots for hands on demonstrations of CSA practices including use of labor saving implements and tools and animal drought. This will ensure experiential learning and sharing between farmers and extension workers. Training materials in print, audio and video formats will be distributed with participants on SD cards, along with hand-crank/solar powered radios with SD card readers and MP3 players. Materials for CSA will be distributed to attending farmer groups. This includes seeds and seedlings of drought tolerant, pest and disease resistant and early maturing varieties, saplings of multiuse agro-forestry species for planting on field boundaries and homesteads. Wherever possible, these materials will be sourced from progressive farmers and nursery groups active in the project, thereby providing a commercial incentive to the seller and simultaneously establishing a linkage with them a prospective customer.

Hands on training and sharing of information between expert pastoralists, extension and veterinary exports will be facilitated. Training will include animal health care and diseases surveillance and provision of veterinary medicines and supplies. Seasonal pastoral field schools will be held in progressive pastoralist camps and settlements for interactions and knowledge sharing between pastoralists facilitated by trained extension staff and community animal health workers. Pastoralists will participate in hands on demonstrations of disease identification and administration of vaccinations and medication and share experiences on livestock production and rangelands with other pastoralists and veterinary services and community animal health workers. Training materials in print, audio and video formats will be disseminated along with hand-crank/solar powered radios with SD card readers and MP3 players. Materials for climate resilience among pastoralists will be distributed to attending pastoral groups and associations including drought resilient varieties of livestock, saplings of multiuse agro-forestry species for planting on field boundaries and homesteads and veterinary supplies for livestock. The former will specifically include the distribution of local climate resilient breeds and introduction of new improved breeds of cattle and livestock. As earlier, the materials will be sourced from progressive pastorals and nursery groups.

Community extension worker and extension staff will provide extension services and materials for climate smart agriculture by holding seasonal camps in settlements with crop and vegetable farming. Extension services and support along with inputs and implements for CSA will be provided to crop farmers including i) Contextual and locally relevant CSA practices focusing on soil moisture and nutrient management and crop diversification; ii) Disease and pest identification and control; iii) Improved variety of seeds which are disease and drought resistant and quick maturing and iv) Saplings for multi-use agroforestry species to be planted along field boundaries and in homesteads; v) Small scale irrigation equipment and piping; vi) Modern tools and implements to reduce manual labor through improved efficiency and animal drought where possible. Similarly, vegetable farmers will receive extension support and agricultural inputs and implements including i) Contextual and locally relevant CSA practices focusing on soil moisture and nutrient management and crop diversification; ii) Disease and pest identification and control; iii) High quality seeds and seedlings; iv) Saplings for multi-use agro-forestry species to be planted along field boundaries and homesteads; v) Small scale irrigation and micro-irrigation equipment and piping and vi) Modern tools and implements to reduce manual labor through improved efficiency and animal drought where possible.

Extension staff and community animal health workers will hold seasonal camps in pastoral settlements for provision of veterinary services and materials for climate resilience. The camps will involve demonstrations of livestock health

[61] Suitable refers to seeds and crops that help farmers adapt to climate change by exhibiting qualities such as resilience to droughts, floods, pests and diseases and/or early maturing varieties.

care, disease surveillance, production and rangeland management. Pastoral groups will receive veterinary support and extension services including vaccination for livestock, disease screening and care and advice on prevalent diseases and their prevention and care. Key informers within pastoral groups will be identified and trained for participatory disease surveillance and monitoring conditions of rangelands and water points. The informers will provide regular updates on livestock diseases and health and rangeland conditions using mobile ICT tools as part of participatory disease surveillance and monitoring.

Activity 2.2.1: Identifying and strengthening customary CBOs and mobilizing new user groups to ensure gender responsive and inclusive community based mechanisms to implement project activities.

Activity 2.2.2 Selecting suitable cereal and vegetable crops based on in-situ tests cum demonstration plots and conducting seasonal farmer field schools for hands on training on CSA practices including use of implements.

Activity 2.2.3 Conducting hands on training through seasonal pastoral field schools.

Activity 2.2.4 Holding seasonal camps in both crop and vegetable farming settlements.

Activity 2.2.5 Holding seasonal camps in pastoral and agro-pastoral settlements.

Output 2.4 Alternative livelihood options such as bee keeping, backyard poultry, kitchen gardens and small ruminants made available to communities with a focus on vulnerable households

Economically vulnerable households will be targeted for livelihood diversification activities, including landless, women headed based on discussions with community representatives and household surveys. Meetings with chiefs and elders and representatives of women and vulnerable groups at payam and boma level will be held to identify the most economically vulnerable households, women headed households and households without assets and land. Household level sample surveys will be conducted from within shortlisted households to build a baseline for credit data and to assess constraints and opportunities for income generation along with capacity gaps and need for training and material. These field surveys will lead to a ranking of livelihood diversification options based on analysis of household level data and assessments and training packages developed under activity 1.1.5 and 1.3.3. Finally, user groups will be formed (or existing ones strengthened and integrated) to plan and implement most feasible livelihood diversification activities and developing participatory plans, ensuring inclusion and meaningful participation of women and vulnerable groups from the most economically vulnerable households.

Seasonal camps, focusing on training and material support for livelihood diversification activities including raising of dairy cows, small ruminants and enhancing pond fisheries will be held among women headed, landless and poor households. Hands on training will be provided to pond user and fishing groups on i) Increasing yields from pond fisheries and pond culture through addition of nutrients, aquaponics and managing water quality; ii) Materials such as lining and meshes for water retention and quality; iii) Improved fishing gear and iv) Techniques for drying and post-harvest processing based on local materials. The increased catch, combined with improved processing will result in increased and sustained incomes by establishing linkages between the fishing groups, nearby markets and with traders (activity 2.4.4). Support for income diversification to vulnerable groups will also be provided through provision of and training on the rearing and management of milch animals, small ruminants, poultry, NTFP such as gum Arabic and beekeeping, the latter focusing on households with experience in traditional bee keeping. Many of these activities are prevalent in the project area (Annex 9a). Efforts will therefore be made to build on traditional knowledge and practices by incorporating modern techniques and new materials for construction and processing.

Building on activity 1.1.5, seasonal assessments will be taken up to identify major agricultural produce and evaluating options for post-harvest processing and storage. Key agricultural produce and post-harvesting and storage technologies, with emphasis to improve traditional storage systems for sustainability will be identified and relevant materials and equipment procured for their application. Training, materials and storage facilities will be provided for post-harvest processing and storage of agricultural produce to both farming and pastoral communities. Communities will be trained in post-harvest processing and storage to reduce post-harvest losses and value addition to agricultural produce for increased incomes. Linkages with financial services, markets and traders will be established to ensure the income streams are reliable and sustained. Baselines will be developed to understand needs for credit and how credit risks will be reduced among farming and pastoral groups through adoption of climate smart/resilient practices.

Market links and value chains for agricultural and livestock products will be identified and established by organizing meetings with marketing federations and unions as well as surveys of unorganized shop keepers. The project will identify key market opportunities and arrange to bring together produces and traders at these events leading to

better prices and improved volumes. Access to financial services will be facilitated for communities and their organizations (user/self-help groups, federations and cooperatives) through training in financial literacy. Capacities of local agents and mobile payment facilities will be enhanced, and workshops will be held to identify opportunities for their investing in and lending to these community organizations, specifically focusing on investments in climate resilient agriculture and post-harvest storage and processing.

The project will establish an innovative, mobile ICT based system for participatory monitoring and assessment of project activities and their impacts. Community animal health workers and extension workers will be facilitated in conducting regular participatory monitoring exercises with farmer and pastoral groups on project activities and their impact. These activities will utilize mobile ICT to enhance the quality and efficiency of data collection and reporting, facilitating adaptive feedback and learning. A comprehensive monitoring framework for the project will be designed which utilizes Android smartphone based utilities such as ODK which combine geo-tagged and time stamped survey forms with photographs, audio recordings and GPS coordinates. Gender-responsive quantitative indicators which are easily measured and recorded will be devised and integrated with the smartphone but also available as printed forms. Indicators will include those for measuring impacts of awareness generation, participation and representation of women and vulnerable groups in CBOs and in training, number of and impact of interventions including (gender-disaggregated) numbers of direct beneficiaries as well as improvement in yields and productivity from income/livelihood diversification, farming and livestock.

Projects staff, extension services, volunteers and representatives of CBOs associated with project activities will be trained in the collection of these indicators for their respective activities on a continual basis. Project staff will further be trained in collecting this data on smartphones for aggregation and sending to the site and/or national PMU for analysis. Results of the monitoring will be reported to communities annually during the multiple stakeholder meetings (Activity 1.1.5) for validation.

Activity 2.4.1 Identifying and developing participatory livelihood diversification plans.

Activity 2.4.2 Holding seasonal camps in both agricultural and pastoral/agro-pastoral settlements for hands on training and material support for agro-processing and value addition for income diversification.

Activity 2.4.3 Facilitating access to credit to agro-pastoral communities and entrepreneurs

Activity 2.4.4 Establishing linkages and facilitate transactions between rural producers and entrepreneurs and shopkeepers in markets for sales of produce.

Activity 2.4.5 Participatory monitoring and assessment of activities and their impacts involving user groups and selected households.

Component 3 Community based natural resources management to offset the impacts of climate change on ecosystem goods and services.

Outcome 3: Communities in micro-watersheds adopt natural resources management and restoration to reduce climate change impacts. Budget 2,712,228 USD

This component will result in the restoration and sustainable management of about 15,000ha under three catchments forming the project sites. This includes 300 ha of farmland, 10,000 ha affected by drought and 5,000ha affected by floods. Communities will be facilitated in establishing a participatory framework for managing these catchments and their resources. The project will leverage modern geospatial technologies to empower communities and local institutions. It will result in the formulation of detailed, spatially explicit, gender-responsive and participatory plans for restoring rangelands and forests. An institutional structure will be set up which provides representation to women and weaker sections and facilitates coordination between different communities, institutions and NGOs operating within a given catchment. An integrated, watershed-based approach will ensure synergy between different interventions within a catchment and will provide a model for community-based land and forest management for the state of Northern Bahr el Ghazal. As this component of the project envisages construction of rural infrastructure, it will be guided by a comprehensive ESIA as mandated in the ESMF. The ESIA shall be designed in the first six months of the project and will address all relevant risks as highlighted in the SESP.

Watershed restoration measures will be implemented through a concerted mobilization of communities to take cost-effective measures using local materials and appropriate designs. These will be guided by geo-spatial analysis of hydrologic features combined with participatory planning. Strategically placed soil and water conservation structures, check-dams, dykes, diversion canals and water spreading structures will be constructed to arrest rapid

stream-flow during storms and assist ground water recharge and moisture retention. Water harvesting structures will be coupled with shallow bore wells and low-cost pumps for water points and small-scale irrigation. Extensive agro-forestry measures will be introduced and combined with community-based management measures to rebuild vegetative cover and re-green rangelands while addressing shortages of fuel, fodder and fruit. These activities are expected to reduce impacts of floods and droughts and to restore ecosystem services for long term climate resilience. All rural infrastructure created by the project will be designed by qualified engineers who will include an environmental impact assessment where needed. Design of all structures, irrespective of size, will provide details of operation and maintenance, including sourcing and costing for materials, labor and replacement of parts where applicable.

Registered CBOs, including federations and associations of farmers and pastorals as well as smaller user groups and self-help groups will be supported to establish financial procedures and practices that sustain O&M costs and investments into livelihood and income generation activities. Key among these will be setting up of a fee structure for those benefiting from the use of water infrastructure, food processing equipment, implements and other rural infrastructure (ponds/checkdams) provided by the project. These groups will receive training on management, book keeping and business practices, in addition to technical training on O&M of their respective assets. A small incentive in the form of matching grants for fees collected will also be provided.

Output 3.1 Restoration plans based on ground surveys of micro-watersheds delivered, vetted and approved by micro-watershed-based committees comprised of representatives of all stakeholders

Community mobilization and awareness raising will be done to facilitate the creation of committees in each micro-watershed comprising representatives from CBOs and bomas as a platform for planning activities and managing and sharing resources. Participatory field assessments will be conducted to identify catchment areas and resource use patterns of settlements in selected sites building on activity 1.1.4. Detailed resource maps for each settlement in the micro-watershed showing resource use patterns including overlap in areas, if any, will be produced. Consultations with traditional leaders and CBO representatives will be held to identify key households based on their dependence on natural resources. Resource dependence of households will be measured and mapped and their willingness to participate in committees determined through focal group discussions and meetings. Women, vulnerable groups and people with special needs will be spoken to separately to ensure their perspectives and priorities are adequately captured. This will lead to the formation of micro-watershed committees and selection of office bearers with representation of women and vulnerable communities.

Site specific plans, which include ESIA where needed, will be developed with relevant user groups for non-farm interventions in the micro-watersheds with technical drawings, listing of materials and labor including contributions from the community. Comprehensive and participatory surveys of identified sites will be conducted to design and prepare technical drawings detailed estimates of materials and labor requirements, including sustained O&M, for each type of intervention in the catchment area, namely:

1) Soil and water conservation structures including: i) contour bunds, check dams and gabions; ii) re-seeding of rangelands; iii) afforestation and agroforestry; iv) protection from grazing.

2) Water harvesting, drainage and spreading structures including: i) restoring channels and drains including stabilization of slopes; ii) water harvesting for people, animals, irrigation; iii) water spreading structures such as dykes; iv) ponds to be de-silted, deepened or strengthened.

3) Constructing water points and associated pumping and irrigation systems including: i) drilling/cleaning/deepening of shallow bore-holes; ii) in existing hafirs to facilitate water collection and/or prevent contamination by livestock; iii) installation of pumps and their power sources; iv) outlets, troughs and pipes for water distribution and to separate livestock and human access points and v) micro-irrigation and drip-irrigation points.

4) Afforestation, reforestation and assisted regeneration of woodlots, rangelands and forested areas including: i) afforestation with native multi-use species in the catchments; ii) collection and broadcasting of superior fodder varieties; iii) protection and re-forestation of existing forest areas; vi) creation of woodlots and energy plantations with fast growing fuel and timber species and; v) planting along and on structures for soil and water conservation and harvesting for strength and protection.

These technical drawings and plans will be validated with the micro-watershed committees. This will include obtaining commitments for contribution of labor and materials towards construction. The documents thus produced will include i) approved (by micro-watershed committees) technical drawings; ii) undertaking from the micro-watershed committee for responsibilities of members for oversight and monitoring of work; iii) commitments of types and quantum of contribution (material, labor, watching duty etc.) from each user group in the micro-watershed committee which is implementing an intervention; iv) approved fee or payment structure, if any, for use of outputs and resources and iv) an agreed management plan including operation and maintenance costs and costs of protection and watering. Office bearers of each of the CBOs entrusted with specific community assets by the project will institute a regime for operation and maintenance of the investment made by the community and the project. This will involve the collection of user fee where applicable and ensuring members of each group participate equitably in operation and maintenance such as protection of sites from grazing, watering of saplings, maintenance and repair of pipes, valves, motors and power trains for pumps and repair and strengthening of structures such as dams and dykes. Private sector suppliers of services and materials may be involved in this activity which will be supported by the project during its period with a gradual withdrawal by its end. The plans will additionally include an environmental impact assessment, if applicable (based on the ESMF), for any of the proposed interventions.

Participatory assessments will be conducted to evaluate the impact of Soil and Water Conservation (SWC) and re-greening efforts at the micro-watershed level and updating work-plans for subsequent seasons based on feedback from monitoring of site-specific activities by relevant user groups. CBO representatives involved in project implementation together with project staff and extension workers will conduct regular participatory monitoring exercises to track project activities and their impact. Mobile ICT tools will be utilized for which a comprehensive monitoring framework will be designed. Quantitative indicators which are easily measured and recorded will be devised along with clear monitoring protocols and reporting guidelines for each type of interventions. These will include measurements such as i) survival and growth of plants; ii) availability of forage, fodder, fuel and timber; iii) financial records such as collection of user free, expenses and receipts from the project; iv) usage statistics for investments in water points, hafirs and irrigation facilities (gender-disaggregated); v) records of contributions of materials and labor by CBO members and vi) condition of structures and records of Operation and Maintenance (O&M) investments. Projects staff including extension services and volunteers and representatives of CBOs associated with project activities will be trained in the collection of these indicators for their respective activities on a continual basis. Project staff will further be trained in collating this data on smartphones for aggregation and sending to the site and/or national PMU for analysis. Results of the monitoring will be reported to communities annually during the multiple stakeholder meetings (Activity 1.1.5) for validation.

Activity 3.1.1 Mobilizing communities to create gender-equitable micro-watershed committees.

Activity 3.1.2 Developing site specific plans for interventions in the watershed.

Activity 3.1.3 Conducting participatory assessments and evaluations.

Output 3.2 Improved ground water recharge and soil moisture retention through community-based soil and water conservation measures in micro-watersheds

Communities will undertake soil and water conservation measures based on approved plans developed during activity 3.1.1. Structures will be built, and slopes stabilized on community lands through contribution of local materials and labor from the community. The work will be supervised by CBO representatives with technical and financial support and oversight along with inputs of additional materials and goods by the project. Each structure will be vetted as per the ESMF and an ESIA will be developed as needed. Private agencies and entrepreneurs such as skilled masons, suppliers of earth moving machinery and transport will be hired from nearby towns and villages, with a preference given to entrepreneurs from within the community.

Multiple species of trees, shrubs and grasses will be planted to stabilize soils and soil and water conservation structures, arrest erosion and increase infiltration while increasing available biomass. Communities will undertake planting and seeding appropriate and multi-use/multi-purpose species of trees, shrubs and grasses to stabilize soils and SWC structures, arrest erosion and increase infiltration while increasing available biomass resulting in assisted regeneration combined with soil and water conservation on communal lands. Supplies of planting materials will be from groups established by the project under activity 2.1.3. The project will pay for sapling supply, its transport and materials needed for fencing or protection of saplings. Communities will be asked to provide compost, manure,

water and labor, as per the plans which will specify the proportion of materials and labor is contribution and what needs to be paid for by the project (activity 3.1.2).

Farmers will be assisted in undertaking on-field soil and water conservation measures and planting of saplings on plots and homesteads within user groups. Group members will be required to contribute labor and locally available construction materials, compost, manure and water for each other's fields as per the plans (activity 3.1.2). Saplings for appropriate species for agro-forestry will be purchased from user groups (activity 2.1.3) by the project which will also cover costs of transport, additional materials and skilled labor for any masonry work, earth moving equipment or machines.

Communities, through their CBOs, will be involved in the O&M of structures and planting measure undertaken by the project, including establishment of social and hard fencing measures and enclosures as well as watering and replanting where needed. Micro-watershed committees and relevant user groups will organize maintenance camps at regular intervals to repair and maintain soil and water conservation and water harvesting structures and protective measures such as fences or cattle guards. Camps will also be organized for watering and replanting of dead saplings in the micro-watersheds and on private farms and homesteads. User groups will additionally set up and monitor no-grazing zones and impose cash or in-kind fines on violators in areas set aside for regeneration and afforestation. The camps will additionally take up repair and construction and maintaining fences and enclosures to protect planting sites, water points and water harvesting structures from pollution by livestock. The project will cover a proportion of the costs of these operations as per the plans of the CBOs.

Activity 3.2.1 Constructing soil and water conservation structures and stabilizing slopes on community lands with contributions of labour and material from communities.

Activity 3.2.2 Planting and seeding appropriate and indigenous multi-purpose species of trees, shrubs and grasses.

Activity 3.2.3 Undertaking on-field soil and water conservation with farmer groups coupled with strengthening of structures through planting multi-use grasses, shrubs and trees.

Activity 3.2.4 Involving communities in maintenance, protection and management of structures and planting efforts on community lands.

Output 3.3 Reduced impacts of floods through creation of water storage and spreading structures and drainage control measures in the catchment

Flood protection measures will be built on community lands through diversion and spreading structures and deepening of ponds on community lands to protect against floods. These will additionally serve to recharge ground water, enhance soil moisture and improve water retention for livestock and pond fisheries during the dry season. Work will be undertaken as per plans (activity 3.1.2) with community member contributing a proportion of labor and local materials and the project providing the financial support for the remaining expenses including hiring machinery, construction materials, transport and labor. Activities will be supervised and monitoring by user group representatives along with project staff who will additionally extend technical support where needed. Necessary precautions and mitigation measures to avoid risks to people, particularly children, and to livestock will be put in place as per the Health and Safety Plan, after a careful ESIA.

Communities will undertake planting and seeding appropriate and multi-purpose species of trees, shrubs and grasses to stabilize water spreading and drainage control structures and channels, reduce siltation and increase infiltration while increasing available biomass resulting in assisted regeneration. Supplies of planting materials will be from groups established by the project under activity 2.1.3. The project will pay for sapling supply, its transport and materials needed for fencing or protection of saplings while communities will be asked to provide compost, manure, water and labor. Some of the community inputs will be the form of contributions, as per the plans (activity 3.1.2).

Flood protection measures will be built on farmlands through diversion and spreading structures such as dykes, widening and de-silting of channels and deepening of ponds to protect against floods. These will additionally serve to recharge ground water, enhance soil moisture and improve water retention for livestock and pond fisheries during the dry season. Work will be undertaken as per plans (activity 3.1.2) with relevant farmer groups and associations contributing labor and local materials and the project providing financial support for hiring machinery, construction materials, transport and labor. Activities will be supervised and monitoring by user group representatives along with

project staff who will additionally extend technical support where needed. This activity will also be addressed by the Health and Safety Plan on the basis of the ESIA.

Communities will be facilitated in taking up regular maintenance of water spreading and flood control structures as well as protecting saplings and turf through watering, re-planting and establishing of social and hard fencing measures and enclosures with local communities. Regular maintenance camps will be organized through micro-watershed committees and farmer groups to repair and maintain channels, streams, ponds and water spreading structures for flood control. Watering and replanting of dead saplings on private farms and homesteads and along channels and dykes in the catchment will be done in appropriate seasons. Monitoring of non-grazing zones where re-planting/turfing and afforestation will be undertaken and disincentives such and fines will be imposed on violators. Fences around enclosures and cattle guards will be constructed, repaired and enhanced where needed, including around water points and hafirs where they will also serve to protect drinking water sources from pollution. Costs of these activities will be shared between communities and the project as per the relevant plans.

Activity 3.3.1 Constructing small dykes, diversion canals and water storage ponds and spreading structures on community lands with material and labor contributions from the community.

Activity 3.3.2 Planting and seeding appropriate and indigenous multi-purpose species of trees, shrubs and grasses to stabilize slopes and sides of structures, arrest erosion and increase infiltration while increasing available biomass.

Activity 3.3.3: Undertaking construction of drainage channels and ponds on farmer lands with farmer groups coupled with strengthening of structures through planting multi-use grasses, shrubs and trees.

Activity 3.3.4: Cleaning and maintaining channels, streams, ponds and water spreading structures.

Output 3.4 Increased resilience to drought through creation of water points from shallow boreholes

Water points will be constructed strategically at locations, decided through consultations with communities, specifically women - where the benefit the largest number of people. This includes shallow bores fitted with appropriate pumps/lift irrigation structures such as treadle, wind or solar powered pumps and troughs/water collection points that protect the sites from contamination. Water harvesting structures will be repaired and/or constructed at strategic locations, keeping in mind needs of women and of livestock (based on activity 3.1.2). An ESIA will be conducted on a case-by-case basis as per the ESMF to ensure the structure do not pose a risk to people or livestock. Appropriate measures to avoid or mitigate alteration of soils, flows and impound water, as well as to avoid and mitigate accidents with people and livestock, will be addressed by the ESMP and the associated Biodiversity Action Plan (BAP) and Health and Security Plan (HSP). This will improve access of drinking water for settlements and for livestock. Existing shallow bores holes will be cleaned, and deepened, and additional ones will be sunk at strategic locations. This will increase availability of water closer to settlements and in water scarce regions. These structures will be fitted with appropriate pumps/lift irrigation structures such as treadle, wind or solar powered pumps and troughs/water collection points that protect the sites from contamination. Increased availability and improved quality of water for humans and for livestock will reduce the impact of droughts on communities. Women and girls will particularly benefit from this as they customarily collect water and are often forced to travel to increasingly larger distances as dry spells increase in duration and intensity.

Water user groups will take up the O&M of water points in accordance with their rules, including collection of user fee to support O&M costs. Water user groups mobilized for O&M of water points (activity 3.1.1) will be trained and facilitated in the O&M of the water points and associated equipment. They will be put in touch with private agencies who can assist in repair and replacement of equipment if needed. Furthermore, the water user groups will be assisted in implementing a user fee system wherein office bearers will be trained to maintain accounts and records of water use. Regular collection of fees will be done in order to cover O&M costs, with an additional infusion of start-up funds from the project for the initial year of operation of the water point. This is expected to create a financially and organizationally sustainable water user groups who can expand membership through investments in additional facilities around water points or by increasing the number of water points.

Small scale and micro-irrigation for crops and trees (multi-use species) nurseries (output 2.2) will be provided by linking up with strategically located water points. These water points will be identified to supply of life-saving irrigation during periods of drought or failed rains to specified farms and restoration sites which have been planted or turfed by the project. Small scale irrigation systems and micro-irrigation facilities will be hooked up with selected water points (activity 3.2.1). Users of these facilities will be made part of the water user groups and will also be

required to pay a user fee. Similarly, the project will compensate the concerned water user group for use of water if needed. This will stabilize farm productivity and livelihoods, with a focus on high value crops such as vegetables and fruit and to reduce the mortality of saplings introduced as part of the project.

Activity 3.4.1 Constructing water points at strategic locations.

Activity 3.4.2 Operation, maintenance and monitoring of water points.

Activity 3.4.3 Linking water points with small scale/micro-irrigation for vegetable gardening and life-saving irrigation.

Partnerships

A summary of concurrent and planned projects and initiatives relevant to the proposed WACRAL project is presented below. Two kinds of partnerships have been explored. **Baseline projects** are those which try to address non-climatic drivers of the same core problem: the high levels of food insecurity and livelihood vulnerability of communities in South Sudan. The LDCF project will build on these baselines to address its climate change aspects thereby adding to their effectiveness and sustainability. The LDCF project will also explore **partnerships** with projects that address objectives related to CCA and resilience building, similar to those of the WACRAL project. This will ensure cross learning and knowledge sharing, collaborations and coordination to complement and increase the extent and intensity of impact while avoiding duplication of activities and sites. A more comprehensive list of relevant projects, including those completed in the recent past, is presented in the Feasibility Study (Annex 13 Section III).

Table 2: Summary of relevant projects and potential partnerships.

ID	Title or Description of Project or Partnership	Implementer	Funder	Funding (US$)	Period
1.	Emergency Livelihood Response Programme	FAO	USA	25,000,000	2020-2021
2.	Strengthening the Capacity of Government and Communities in South Sudan to Adapt to Climate Change	UNDP	GEF-LDCF	9,032,420	2020-2025
3.	South Sudan Safety Net Project (SSSNP)	UNOPS	World Bank	40,000,000	2020-2022
4.	South Sudan Livelihoods Resilience Programme (SSLRP)	IFAD	IFAD and AfDB	17,900,000	2021-
5.	Value Addition and Trade Development project (AMVATP)	FAO	AfDB+FAO	20,810,000	2021-2025
6.	Adapting agricultural production methods to climate change and stabilizing livelihoods in Western Bahr el Ghazal, South Sudan	Ministry of Agriculture, Forestry, Tourism, Animal Production, Fisheries, Cooperatives and Rural Development	GIZ	5,500,000 (apprx)	2013-2019
7.	The South Sudan Enhancing Community Resilience and Local Governance Project Phase II (ECRP-II)	Ministry of Finance and Planning	World Bank	120,000,000	2022-2027

Baseline projects

1. Emergency Livelihoods Response Programme (ELRP) – 2020-2023.

Objectives and Coverage: The aim of the ELRP is to save lives, protect livelihoods, enhance food production and strengthen the resilience of vulnerable communities by building their coping capacity. As such, the ELRP sets the foundation for enhancing the long-term adaptive capacity of communities and strengthening synergies among the activities FAO will pursue towards building resilience. In collaboration with other actors, FAO provides Livelihood support to ensure assistance reach the most at-risk populations according to the IPC acute or emergency phase classification. Thus, contributing to improved food security, income and dietary diversification by improving access of vulnerable farmers to quality seeds, either through direct distribution of emergency kits or, in more stable areas, through voucher-based seed fairs (SFs). In order to improve beneficiaries' ability to produce food in the short term, FAO disseminates generally recommended good agricultural practices to obtain a better yield than normal and maximize the benefit from the seed aid they are receiving. In more stable areas, FAO implements medium- to longer-term support by extension workers and NGO partners that enable a full package and follow up mechanism to support that increases agricultural productivity in a sustainable manner. The programme targets all 78 counties in the country (as per OCHA county list), according to the relevant IPC phases targeted. The ELRP offers a rich set of lessons and experiences in providing agricultural extension and veterinary services in South Sudan. Its activities include building capacities of implementing partners in in project implementation and gender mainstreaming. The project provides training and assistance to farmers and those engaged in fishing. Seed fairs are organized and farmers, including women, provided crop kits with improved varieties of crop and vegetable seeds and implements. The project supports fishing communities by training them on net making, fishing methods and improved fish preservation. The project also conducted a market-based nutrition voucher scheme that supported 3,650 highly vulnerable beneficiaries including youth and students facilitating their access to food and to training on nutrition.

Linkages with the LDCF proposal

The ELRP offers a rich set of lessons and experiences in providing agricultural extension and veterinary services in South Sudan. The LDCF project will coordinate its efforts with the FAO on both thematic areas and local interventions. It will leverage and build upon existing resources, expertise while identifying, and addressing gaps in interventions relating to climate change adaptation in agriculture and NRM. The LDCF project will collaborate with implementing partners to extend the project's activities to include: i) a framework to identify communities and specific climate related challenges that affect agricultural production and livelihoods among them; ii) coherent strategies to address these issues through CSA - adding to the existing initiatives of the ELRP; iii) adopting integrated watershed approaches that link catchment restoration with fisheries and farming through disaster mitigation measures such as improved drainage, flood defenses and combine water harvesting and spreading with planting multiuse species to build landscape level resilience. Finally, iv) the LDCF project will provide a platform to share and build upon knowledge among communities and institutions, that integrates on-farm and household-based climate resilience with restoration and protection of watersheds for long term resilience.

2. Strengthening the Capacity of Government and Communities in South Sudan to Adapt to Climate Change (SCGC)

This project seeks to 1) Develop institutional capacity for adaptation to climate change developed; 2) Transfer ecosystem based adaptation strategies communities as part of an agreed land-use plan structured to reduce people's vulnerability to climate change; and 3) Strengthen the knowledge base and transfer knowledge on climate change effects and adaptation benefits. The project strategy is to strengthen the capacity for adaptation planning and policy development, including increased awareness of climate change adaptation to government, developing mapping and information products and planning tools and climate risk analysis. The project will invest investing in ecosystems-based Adaptation and develop the evidence base on cost effectiveness of these interventions for policy development, working closely with communities. The project will work in those areas where the root cause of conflict among communities is access to natural resources, for example, forests, water points and grazing land. Climate change is an added stressor to hardship and displacement. Local peacebuilding will be promoted using natural resources as the basis for rebuilding key relationships and a common vision.

Linkages to the LDCF proposal

There is an opportunity for both projects to gain from lessons learned and adaptation strategies developed in their respective sites. Output 1.1. from the SCGC project which seeks to develop land use maps and vulnerability, demographics and land use projections could provide valuable lessons for output 3.1 of the WACRAL project which

will develop restoration plans based on ground surveys of micro-watersheds. Experiences from the ecosystem-based approaches (output 2.2). livelihood diversification (output 2.3) and climate smart interventions (output 2.5) of the SCGC are, similarly, relevant across the outputs in component 3, outputs 2.4 and output 2.1 respectively of the WACRAL project. The proposed LDCF project (output 2.4) could also gain through the improved dissemination of climate information proposed under the SCGC.

3. South Sudan Safety Net Project (SSSNP)

The objective of the Safety Net Project for South Sudan is to provide temporary income opportunities to selected poor and vulnerable households and to strengthen safety net delivery tools in the Republic of South Sudan. The Project is expected to provide income support to nearly 430,000 people in some of South Sudan's most vulnerable communities. It primarily focuses on the most vulnerable households such as people living with disabilities, the elderly, pregnant women and those living with HIV/AIDS. The SSSNP has three components. 1. Labor Intensive Public Works Plus component will scale up community-based public works activities to provide access to temporary income, supported by a plus approach, which will include selected complementary support. 2. Direct Income Support component will provide direct income support to poor and vulnerable households who lack able-bodied members and are therefore unable to participate in labor-intensive public works. 3. Strengthening Safety Net Delivery Tools and Project Management component will strengthen existing safety net tools and enhance local level capacities to manage them in order to address on-going challenges and risks to the delivery of effective and accountable safety net in the future.

Funded by the World Bank's International Development Association, the project will be implemented by UNOPS who will work with South Sudan's Ministries of Agriculture and Food Security, Gender and Social Welfare, and Finance and Planning to implement the project.

Linkages to the LDCF proposal

The first and largest component of the project (US$ 22.8 million) is particularly relevant to the proposed LDCF project, which under component 3 proposes to undertake construction of rural infrastructure for climate resilience. The proposed work will depend on local labor and materials. The LDCF project will reach out to the SSSNP during project implementation to see if funding can be secured under its community-based public works activities.

4. South Sudan Livelihoods Resilience Programme (SSLRP)

This IFAD project is being implemented in the Jonglei, Central Equatoria and Eastern Equatoria states of South Sudan and proposes to re-establish livelihoods for rural communities, focusing on returnee households, young people and women. It will strengthen household resilience to emergency and crises, rebuild local agricultural production and stabilize incomes through micro-enterprises and short-term employment. The project goal is to contribute to improved and resilient livelihoods among the targeted rural communities and its development objective is to empower communities to participate in decision-making processes that will recover agriculture livelihoods, build household resilience and promote stability. The project targets poor, food insecure farmers, and agro-pastoral and pastoralist households engaged in fishing, cropping, and livestock activities. The project will directly target 38,800 poor households, approximately 225,504 people. Project beneficiaries will receive specific activities to facilitate their social integration in agricultural production and economic activities. The project has four components: 1) Disaster Response and Risk Mitigation; 2) Community Driven Development Planning; 3) Agriculture Production and Rural Livelihood Support; and 4) Project Support and Capacity Building.

Linkages to the LDCF proposal

The SSLRP project targets the same livelihoods and communities that the proposed LDCF project does. Component 2, 3 and 4 of the projects also overlap significantly with the work proposed under the WACRAL proposal. This specifically includes outputs under component 2 which also focus on climate smart agriculture and climate resilient livelihoods, including extensive capacity building and component 3 whose outputs include community-based development planning for landscape restoration. The two projects will ensure a continuous sharing of information and lessons learned which will facilitate the scaling up of successful practices in the LDCF protect and mainstreaming of climate impacts during the implementation of IFAD activities.

5. Value Addition and Trade Development project (AMVATP)

This project, being implemented by the FAO with the Ministry of Agriculture and Food Security, uses an agricultural value chain approach with emphasis on the development of producer associations. The development goal of AMVAT

is to contribute to reduced food insecurity, poverty reduction and building of community and household resilience. Its objectives are: 1) Increased agricultural productivity; 2) Increased agro-processing, aggregation and marketing of agricultural produce; and 3) Trade and export of agricultural products and merchandise. To achieve this, the project will implement four components: 1) Increase agricultural productivity and production; 2) Improve market-place economic and social infrastructure; 3) Enhance market and trade enabling environment; and 4) Project management and coordination. The project is expected to benefit 20,000 farming households (about 120,000 individuals) by increasing their agricultural productivity and incomes, in the three states of Central Equatoria, Eastern Equatoria and Jonglei.

6. Adapting agricultural production methods to climate change and stabilizing livelihoods in Western Bahr el Ghazal, South Sudan

There are important lessons that were learned from the GIZ-project "Adapting agricultural production methods to climate change and stabilizing livelihoods in Western Bahr el Ghazal, South Sudan", which concluded in 2018. The project used field farmer schools to enable the local population to employ various adaptation measures, particularly in relation to staple crops and vegetables. Additionally, the project strengthened the capacities of local government, by involving the agricultural extension services The GIZ project overcame inherent challenges in capacities of both communities as well as extension agencies to improve their resilience to climate change impacts by stabilizing the livelihoods of selected households through efficient use of available natural resources, CCA and sustainable agricultural production measures. The setting up of farmer field schools as a route for hands on training on sustainable land management and cultivation of stable foods and vegetables was at the center of the strategy. The project additionally strengthened structures and capacities within the state ministry of Agriculture, Forestry, Cooperatives and Rural Development, focusing on training agricultural extension services. This ensured that project interventions were sustained and institutional structures for their support were in place. The project, since 2016, implemented the activities of the Regional Transitional Aid Programme for Food and Nutritional Security in Sub-Saharan Africa, which focuses on improving food security among smallholder households rural populations, especially women, in the fragile states of Burundi, the Democratic Republic of the Congo and South Sudan. The project has resulted in optimized and diversified agricultural production practices that are adapted to climate change among its target groups, leading to more efficient utilization of food and prevention of malnutrition.

Key elements of the GIZ project that have been adopted and are part of the LDCF project design include:

1. Replication of the farmer field school approach as a mechanism for not only hands-on training, but also as the route for distribution of materials and assets (see below) for climate smart agriculture and best practices in livestock raising and veterinary surveillance and services.

2. Specific targeting of food insecure smallholders, specifically women though a careful and exhaustive vulnerability assessment and consultations with community leaders and representatives.

3. Strengthening institutions both at the community level to ensure sustained on-ground action, circulation and sharing of assets created by the project and for financial sustainability and viability.

4. Strengthening of government agencies, particularly extension services to sustain technical support to the communities and to replicate its strategies and activities to other sites.

Linkages to the LDCF proposal

The AMVATP project has overlaps with outputs under component 2 of the proposed LDCF project. This includes activities that introduce and build capacities for climate smart agriculture under outputs 2.1 and 2.2 and activities under output 2.3 that seek to support small scale agri-businesses and enterprises. Mechanisms for cross learning and experience sharing between the two projects will be put in place through the knowledge management activities under output 1.1.

7. The South Sudan Enhancing Community Resilience and Local Governance Project Phase II (ECRP-II) is a five-year project that will benefit as many as 920,000 people in 12 of the country's 79 counties. The project will help build the institutional capacity of local communities to deliver critical services such as access to electricity, clean water, health care, and education, as well as develop integrated disaster risk management systems at the national and sub-national levels that will help communities anticipate and better cope with natural disasters and climate shocks.

Linkages to the LDCF proposal

The project overlaps with the WACRAL objectives of helping communities and local institutions adapt to climate change induced shocks. This includes project component 1, outputs 1.1 which address integration of climate change adaptation strategies in agriculture and NRM and component 3, output 3.3 which seeks to reduce impacts of floods and 3.4 which seeks to build resilience to droughts through on-ground adaptation action.

Risks

The project is classified Substantial Risk according to the Social and Environmental Screening Procedure which was conducted during PPG. Because some activities are still to be specified on the basis of project selection criteria, an additional safeguards screening is expected before these activities start.
As the project activities have been screened through UNDP SESP, to ensure the full project's compliance and consistency with UNDP safeguards policy. These activities fall within scope of project governance (Project Steering Committee), assurance (UNDP), monitoring, reporting, and accountability mechanisms, providing key "risk control" framework and mechanism.

The following principles and standards are triggered:

Overarching Principle: Leave No One Behind

- Human Rights
- Gender Equality and Women's Empowerment
- Accountability

Standards

1. Biodiversity Conservation and Sustainable Natural Resource Management
2. Climate Change and Disaster Risks
3. Community Health, Safety and Security
4. Cultural Heritage
5. Displacement and Resettlement
6. Indigenous Peoples
7. Labor and Working Conditions
8. Pollution Prevention and Resource Efficiency

Eleven risks, detailed in the SESP (Annex 6) were identified:

An Environmental and Social Management Framework has been designed during PPG. This ESMF sets out the principles, rules, guidelines, and procedures for screening, assessing, and managing the potential social and environmental impacts of forthcoming interventions of the project. It contains measures and plans to avoid, and where avoidance is not possible, reduce, mitigate, and/or offset adverse risks and impacts. It specifies the most likely applicable social and environmental policies and requirements, as well as how those requirements will be met through procedures for the screening, assessment, approval, mitigation, monitoring, and reporting of social and environmental risks and impacts associated with the activities to be supported. It ensures that the activities are screened and assessed, and that appropriate management measures are in place prior to implementation. The procedures have been designed to ensure compliance with relevant social and environmental policy frameworks, including the South Sudan's legal, policy, and institutional framework, as well as with UNDP's Social and Environmental Standards. The ESMF aims to effectively address risks through thorough application of the environmental and social measures, including time-bound action plans for avoiding, and where avoidance is not possible, reducing, mitigating, and managing adverse impacts related to the future activities or policies/regulations.

The table below provides an overview of the required social and environmental safeguards elements to be designed in the first six months of project implementation. Activities rated as Substantial Risk–in the SESP – will not start before appropriate Management Plans are in place.

Table 3: Social and environmental safeguard elements.

Environmental and social elements	Description

Environmental and Social Impact Assessment (ESIA)	In accordance with UNDP's SES policy, substantial -risk projects require comprehensive forms of assessment. An ESIA assesses the full range of social and environmental impacts, including alternatives analysis. It will be developed and carried out by independent experts in a participatory manner with stakeholders during the inception phase. The ESIA will further identify and assess social and environmental impacts of the project and its area of influence; evaluate alternatives; and design appropriate avoidance, mitigation, management, and monitoring measures. It will address all relevant issues related to the SES Overarching Principles and Project-level Standards.
Environmental and Social Management Plans (ESMP)	A key output of the ESIA is an ESMP, prepared within the first six months of project implementation, to further refine risk identification and mitigation strategies, as well as to establish a system for monitoring these risks. Based on the findings, required management plans (e.g. Indigenous Peoples Plan, Biodiversity Action Plan) will be developed and implemented as appropriate.
Development of specific plans	In order to address specific substantial risks, the project's ESMP will be complemented by: • Livelihood Action Plan (LAP) • Indigenous Peoples Plan (IPP) • Biodiversity Action Plan (BAP) • Health and Safety Plan (HSP)
Technical and feasibility studies	Selected projects to be supported by the project will be subject to technical and feasibility studies according to UNDP guidelines in order to be appropriately screened and managed.
Operationalization of a Grievance Redress Mechanism (GRM)	The full details of the GRM will be agreed upon during the ESIA phase and the project will establish a project-level GRM at the start of implementation. Interested stakeholders may raise a grievance at any time with the Project Management Office, the government party, UNDP, or the GEF.
Operationalization of the Gender Action Plan	A Gender Action Plan has been developed during the project's design phase. It will guide all actions pertaining to SES implementation and gender-mainstreaming. It offers specific activities, from capacity-building to specific consultation activities, allowing all women to fully engage with the project and decision-making processes from the outset.
Operationalization of the Stakeholder Engagement Plan and development of an associated FPIC protocol	A Stakeholder Engagement Plan has been developed during the project's design phase. It will guide all actions pertaining to SES implementation. It will be completed by a specific Indigenous Peoples Plan and an FPIC protocol, to be developed together with the local communities in order to enable them to get extensive information about the project and associated possible positive and negative consequences. They will be encouraged and given the time to explicitly reflect on this information in order to able to give their free prior informed consent (FPIC). The FPIC protocol will then be applied to each activity of the project, as communities will be allowed to provide their consent to part of them, ask for modifications, or withdraw their consent.

Financial, operational and regulatory risks:

Security and instability

Risk: Political or security complications in project sites may constrain or delay the implementation of activities and could impact private sector involvement by affecting markets and value chains.

Mitigation/avoidance: Security risks and accessibility were considered during the selection of sites and those with security challenges and poor accessibility were avoided. Selected sites have been free of conflict due to proactive efforts of the government who have ensured peace in the region. The project will be part of the existing UNDP peace building efforts in the project catchments where frequent clashes between nomadic pastorals and local communities

are known to occur. As these conflicts typically occur during the return of the nomadic pastorals, peace-building efforts of reconciliation committees will be heightened during this period. The project will also ensure that its activities involve nomadic communities who are present in the project catchments.

Limited capacities may prevent duty bearers from discharging their duties and responsibilities

Risk: Extended periods of insecurity and recent administrative realignments in government departments have led to low staffing and poor levels of capacity and training among staff. The duty bearers of this project, government ministries and local authorities and CBOs, have low capacities to: i) measure and manage the impact of climate change on agriculture; ii) engage with all members of the communities in depth, and iii) facilitate and monitor a grievance redress mechanism. This could result in administrative delays and could also affect the quality and quantity of outputs.

Mitigation/avoidance: In order to reinforce the capacities of the duty-bearers to conduct the project effectively and meet their obligations, all outcomes include targeted capacity-building. World Vision, will appoint a full-time project management team comprising of professionals with expertise in administrative, social as well as technical aspects of the project. Highly trained and motivated professionals with expertise in both the administrative, social as well as technical aspects of implementing climate resilience and adaptation projects will be assembled for this project. This will include a full-time project manager. Technical experts in agriculture, animal husbandry, veterinary sciences and NRM will be engaged for designing, overseeing and analyzing results of surveys, for preparing training materials and for training project staff in relevant technologies and techniques. Safeguards specialists, including gender, environmental and social safeguards and stakeholder engagement will lead the socioeconomic and environmental vulnerability assessments and designing the framework for continual and participatory monitoring of safeguards.

These experts will be drawn from both national and international agencies with the mandate to transfer capacities to local institutions, including community-based organizations. Training and skill up gradation will be conducted throughout the project's life cycle and will be coupled with close oversight of the project by experts from the field and by PMU staff. These measures will ensure that technical staff are well equipped to effectively and efficiently discharge their duties and that project management and administration are handled professionally and meet both GEF and UNDP standards and requirements. Government agencies, particularly State Ministry of Agriculture Environment and Forestry (SMoAEF) and the State Ministry of Animal Resources, Fisheries and Tourism (SMoARFT), have staff with clearly defined roles in extension down to the payam level and volunteers down to the boma. Many of these extension staff have prior experience and training which will be built upon by this project.

Limited Private Sector Involvement

Risk: Private sector involvement in project activities and investment in climate adaptation may be limited. This may be worsened by the COVID-19 pandemic.

Mitigation/avoidance: Prolonged insecurity and conflict have severely constrained the development of markets and value chains in South Sudan and led to disruption and closure of many traditional markets and places of trade. The project sites have been selected strategically to be close to existing markets that cater to the needs of the agricultural and pastoral communities. Initial contacts with federations of traders have been made during the PPG stage of the project (Annex 9a) to explore the potential for strengthening the markets and value chains through strategic investment in training, equipment and facilities both for traders and entrepreneurs as well as for the agro-pastoral communities (Output 2.3). This dual pronged approach is expected to create the necessary impetus to strengthen and expand the market linkages locally. At the policy level, the project will engage with relevant ministries at both national and state/county level to help strengthen necessary value chains in the agricultural sector (Output 1.2). The National and State Ministries of Trade and Industry have both pledged their support to these initiatives which will give an additional impetus to private sector involvement.

Conflict and displacement

Risk: While the project sites have been selected on the basis of their relative stability, there have been instances of violence between nomadic pastoral groups and residents in the Aroyo and Chel micro-watersheds. There are also isolated instances of violence in the project area which can jeopardize implementation or cause delays. NBG houses a large population IDPs as well as refugees from other regions. These communities have been allowed to settle by the resident communities and have been given access to land and natural resources. In most cases these rights are allocated through traditional authorities.

Mitigation/avoidance: Conflict and consequent displacement are unlikely to affect the entire project as its sites are located in two counties, both of which have remained largely peaceful. Furthermore, this project is being implemented via regional government agencies and departments and its field activities will be coordinated out of the Aweil field office of World Vision which is a secure and safe location. Project staff, including any consultants or supporting staff from partner agencies will conform to agreed government and UN protocols on safety. The county administrator will be the official channel to provide security related information to the project teams and project activities will only be initiated and conducted in those sites which are deemed secure. Additionally, the extent of this risk will be reassessed at project inception and will continue to be monitored. Any severe implications that will affect project implementation in specific locations will be considered by the Steering Committee and communicated accordingly.

Risk of co-financing commitments not being met

Risk: There is a small risk that planned co-financing for the project may be delayed or not be provided on time or in the amounts intended.

Mitigation/avoidance: Delays in funding or cancellation of projects have occurred in the past on account of insecurity. However, after the 2018 peace agreement, there has been a resumption of projects and finances for initiatives in South Sudan. This risk has also been minimized by carefully reviewing the co-finance commitments of the institutional partners and revising the co-finance commitments on that basis. The amount of in-kind co-finance is based on actual allocations of staff time, infrastructure and facilities of the government to the project. These commitments are supported by letters that are provided in Annex 14. Co-finance through baseline projects and partnerships is based on projects to which financial commitments have already been made and which are concurrent to the proposed LDCF project.

Social Risks

Potential economic displacement

Risk: The restoration of degraded rangelands or low-productivity agricultural areas by the project for more productive land-uses and for watershed management may reduce open access pastures and fields in project areas, and hence restrict availability, quality of and access to resources or basic services, in particular to vulnerable individuals or groups. These restrictions could potentially result in economic displacement.

Mitigation/avoidance: The Environmental and Social Management Framework (ESMF) outlines all steps required in order to ensure full compliance with SES requirement during project implementation. In accordance with the ESMF an environmental and social impact assessment (ESIA) will be carried out for all significant risks, triggered as per the ESMF. The ESIA process will draw upon the ESMF to assess the associated impacts, and to inform the specific management measures outlined in the ensuing Management Plans. Given that the project's downstream interventions (and notably the project's support to agricultural and pasture activities) are yet to be specified on the basis of selection criteria of projects, the potential direct impacts are yet to be fully assessed and can't be identified with a reasonable degree of certainty. Further screening will be needed as the projects are selected, through this SESP.

The application of standard good practice such as Free Prior Informed Consent and participatory approaches when choosing project sites and discussing specific agricultural practices will be implemented. The SESP will be subject to further consultations on the field after the activities have been specified, leading to a potential update in the first six months of the project. A social baseline will be conducted and made available in an accessible location in the first six months of the project, before any field activity starts. The SESP conclusion (list of risks) will be translated to Arabic and Dink made available and discussed with all stakeholders, including indigenous peoples and women, for their inputs. An Indigenous Peoples Plan, together with the enclosed FPIC protocol, will address conflict resolutions mechanisms. The Grievance Redress Mechanism proposed in the ESMF will be subject to revisions based on the FPIC protocol. The inception phase of the project will involve a comprehensive, field based and participatory planning exercise which involves stakeholders from the government, development agencies and communities. The project will follow a human rights-based approach and contribute to reducing inequalities and improving livelihoods of poor and vulnerable people.

This proposal has been designed with the objective of minimizing risks related to physical and economic displacement. Additionally, during implementation these issues will be addressed in the frame of participatory

assessment and planning process within and between the participating communities. Activities will only be implemented in locations, in agreement with the respective communities, and where the risks of economic displacement will be assessed through the ESIA as low. The project will deliver improved services to local communities to reduce their vulnerability to climate change, and address some of the underlying causes of vulnerability, hence reinforcing their capacities to act on the long-term.

Increased social tensions

Risk: The project's support to agricultural and pastoral activities could increase social tensions over access to resources between local communities, settled IDPs and nomadic pastoralists. These tensions could also increase violent altercations which have been known to occur, and may affect the repartition of benefits among beneficiaries, to the detriment of women and indigenous peoples.

Mitigation/avoidance: The Stakeholder Engagement Plan (SEP, Annex 9), has been designed and will be made available in Arabic, Dinka and Luo to all stakeholders before the activities start. It specifies the need for a full disclosure of information and providing for meaningful participation of stakeholders during the planning and implementation of site-specific activities including as part of site-specific Environmental and Social screenings and assessments. UNDP Grievance Redress Mechanism will promote awareness of the grievance mechanism which provides a means for redress of aggrieved individuals or groups. A conflict analysis will be conducted together with the ESIA in order to detect i) potential existing tensions and ii) existing conflict resolution mechanisms, with a particular emphasis on the livelihoods of Indigenous Peoples and Internally Displaced Peoples. The Livelihood Action Plan will be conducted on a participatory basis, through the representative management structures set up by the project to manage interventions, both in farm and pasture lands. All communities' livelihoods, including nomadic pastoralists and IDPs, will be represented. The project will additionally participate in the peace building initiatives and mechanisms such as the annual peace conferences organized by the state government agencies and the UNDP to ensure potential conflicts between groups are avoided and mechanism for conflict resolution are in place.

Gender exclusion

Risk: As women are traditionally excluded from decision-making processes, they could be excluded from the support planned for farmers and farmers organizations as well as in the national and regional institutions. This could inadvertently reproduce existing discriminations, including in the design of agriculture and natural resources management policies, and even gender-based violence against women in project implementation.

Mitigation/avoidance: Gender concerns are integrated all outcomes of the project document and supported by the Gender analysis and action plan. The gender analysis develops a comprehensive situational analysis. It enables the project to better understand the levels of participation and involvement of women and men in agriculture and in community-decision-making as well as different experiences of specific development challenges bear by subsets of the women groups. It also enables the project to better take into account women's priorities, restraints and motivations when designing and supporting alternative livelihoods, as well as to identify opportunities for greater equality and empowerment for women throughout project implementation. All activities have been designed to be gender-sensitive, supported by gender-disaggregated indicators.

The project has been designed with particular attention to establishing mechanisms to reduce the risk that existing discriminations against women are inadvertently reproduced in project implementation. Output 1.1 (Integration of CCA strategies in agriculture and natural resources management policies) will be supported by the recruitment of a national gender consultant in charge of developing site specific social and environmental safeguards, and in particular to look at Principle 2. Consultations held during PPG included women's group and a needs assessment focusing on the vulnerability and climate adaptation needs of women was conducted to inform the formulation of adaptation and disaster risk reduction plans. The meeting with NGB State Women Association, in particular, led the consultants to listen to many different women's groups and was the occasion to gather insights on the challenges met by them. Clear recommendations were made such as the implementation of flood control measures (channels and dykes), included in the project. All reports, including proper documentation, pictures and proof of consent are stored and available on demand. Gender responsive and inclusive community mobilization and capacity building activities will precede all interventions, according to the SEP.

The Ministries of Gender, Child and Youth Affairs at both the national and state governments have been part of the project formulation. At the national level the ministry is part of the Project Steering Committee to guide and support the policy interventions proposed. At the state level, the ministry has participated in the community consultations

and brought on board representatives of women groups and youth. This is captured in the SEP (Annex 9) and has informed the gender strategy. The involvement of these ministries will further enhance the meaningful participation of women and vulnerable groups in the project.

Child labor and worker rights

Risk: Most of the agricultural sector in the project area is informal and fails to comply with national and international labor standards. Hence there is a risk of violation of workers' rights within the cooperatives and small agribusinesses supported by the project, linked to forced labor and in particular to child labor.

Mitigation/avoidance: Inspections of all activities are expected to be carried out by Ministry of the Agriculture and local authorities. In order to ensure the protection of children and all workers against forced labor and other worst forms of labor in agriculture, it is expected to step up inspections of those activities. The project will work closely with farmers organizations and agribusinesses within this project, and responsible parties will ensure that these organizations comply with all national and international labor standards. Training to farmers organizations and agribusinesses on adapted practices will recall these standards and monitoring of working conditions will be diligently followed as planned in the ProDoc.

Misuse of traditional knowledge

Risk: The project could adversely impact traditional indigenous knowledge by sharing it in a way that is not culturally appropriate and/or triggering its loss through the introduction of climate smart agriculture technologies and new practices.

Mitigation/avoidance: Activity 1.1.3, 1.3.3 and 1.4.2 will ensure that all traditional knowledge and practices found in use are documented and clearly acknowledged by the project during the surveys and assessments that are done during the inception. Activity 1.4.1 will further ensure that these practices are built upon and synergize with new technologies to facilitate better adoption and uptake. The Indigenous Peoples Plan will plan adequate measures to avoid the loss of indigenous agricultural knowledge and to define culturally appropriate ways of sharing indigenous knowledge.

Exclusion of indigenous peoples and vulnerable groups

Risk: There is a risk that indigenous peoples and vulnerable groups, might not be involved during the implementation of the project including investments in local adaptation measures for resilient agriculture and implementation of local-level economic activities, and therefore not engaged in, supportive of, or benefiting from project activities.

Mitigation/avoidance: Responsible parties will make sure that the project activities strengthen national laws and local regulations in line with the respect of UNDP standard and internationally recognized indigenous people's rights. Specific measures pertaining to the respect of indigenous people's rights to land, food, services, and participation in project which affect their lands will be enclosed within the Indigenous Peoples Plan, to be developed on a participatory basis.

- Separate culturally appropriate consultations with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned were held during the PPG phase and will continue during project implementation. These will be documented and remain available upon request. The FPIC protocol will be further detailed in the Indigenous Peoples Plan.
- Training and material support provided to farmers organizations and women's groups will be based on inter-community dialogue, ensuring that all local and indigenous communities participate equitably. These CBOS will be supported in the establishment of transparent and accountable mechanisms for the equitable distribution of local benefits (Activity 2.3.4 and 3.4.2).
- Participation of all communities in farmers in the farmer organizations will be encouraged in a culturally sensitive way to ensure a sufficient number of indigenous participants and promotion of sustainable traditional and customary use practices while preventing any involuntary restrictions on land and resource use (Activity 1.3.2 and 2.2.1).
- The project will ensure that communities are able to represent themselves through their own organizations.
- Farmers organizations are expected to establish transparent and accountable mechanisms for the equitable distribution of local benefits.

- A Stakeholder Engagement Plan has been developed as part of the project design to articulate participation mechanisms and processes. It will inform mitigation and management measures for risks associated with the presence of different ethnic groups in the targeted landscape during project implementation. The breadth and detail of participatory mechanisms and processes are scaled to the Project's potential social and environmental risks and impacts and particular circumstances.
- A summary of the SEP, IPP and FPIC protocol will be translated in appropriate languages and made available to all stakeholders, including indigenous peoples. They have been designed on the basis of consultations and will be subject to further consultations on the field leading to a potential revision in the first six months of the project.
- The project will engage the services of gender and social engagement expert to conduct a comprehensive assessment of social risks for each project site and to develop a clear set of guidelines that ensure women and vulnerable groups are identified and provided opportunities to participate in decision making in the project (Activities 1.3.2, 1.3.3).
- The PPG phase involved discussions with representatives of the Ministry of Gender, Child and Social Welfare at national, state and payam level. Representatives of vulnerable groups, women community members and gender and community experts will be sought out during consultations to assess the nature and scale of the challenges and incorporate these into project design.
- Vulnerable groups will be supported to develop leadership skills and facilitated to hold positions in committees and user groups created. Mobilization and awareness generation activities are integrated with all the project components.
- Project staff will be trained in FPIC, participatory approaches and empowered to integrate the needs of vulnerable groups in project planning (Activity 2.21, 2.4.1).
- Careful follow-up of pastoralists/agriculturalists or of politically and economically triggered inter-community conflict will be done by the PMU throughout the project utilizing available mechanisms that are already in place in project sites. The Grievance Redress Mechanism will integrate existing conflict resolution mechanisms. Further, the complaint and grievance mechanism established by UNDP and the project executing agency(ies) will allow individuals to bring up claims, when they cannot resolve at the level of CBOs.
- The project will ensure that local communities including indigenous peoples, women and landless youths are involved in the assessments, negotiations and dialogue regarding land classification, use and planning and are empowered to eventually influence allocation decisions. They will be empowered to influence allocation decisions and will receive benefits from the restoration and provision of income-generating activities on communal lands.
- Identification of exact activities sites will be done in consultation of national and state government agencies and their line departments the local levels. Local leaders will be consulted, and their approval obtained before initiating any project activities. Communities will retain control over the planning and design of on-ground activities and will be provided access to project management staff.

Environmental Risks

Habitat destruction

Risk: Even though the project aims at making agricultural practices more sustainable by improving their adaptation to climate change, the support to the development of agribusinesses triggered by the project could cause increased development in the area and potential demographic pressure could lead to improper use of agro-chemicals and degradation of the natural habitats, including to the neighboring Chelkou and Ashana game Reserves.

Mitigation/avoidance: The project proposes a watershed approach to building resilience of communities and landscapes which will restore and enhance the management of natural resources, including these reserves. A participatory framework for planning of project interventions and managing resources will be used wherein stakeholders will play a key role in management decisions to ensure sustainable use of resources and to avoid adverse impacts on ecosystems and people's livelihoods. A Biodiversity Action Plan will be designed as a SES Management Plan looking particularly at biodiversity hotpots and at sites connected through water streams to the project area. The project will work to strengthen institutional capacities to ensure effective and efficient management of agriculture and pastoral landscapes in regard to climate change, including the mitigation of potential adverse impacts to habitats. Environmental, Social and Technical Assessments, including a cost-benefit analysis of options, will be undertaken for the targeted sites will detail viable options. Risks will be examined in the course of

these targeted assessments, which will analyze adverse impacts on habitats, ecosystems and services. They will identify socially acceptable and environmentally suitable solutions to be supported by the project. Environmental assessment of those alternatives will be included in this assessment (Activity 3.1.2). The sites of intervention themselves do not constitute areas considered critical habitat. All potential activities will be carried out in accordance with applicable management plan, and with conditions of approval for the activity as set out by the regulatory authorities. Integrated Pest Management (IPM) and Integrated Vector Management (IVM) approaches will be used for pest control where necessary. Disease and pest resistant varieties will be coupled with suitable cultural practices and biological control and pesticides will only be used as a last resort to prevent unacceptable levels of pest damage. World Vision will advise, through capacity-building activities, safe, effective and environmentally sound pest management in accordance with the WHO/FAO International Code of Conduct on Pesticide Management for the safe labeling, packaging, handling, storage, application and disposal of pesticides. Hazards of pesticide use will be carefully considered, and the least toxic pesticides selected that are known to be effective, have minimal effects on non-target species and the environment, and minimize risks associated with development of resistance in pests and vectors.

Introduction of invasive alien species

Risk: The afforestation activities, if not well designed, could potentially lead to an inadvertent introduction of invasive alien species.

Mitigation/avoidance: Afforestation with native multi-use species in the catchments will be prioritized. All assisted natural regeneration activities will only employ native species. A full consultation and assessment will be conducted to develop afforestation plans for each of the focal landscapes in line with international best practice and consideration of the local context (Activity 1.1.3). Plans will recommend the use of integrated activities that promote the use of indigenous tree species and through sustainable and environmentally friendly means. These activities will result in reduced de-forestation and conservation of existing forest species. The specific sites and composition of species to be used for afforestation and reforestation will be fine-tuned during discussions and planning with communities (Activity 3.1.2, 3.2.2). Recommended fast growing species for fodder and fuel will largely be limited to homesteads and village boundaries. No exotic species will be introduced by the project and only those non-native species will be used which have already been introduced under other government programs and are known to be non-invasive. Furthermore, exotic species will only be used if they provide specific advantages over native counterparts and will only be planted in homesteads, private lands and woodlots (Output 2.2 and activity 3.3.4) and will occupy relatively small areas.

Over extraction of ground water and alteration of natural stream flow

Risk: The Project envisages the installation of pumps for extraction of ground water from shallow aquifers. This will be done in conjunction with restoration of wells, construction of small-scale check-dams and other small soil and water conservation structures, including water storage, spreading structures and drainage. This could lead to unsustainable groundwater resources extraction, as well as alteration of soils, flows and impound water.

Mitigation/avoidance: Specifics of sites and interventions will be decided through comprehensive surveys (Activity 1.1.3, 3.1.2, 3.1.3 and 3.1.4). The survey and design of these interventions will specifically include safeguards assessments and the SESP will be used to screen all construction activities once identified. Technical and feasibility studies will be conducted for each activity. The community based micro-watershed committee will coordinate the construction of water harvesting/extraction structures. Project staff including site engineers will design, document and report on the activities. User groups formed for managing these communal assets and structures will operate and protect them from over-exploitation. The design and oversight of construction of ponds and water harvesting structures will be done by professional engineers after a comprehensive site survey (Activity 3.1.4). Safety measures, including measures to minimize pollution and waste will be integral to the design and implementation of these activities. Local materials will be used for soil and water conservation structures. All earthworks will be completed well in advance of rainy seasons to prevent any erosion or sedimentation of water bodies. Soil stabilization with vegetation will be done to further reduce post-construction erosion. Most catchment-based interventions will be located on unmanaged and degraded lands and water courses which otherwise cause erosion and flooding. Water impoundments will be small in size and designed with optimally placed surplus weirs/overflow channels so that the obstruction is temporary and does not significantly alter the stream hydrology. World Vision will appoint a site supervisor who will oversee and direct construction and field activities including use of safe work practices, safe

handling and disposal of waste, and other common construction issues and practices, storage and use of fuels and other hazardous material.

Climate change impacts

Risk: Climate change, has generated major shifts in the seasonal calendar, increased heat waves, perturbations in agriculture and among pastoral groups due to increased variability in the wet season and more frequent extreme rain events. This has reduced water retention and storage in ponds and wetlands affecting those engaged in fishing. Rapid streamflow during extreme rain events could potentially damage the soil and water conservation and water harvesting structures proposed. Excessive temperatures and prolonged drought conditions can affect the survival of saplings and success of the various planting/seeding interventions proposed.

Mitigation/avoidance: This project focuses on the transfer of capacities, social infrastructure and community assets to equip communities to adapt to and mitigate the effects of climate change. It will specifically build climate resilience among farmers, pastoralists, those engaged in fishing and the collection of timber and non-timber forest produce. While extreme events are likely to negatively impact project activities, by and large, the activities will be resilient to climate change impacts. Capacity enhancement of State entities and natural resources users will be supported and monitored to ensure that communities' livelihoods are better adapted to climate change. Alternative livelihood activities are designed to be climate-smart; promotion of innovative agro-pastoral techniques is emphasized. Flood, water scarcity and drought management systems will be part of the capacity-building and knowledge sharing activities. Component 1 of the project focuses on institutional capacity building, the second on supporting farming communities and agro-pastoral groups while Component 3 which focuses on catchment restoration which will provide long term climate resilience for all communities and particularly for pastoral groups. The design of structures will be based on best practices and will incorporate current climate scenarios and return periods for floods to ensure structural integrity of all construction during extreme events. All nursery raising and planting activities will be undertaken based on the most recent available forecasts. Nurseries will only be established near water points to ensure sapling can be protected and maintained during prolonged dry periods and high levels of heat. Best practices in nursery raising and the use of hardy varieties of saplings will ensure high survival of plants both in the nursery and after planting. Soil and water conservation measures will go hand in hand with afforestation and planting sites in micro-watersheds will be selected based on soil quality and moisture availability for optimal survival.

Increase in vectors and spread of diseases

Risk: Small scale water storage may have potential to provide breeding areas for mosquitoes which represent a nuisance and increase the prevalence of Malaria or other significant mosquito borne diseases.

Mitigation/avoidance: Because this risk can't be avoided, mitigation measures will be implemented to tackle the adverse effects especially before the rainy season which constitutes a peak of transmission (April to October). The project will partner with local health authorities and projects to support i) distribution of insecticide-impregnated mosquito nets to limit the spread of malaria in the area; ii) improvement of the health coverage of the area and the encouragement of the future operators of the site to carry out regular medical check-ups; iii) Raising awareness and educating the population on hygiene measures.

Emergent risks due to the COVID-19 pandemic

Introduction and spread of the COVID-19 virus due to project activities

Risk: The project relies on continuous and intensive stakeholder engagement and use of participatory methods and engagement in order to transfer climate adaptation technologies and techniques. It is therefore necessary that measures are put in place to mitigate the risk of transmission to both project staff and stakeholders.

Mitigation Measures: The strategic elements to minimize and mitigate risks associated with COVID listed below pertain to the period prior to widespread vaccinations. However, even after stakeholders have been vaccinated, precautions will be kept in place as per government mandated protocols and WHO recommended best practices:

1. A system of delegation of responsibilities will be put in place to decentralize decision making and action wherever feasible. Multiple channels of communication will be opened up between project managers at all levels and project staff to ensure activities are not held up and to facilitate the process of delegation and administrative support.

2. Project annual work plans will be prepared with due consideration for possible delays due to COVID-19 restrictions after assessing such risks at planning stages, and adaptive measures will be undertaken accordingly.
3. The bulk of activities will be coordinated locally - from the World Vision field office at Aweil and implemented by local extension and line department staff. This will minimize potential transmission due to movement of project staff. Delegation of activities, as described earlier, will further ensure activities are implemented smoothly with minimal movement of staff between towns and cities.
4. Adherence to all government directives, such as lock downs and mandatory quarantine as well as restrictions on travel, organization of events or sizes of meetings and workshops.
5. Project staff will take additional precautions to ensure that stakeholders and beneficiaries are not exposed to and that project activities do not in any way, allow spreading of the virus to rural areas. Awareness among project staff and stakeholders, including communities will be embedded in all interactions.
6. International travel, but also travel between towns and villages will be avoided wherever possible. In case where such travel is unavoidable, the concerned person will follow government mandated and WHO recommended protocols including testing and isolation/quarantine to prevent any possibility of spreading. Project staff engaged in training of trainers and conducting field surveys will, in particular, need to take these precautions and will organize their schedules so that fewer and longer trips are made in place of short, frequent trips.
7. Project staff and consultants will be required to learn how to use of online tools such for video conferencing, project management and collaboration. Screen casting and recording software will be used to ensure presentations and training videos can be prepared and shared online ahead of remotely held meetings and workshops. Where necessary, project staff will assist in translation and editing of the materials.
8. The project has a strong emphasis on the use of mobile ICT which includes provision of networking equipment and infrastructure to the field office and project teams. This will minimize face to face interactions and facilitate online interactions and transfer of data, information and instructions. Project staff will be encouraged to utilize online facilities and applications for meetings and workshops where possible. Training will be provided in the use and operation of such tools.
9. The training of trainers approach will effectively transfer capacities to local institutions. Precautions that need to be taken during these interactions will include limiting the number of trainees per workshop, use of personal protective equipment (PPE) and selection of venues where social distancing measures can be maintained and where there is regular monitoring of staff health.
10. Mandated safety protocols and best practices such as use of masks, gloves, sanitizers and maintaining social distancing will be followed by project staff. Community members participating in project activities will also be required to follow these practices and encouraged to adopt them as basic precautionary measures to avoid contracting and spreading COVID-19.
11. Protective equipment such as masks, gloves and hand sanitizers will be provided to staff and participants in project meetings and events. Their use will be mandated.
12. If and when possible, project staff and consultants who require movement between regions and internationally will immunize themselves using approved vaccinations.
13. All group meetings and events will be organized in open spaces and participants will be required to use PPE and maintain social distancing. The size of participants in the meetings will be kept low by ensuring representatives of households as opposed to multiple members take part in meetings.
14. Where possible, materials and goods will be purchased in bulk and moved to project sites in project vehicles or vehicles hired for the purpose.
15. The project and its staff will assist relevant agencies in vaccination drives by facilitating access of communities to vaccinations and of health workers to communities.

Disruptions and delays due to lockdowns

Risk: National and regional responses to the COVID pandemic may involve planned as well as sudden lockdowns. This could limit access of staff and materials to the sites and constrain the movement of stakeholders and communities which delays or even prevents timely implementation of activities.

Mitigation/avoidance: The project and its personnel will abide by all rules and regulation mandated by the GoSS in response to COVID-19. Most lockdowns will likely be imposed within specific zones or cities allowing project activities to go unimpeded elsewhere. The project manager will determine the location and period of all lockdowns and take the following measures to ensure project activities are conducted smoothly:

1. Project staff and consultants will be required to learn how to use of online tools such for video conferencing, project management and collaboration as described above. This includes the use of screen casting and recording software to ensure presentations and training videos can be prepared and shared online ahead of remotely held meetings and workshops. Where necessary, project staff will assist in translation and editing of the materials.
2. Communication and transport channels will be identified and hired where needed to transport project materials between locations.
3. Project activities will be prioritized and windows and gaps in lockdown will be used effectively to ensure they are completed in time.
4. A system of delegation of responsibilities will be put in place as describe above. This will be carefully monitored by the project manager and her/his support staff.

Disruption of value chains and markets

Risk: Value chains and markets may be affected by the COVID-19 pandemic

Mitigation/avoidance: The project will attempt to localize value chains and linkages to markets and private sector agencies, so they are more resilient to the potential disruption of transportation and movement. Farmers and pastoral groups will be supported to establish and strengthen local linkages to with markets and supply chains. Where possible, materials and goods will be purchased in bulk and moved to project sites in project vehicles or vehicles hired for the purpose. The wide range of value chains promoted by the project, and their diversification between rural areas and towns, will reduce the risk that all project focus is put on specific value chains particularly affected by the epidemics. Operationally, project staff and consultants will abide to the regulations and hygiene practices described above, including the use of online communications where possible.

Stakeholder engagement and south-south cooperation

The derailed stakeholder engagement plan is included in Annex 9. The main engagement strategies necessary to ensure stakeholder engagement throughout the project duration include: i) Strategically creating awareness among communities, including traditional leaders and representatives of CBOs about the project's emphasis on gender responsive interventions and the need to engage with the most vulnerable groups and communities in the selected sites; ii) Mobilization of communities to strengthen existing CBOs and formation of new ones to participate in the implementation of activities. Representation of women in mixed gender groups and creation of exclusive CBOs of women and vulnerable groups will be ensured through this mobilization process. iii) The capacities of representatives and officer bearers from these CBOs will be enhanced through training that imparts leadership, organizational and administrative skills, including financial administration, asset management and monitoring. iv) Careful selection of project staff from within govt. extension and development staff and local NGOs and their sensitization to issues of gender and socioeconomically vulnerable groups. v) The teams selected to coordinate and oversee project activities will include women and members of vulnerable groups.

At an institutional level, the project will create multiple avenues for engaging with stakeholders through creation of multiple stakeholder platforms at the local level in the form of micro-watershed committees. These committees will meet at regular intervals and will also be represented at the national level during knowledge management events. Selected members of the committees will also be invited to regional and international fora to share their experiences. The project has a consistent framework to ensure that impacts and outcomes of interventions are monitored at the level of each CBO through focal persons and key informants and regularly shared with the committees. See Annex 13 section IV for more details on the knowledge management strategy for the project.

The project will take specific actions on south-south and triangular cooperation to present opportunities for replication in other countries, and to facilitate dissemination through global ongoing South-South and global platforms.

- It will approach and build partnerships with regional and international agencies including:

- Global Alliance for Climate Smart Agriculture: GACSA is an inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture (CSS).
- Africa Climate Week: Shares ways for governments to implement the Paris Agreement in Africa.
- Community Based Adaptation Conference: A practitioner-focused forum on climate adaptation, delivering dialogue and evidence to inform policy and action – from the local to the global scale.
- UN South-South Galaxy knowledge sharing platform: A knowledge hub on South-South and triangular cooperation enabling developing countries to effectively face their development challenges and harness opportunities to address them, and
- PANORAMA: An initiative to document and promote inspiring, replicable solutions across conservation and sustainable development topics, enabling cross-sectoral learning.

In addition, the project will formally liaise with existing technical groups that operate regionally or in a national context to facilitate sharing of technical information as well as field data and analysis. These include:

- IGAD Drought and Disaster Resilience and Sustainability Initiative (IDDRSI): Promote a mechanism for coordinated and harmonized implementation of development partner funded actions at the national and regional levels with the aim of sustainably enhancing disaster resilience of vulnerable communities especially those in the pastoral and agro-pastoral areas to end drought emergencies in the Horn of Africa, where the 8 member countries of IGAD are located.
- IGAD Climate Prediction and Application Centre (ICPAC) – Climate monitoring / prediction: Provides medium range and extended climate forecasts that are required by IGAD, the National Meteorological and Hydrological Services (NMHSs) and other national, regional and international partners. The main priority is two folds; improvement of computing capacity for ICPAC and Member Countries, human resources and development of new forecasting tools and products required for sector specific applications.
- IGAD Centre for Pastoral Areas and Livestock Development (ICPALD): Promoting, facilitating, and advocating for a people centered gender responsive sustainable development in arid and semi-arid areas in the IGAD Region.
- South Sudan Meteorological Department (SSMD): SSMD became a member of the World Meteorological Organization (WMO) on December 14th, 2012 has been providing useful weather information for aeronautical. Strategically its role is key provider of weather and climate services to cross cutting sectors such as the Agriculture, Environment, Water Resources, Forestry, Livestock, Health, Energy and Tourism.
- FEWS NET – FSL in relation to weather: Famine Early Warning Systems Network member of South Sudan multi stakeholder IPC Technical working Group and an active participant in National IPC Analysis workshop producing a forward-looking food security analysis and IPC compatible mapping.
- South Sudan National Bureau of Statistics: Statistical and survey data for South Sudan especially on demographics, economic e.g. consumer price index etc.
- The CGIAR is the world's largest global agricultural innovation network and the World Agroforestry center (ICRAF) is one of its centers which leverages agroforestry sciences for poverty reduction, increasing food and nutritional security, and improved natural resource systems and environmental services. The extensive practical experience of ICRAF in Africa, and their use of innovative and contemporary technologies for planning and monitoring can play an important role in guiding and supporting the project.

Stakeholders in the WACRAL project will be facilitated to participate in knowledge sharing events (Activity 1.1.5) such as the Global Alliance for Climate Smart Agriculture, the Africa Climate Week and the Community Based Adaptation conference. In addition, to bring the voice of South Sudan to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP and World Vision could support engagement with the global development discourse on South Sudan. The project will additionally provide opportunities for regional cooperation with countries that are implementing initiatives on CCA and resilience building among communities in geopolitical, social and environmental contexts relevant to the proposed project in South Sudan.

Gender equality and Women's Empowerment

The Gender Analysis and Action Plan (Annex. 11) for the project has the following recommendations to ensure women are adequately represented among the project beneficiaries and to ensure project activities are gender responsive and designed to empower women and facilitate their meaningful participation in activities

1. The project will appoint a gender expert to design and oversee a gender mainstreaming strategy for the project based on the gender action plan during the inception phase. This will be done in consultation with experts from the MGCSW and from its directorates in relevant ministries as well as NGOs and academics. The strategy will include measures that ensure:
   - Gender concerns are appropriately integrated and that women are facilitated through mobilization, training or and representation on management structures, based on prior experiences in South Sudan.
   - Concerns and priorities of women will be taken on board during the design and prioritization of technological interventions including: i) Small scale irrigation, land preparation, agro-processing, storage and post-harvest technologies; ii) Interventions which can replace or alleviate labor inputs into tasks typically assigned to women will be prioritized. This includes interventions such as shallow boreholes, animal powered draught, milling and drying technologies as well as fuel efficient stoves; iii) Interventions which can directly reduce their burden in tasks such as fuelwood and water collection. This includes siting of water harvesting structures and fuelwood plantations that may be proposed.
   - Monitoring of activities and collection of data during surveys will be gender disaggregated. Community interactions such as focal group discussions, key informant interviews or participatory mapping sessions will be done separately for women and men.
   - Comprehensive gender analysis checklists and gender sensitive indicators will be framed for each type of intervention to guide both the collection of information and perspectives of women and to monitor progress and for course correction and evaluation.
2. A careful analysis of existing roles and responsibilities of women along with details of time commitments, constraints and capacities will be done as part of the inception phase. This will lead to specific strategies for each of the target groups that proposed activities do not add to the burden on women, even as they ensure their full participation.
3. The project will work with and generate awareness about women's issues and their rights among traditional leaders and members of the communities.
4. The project will undertake mobilization and empowerment of women to ensure their representation in user groups and committees created for implementing project activities including: i) Watershed restoration and assisted restoration and reforestation to increase biomass productivity and access to fuel. ii) Water harvesting structures for human, livestock and small-scale irrigation; iii) Climate smart agriculture, including vegetable gardens and crops and iv) Income diversification including milch animals, small ruminants, apiculture and NTFP.
5. Institutional partners and project partners will be required to have proportional representation of women in the project, especially among staff engaged with mobilization and extension services. A detailed recruitment and training plan will be drawn up based on the capacity assessments during the inception phase.
6. The project will try and employ women from within communities to act as development agents at the boma level. Attempts will be made that at least half the development agents and volunteers engaged with are women.
7. A comprehensive plan will be prepared and implemented for gender awareness and sensitization that includes: i) Generalized as well as focused awareness generation in communities on gender issues and active mobilization among user groups and committees formed for implementing project activities will be undertaken; ii) All project staff including development agents and volunteers will receive gender training and capacity building on gender aspects of CCA and resilience building.
8. Lessons learned on-ground and results from the monitoring of activities related to gender mainstreaming and involvement of women will be presented locally as well as at national, regional and international fora.

Innovativeness, Sustainability and Potential for Scaling Up

The project will ensure long term sustainability and continuation by investing in the strengthening of community-based institutions and government agencies at the local level. It will ensure representation of women and of

vulnerable groups in these institutions and will create a micro-watershed committee, as a mechanism for different user groups in the project to coordinate, collaborate, cross-learn and complement each other's activities. The three micro-watershed committees will additionally coordinate their activities through annual meetings and sharing of information in Aweil where other agencies and projects will also be invited. This multiple stakeholder platform will provide a framework for collaboration, learning and coordination of projects and programs of the government and other agencies in the state. The project will strengthen existing federations and associations by working through them and providing them additional training and support. Coordination mechanisms between national and sub-national agencies will be strengthened and streamlined through dialogue and information sharing events.

The project will be implemented through existing governmental mechanisms and institutions, thereby strengthening them and contributing to their capacity development, particularly at the local levels - county and below. Staff from government extension and development services will be trained and provided hands-on experience and opportunities for cross learning with experts in the field and colleagues. Gaps in critical communication systems and facilities will be addressed by the project by basing the local PMU at Aweil. Extension staff and development agents will be equipped with essentials such as survey and storage equipment, materials and supplies for extension support to both farmers and pastoralists. Linkages with other ongoing and proposed projects of the government and development agencies and with private sector suppliers of these equipment and materials will be established through concerted coordination, knowledge exchange and collaboration to ensure long term sustenance of these activities.

At the community level, the project will invest in raising awareness and sensitization of traditional and customary authorities to equitable development and representation of women and vulnerable groups in decision making. Community based organizations will be strengthened through training and support, including seed money and relevant assets. Existing CBOs will be encouraged to participate in the project to avoid duplication and redundancy in ground-based organizations. This ground level institution building and strengthening will provide communities necessary social capital to organize and pool resources for sustaining and extending project activities. Most of the CBOs involved at the project, for e.g. water user groups, will be required, and assisted to register with local authorities. The registered groups will be assisted in building a system for raising finances and resources for O&M of project interventions and their extension and expansion. Low-value grants will be provided to incentivize groups that qualify based on their legal status (registration) and performance.

Rural infrastructural investments made by the project in and around settlements and catchment areas will be based on a comprehensive technical and social evaluation of the sites and users, including an ESIA, as per the ESMF. Mitigation measures will be designed in the ESMP in the first six months of project implementation and put in place before field activities start. These structures and the systems for their O&M will be designed to ensure they remain operational over a long term and to ensure their users are equipped financially and organizationally to operate, maintain and manage them without external support. These investments will provide long term facilities for communities, for which small user fees will be collected both in kind and in cash. User groups will be provided seed money and materials and trained in financial management, monitoring and O&M, thereby sustaining the impact of the project. User groups will be formed to manage small scale irrigation systems which include pumps and pipes that require frequent maintenance and replacement of parts. Other groups will manage agricultural implements, water harvesting structures including hafirs and check dams and water points with troughs and tanks and fences that separate livestock and human water sources to avoid contamination.

Types of equipment selected for the project will be determined by the availability of spares and parts among nearby markets and towns. Entrepreneurs who service and repair equipment will be identified and linked to the relevant user groups to ensure it continues to be used over a long term. Linkages with markets, private sector agencies for sales of produce and accessing services, including financial services as well as extension support such as veterinary care will also be established to increase the financial viability of interventions and ensure the private sector meaningfully engages with the project.

This project utilizes lessons learned and strategies from prior initiatives in the Northern and Western Bahr el Ghazhal. This specifically includes the GIZ project: “Adapting agricultural production methods to climate change and stabilizing livelihoods in Western Bahr el Ghazal”, which concluded in 2018 and the Govt. of Canada funded project: “Upgrading the Fishery Sector in Upper Nile State, South Sudan, 2013-2019” which operated in the Greater Bahr el Ghazal region and was implemented by UNDO and the Ministry of Livestock and Fisheries.

Most efforts in the scaling up and replication of the project will focus on areas that are in the in the vicinity of the project sites, including neighboring payams, counties and even states. This is because the biophysical conditions in the project site are very similar to other parts of South Sudan, particularly the northern states and specifically Northern Bahr el Ghazal. Furthermore, given the resource constraints, the capacity building and strengthening of government agencies focuses online departments and their staff based at Aweil, Aroyo and Akuem. This includes extensive and in-depth training of line department staff and support to these agencies in terms of communication facilities and setting up of demonstration and test sites in their campuses. The entire process of replication will be facilitated by the contribution proposed to state policies in community based natural resources and forest management. Thus, staff from agencies involved with the project, specifically those engaged in agricultural extension, veterinary care and pasture/forest management will be the primary vehicle for replication of project activities to other catchments in the vicinity of the project.

The involvement of the private sector and the building of local business skills is another mechanism to ensure the project interventions will be sustained and replicated based on their financial viability without external financing.

South Sudan has a ranking of 185 out of 190 countries in the Doing Business Report for 2020. Key challenges faced by businesses include access to electricity (187/190), protecting minority investors (185/190) and access to credit (181/190). It is among the most important barriers to economic growth and private sector development. The report highlights the lack of credit data and poor legislative provisions and legal rights as key contributors to this.

Limited access to financial services can constrain investments in farming, livestock-raising and entrepreneurial activities for the proposed project. Banks, and NGOs[62] can help address this challenge by not only providing access to credit but also supporting micro-credit and self-help groups within communities with a clear framework for access to credit and other financial services and providing financial literacy trainings to communities.

The project will additionally explore collaborations with local NGOs to support self-help groups and community-based organizations. This will be based on self-help group model employed in many countries across the world, including Africa where it builds on rotating savings and credit associations and is supported by NGOs across the continent and reaches over 3.8 million people. This approach has been demonstrated to improve access to credit and asset ownership[63] .

The matching funds approach is one among many mechanisms to provide a subsidy or for investments in assets for income generation and to incentivize groups to adhere to loan repayment schedules. This has been used effectively in government programs across South Asia, especially India[64], where it is part of rural development policies and credit systems. In Africa, subsidized grants, often through micro-finance institutions (MFI) and NGOs have been found to be effective to target not only self-help groups, but also vulnerable groups such as persons with disabilities[65].

In the proposed project we will explore a tie-up with local financial service providers, wherein they provide support to save and access loans in community-based organizations and self-help groups, to support investments into livelihood and income generation, including for entrepreneurs.

User groups and associations who are responsible for water infrastructure and assets such as food processing facilities will be guided in setting up formal mechanisms for collection of user fee from beneficiaries within their group. They will receive a small incentive in the form of matching grants to supplement the fee collected. Community self-help and saving groups will also be supported through financial literacy, bookkeeping as well as leadership and organizational skills.

The project will make a total allocation of 150,000 USD towards these approaches via a grant to an experienced local NGO and Low Value Grants to CBOs over the five year period benefiting a total of 60 groups each year over the five years.

The project strategy also emphasizes mobilization and strengthening of community-based organizations and local institutions as a key ingredient of sustainability, scaling up and replication. Scaling up of the project will be achieved

[62] For example < https://fivetalents.org/proven-model>

[63] Gugerty, Biscaye, and Anderson, 'Delivering Development?'

[64] Madheswaran and Dharmadhikary, 'Empowering Rural Women through Self-Help Groups'.

[65] Klerk, 'Funding for Self-Employment of People with Disabilities. Grants, Loans, Revolving Funds or Linkage with Microfinance Programmes.'

by ensuring ownership of the project and its activities lie with the communities, government and local authorities and ensuring wider participation by different stakeholders who will continue operating in the project areas beyond GEF funding.

The project management structures will build on and strengthen existing institutional structures where possible and will provide small, matching-grants which will ensure financial viability and stability of user groups who require to cover O&M expenses of assets and facilities created by the project. Project activities will be aligned to existing development plans and programs especially at the payam and county level so that they are part of long-term strategies.

On a broader level, the M&E strategy proposed is designed to capture important lessons and experiences and to share these with both communities as well as project managers for decision making. The same information will be available to stakeholders at state and national levels and will be the basis for knowledge sharing, replication and scaling up of successful lessons and strategies from the project by other agencies.

Mechanisms proposed to ensure sustainability of entrepreneurial interventions, market and value chains are i) scaling up private sector engagement; ii) linking to financial services and iii) developing guidelines for operation and management of food post-harvest processing facilities and markets under governmental agencies or federations and associations that are formalized. This will place future investment planning for storage and processing of agricultural products under the control and as part of the plans and budgeting of institutions who represent the interest of the farmers and pastoral groups. Representation of women and vulnerable groups to these institutions will be ensured. It is to be noted that the sustainability mechanism of engagement of the private sector will be gradual, but necessary and can be replicated across South Sudan where entrepreneurship is as nascent as the rebuilding new nation and almost nonexistent in commercial agriculture value chains in the project states of Aweil, from farming and input supplies and in the food processing and post-harvest marketing activities and supply chains. Relevant stakeholders identified during the PPG that will be engaged with during project inception include: i) informal producer groups in farming and agricultural seeds vendors; ii) local black smith groups in Aweil town and in Aroyo Payam; iii) farmers' cooperative and associations in Aweil who participate in the value chains of Gum Arabic and apiculture; iv) pastoralists; v) the state Industry Chamber Union, and vi) the pastoralist service centre for veterinary and agricultural services. An institutional PPP approach will be promoted to help overcome the weak capacities in private sector engagement.

The engagement of subsistence, micro and small-scale producers, cooperatives and financing entities in the food value chains will be another component of the sustainability strategy of the project. The plan for engagement of private sector will be guided by experts that will be identified to work with and be coordinated through Ministry of Trade and Industry, Ministry of Agriculture, and the Department of Environment at national, state and sub national payam and boma levels. Multiple criteria of unlocking investments will be explored, including from technical and micro financing solutions to climate resilient grow out farms from nurseries and food processing facilities. The project will also invest in strengthening private sector organizational and producer capacities and organizations such as for pilot cooperatives. Advisory packages will be designed that focus on food processing using low cost techniques and infrastructure. These will address current and projected future conditions of existing staple and new food value chains particularly those where progressive farmers, input vendors to processing and post-harvest enterprises are presently engaged.

The project will contract CBOs and progressive farmers and pastoralists for the supply of materials for proposed interventions. This includes supply of seeds of resilient varieties of crops, seedlings and saplings of vegetables and trees, livestock, milch animals and small ruminants. During this process, these 'suppliers' will be put in contact with customers (other CBOs and individuals) from within and outside their communities, and with other projects in the region. This is expected to result in some of these individuals and groups to create a financially sustainable business. Community animal health workers and those engaged in monitoring and protecting areas from grazing, maintaining fences and maintenance of soil and water conservation and flood control structures will also be paid a stipend from their respective CBOs. This will ensure interventions that require long term protection and care as well as services provided by focal persons in the community are paid for and thereby sustained.

The project will also utilize innovative approaches and technologies that improve the effectiveness and efficiency of its interventions and of monitoring the impacts and outcomes of proposed interventions. Participatory GIS

technologies will be combined with aerial surveys using low cost, GPS equipped drones for the surveying, mapping and monitoring of micro-watershed restoration activities that are spread over large spatial scales.

A mix of formal surveys and citizen science-based approaches will be used for monitoring and reporting the impact and outcomes of project interventions. Experts will be engaged to identify robust and quantitative indicators that can be tracked by community members, including those who are semi-literate. These indicators will cover both socioeconomic as well as biophysical aspects of the project. The indicators and data collection framework will be gender disaggregated and will specifically track social safeguards and gender concerns.

Focal points within communities and CBOs will be trained in the collection of this data on illustrated forms designed for automatic digitization[66], and on registers which can be scanned using an android based device. Project staff will also receive training in the use of mobile ICT based survey tools such as the Open Data Kit to facilitate efficient and accurate reporting and surveying of field observations, including collection, recording and transmitting data collected by the volunteers and focal points from communities.

Finally, the WACRL project will establish formal tie-ups with national, regional and international research agencies, to ensure the use of contemporary technologies and techniques in its interventions. This includes i) new and suitable varieties of crops (cereals, pulses and vegetables) for farmers; ii) indigenous species of trees, shrubs and grasses for agro-forestry and watershed restoration; iii) high yielding varieties of fruit and multiuse species of trees for homesteads, farms and cattle camps and iv) drought resilient varieties of livestock, milch animals and small ruminants. This knowledge sharing mechanism will also ensure the project leverages the latest veterinary and animal health technologies and contributes to ongoing efforts for the monitoring and surveillance of livestock diseases.

[66]For use with tools such as ODK: <https://docs.odk-x.org/scan-form-designer-using/#scan-form-using-adding-fields-checkbox-bubble>

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): ***Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.*** ***Goal 5: Achieve gender equality and empower all women and girls.*** ***Goal 13: Take urgent action to combat climate change and its impacts***				
This project will contribute to the following country outcome (UNSDCF/CPD, RPD, GPD): **UNSDCF outcome 2: Local economies are recovered and conditions and coping strategies are improved to end severe food insecurity.** ***UNDP Strategic Plan outcome 1: Advance poverty eradication in all its forms and dimensions.***				
	Objective and Outcome Indicators **(no more than a total of 20 indicators)**	**Baseline**[67]*Must be determined during PPG phase*	**Mid-term Target**[68]*Expected level of progress before MTR process starts*	**End of Project Target** *Expected level when terminal evaluation undertaken*
Project Objective: **Building resilience to climate change risks amongst agricultural and pastoral communities of South Sudan.**	**Mandatory LDCF Indicator 1:** Direct project beneficiaries	*0*	*25,000 (11,910 male, 13,091 female)*	*75,000 (35,729 male, 39,271 female)*
	Mandatory LDCF Core Indicator 2: *Indicator 2: Area of land to be managed for climate resilience (ha)*	*0*	*5,000 ha.*	*15,000 ha.*
	Indicator 3: Number of agricultural and NRM policies that integrate climate change	*0*	*3*	*1: National Agriculture and Livestock Extension Policy (NALEP)* *2. The National Agricultural and Livestock Research Policy.* *3. Northern Bahr el Ghazal Policy for Community Based Forest and Natural Resources Management.*
	Mandatory LDCF Core Indicator 4: Indicator 4: Total number of people trained	*0*	*3,820 (2,470 male, 1,350 female)*	12,665 (8,226 male, 4,439 female)
Project component 1	*Institutional capacities for gender-responsive climate change adaptation across the agricultural sector.*			
Outcome 1: Strategies and capacities to implement community based and gender-sensitive climate change	*Indicator 5: Number of strategy documents and advisory packages developed for gender responsive CCA and value chains in the agricultural sector*	*0*	*1 - Strategy paper (Ag. extension policy)* *3 - Advisory packages for farming, livestock and agro-*	*2 - Strategy papers (Ag. extension & Ag. value chains)* *3 - Advisory packages for farming,*

[67] *Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and needs to be quantified. The baseline can be zero when appropriate given the project has not started. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.*

[68] *Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.*

adaptation for agriculture and food value chains across South Sudan.			*forestry*	*livestock and agro-forestry*
	Indicator 6: Institutional and grassroots capacities demonstrated in coordinating and implementing community based, gender responsive CCA in agriculture and NRM	*0*	*3 - NBG state, Aweil Centre and Aweil East county institutions*	*6 - NBG state, Aweil Centre and Aweil East county institutions, CBOs in Wardit, Aroyo and Akuem sites*
Outputs to achieve Outcome 1	*1.1 Integration of climate change adaptation strategies in agriculture and natural resources management policies.* *1.3: Guiding materials to support climate-responsive extension services developed, delivered and distributed* *1.4 Training of trainers and extension personnel delivered to support climate-smart agriculture and natural resources management*			
Project component 2	*Climate change resilient agriculture and food value chains.*			
Outcome 2: Best practices in climate change resilient agriculture and food value chains adopted by rural communities.	*Indicator 7: Number of women and men in agro-pastoral communities adopting CSA and climate resilient livelihoods*	*0*	*25,000 (11,910 men, 13,091 women)*	*75,000 (35,729 men, 39,271 women)*
	Indicator 8: Number of agri-businesses and value chains established	*0*	*1 value chain.* *5 organized enterprises, MSMEs, cooperatives, associations*	*3 value chains.* *20 organized enterprises, MSMEs, cooperatives, associations*
Outputs to achieve Outcome 2	*2.1 Integrated and diversified climate-smart farming practices adopted to reduce risk of crop failure through improved seeds, multi-cropping, crop diversification, crop-livestock systems and agro-forestry* *2.2 Farmer field schools established and community based organizations (e.g. women self-help groups, farmer groups) strengthened to enable adaptive practices and provide local support to farmers with the adoption of low cost techniques for climate resilient agriculture (such as micro-irrigation, tillage, soil moisture conservation, fertility management and composting)* *2.4 Alternative livelihood options such as bee keeping, backyard poultry, kitchen gardens and small ruminants made available to communities with a focus on vulnerable households*			
Project component 3	*Community based natural resources management to offset the impacts of climate change on ecosystem goods and services.*			
Outcome 3: Communities in micro-watersheds adopt natural resources management and restoration to reduce climate change impacts.	*Indicator 9: Number of hectares restored*	*0*	*5,000*	*15,000*
	Indicator 10: Number of micro-watershed committees established for sustainable management of catchment areas	*0*	*0*	*3, in Aroyo, Chel and Akuem respectively.*
Outputs to achieve Outcome 3	*3.1 Restoration plans based on ground surveys of micro-watersheds delivered, vetted and approved by micro-watershed-based committees comprised of representatives of all stakeholders* *3.2 Improved ground water recharge and soil moisture retention through community-based soil and water conservation measures in micro-watersheds* *3.3 Reduced impacts of floods through creation of water storage and spreading structures and drainage control measures in the catchment* *3.4 Increased resilience to drought through creation of water points from shallow boreholes*			

VI. MONITORING AND EVALUATION (M&E) PLAN

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP (including guidance on GEF project revisions) and UNDP Evaluation Policy **The UNDP Country Office is responsible for ensuring full compliance with all UNDP project M&E requirements including project monitoring, UNDP quality assurance requirements, quarterly risk management, and evaluation requirements.**

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[69]. The M&E plan and budget included below will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed – including during the Project Inception Workshop - and will be detailed in the Inception Report.

Minimum project monitoring and reporting requirements as required by the GEF:

Inception Workshop and Report: A project inception workshop will be held within 2 months from the First disbursement date, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework (where relevant) and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan. Finalize the TOR of the Project Board.
h. Formally launch the Project.

GEF Project Implementation Report (PIR):
The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. UNDP will undertake quality assurance of the PIR before submission to the GEF. The PIR submitted to the GEF will be shared with the Project Board. UNDP will conduct a quality review of the PIR, and this quality review and feedback will be used to inform the preparation of the subsequent annual PIR.

GEF and/or LDCF/SCCF Core Indicators:
The GEF and/or LDCF/SCCF Core indicators included as Annex 15 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the core indicators status. The updated monitoring data must be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF.

[69] See https://www.thegef.org/projects-operations/policies-guidelines

Independent Mid-term Review (MTR):

An independent mid-term review (MTR) will be completed by the mid-point of the project. The terms of reference, the MTR process and the final MTR report will follow the standard templates and MTR guidance for UNDP-supported GEF-financed projects available on the UNDP Evaluation Resource Center. The MTR must be submitted to the GEF by the mid-point of the project but no later than 48 months after CEO Endorsement. To meet the submission deadline, final MTR reports must be completed and submitted to BPPS NCE team no later than 2 months in advance of the submission deadline to allow sufficient time for internal review/clearance that is required prior to submission.

Provisions must be taken to complete and submit the MTR within the submission deadline. Therefore, the MTR process must start no later than 8 months before the expected date of submission of the MTR.

The MTR will be 'independent, impartial and rigorous'. The evaluator(s) that UNDP will hire to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be reviewed. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the MTR process. Additional quality assurance support is available from BPPS/NCE.

The final MTR report will be publicly available in English and will be posted on the UNDP ERC by the MTR submission date included on cover page of this project document. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's submission to the GEF.

Terminal Evaluation (TE):

An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and TE guidance for UNDP-supported GEF-financed projects available on the UNDP Evaluation Resource Center. TE must be submitted to the GEF no later than 6 months after the Completion Date. This is a hard deadline that, if not met, can only be extended through a formal extension request. To meet the submission deadline, final TE reports must be completed and submitted to BPPS NCE team no later than 2 months in advance of the deadline to allow sufficient time for internal review/clearance that is required prior to submission.

Provisions must be taken to complete and submit the TE within the submission deadline. Therefore, TE must start no later than 8 months before the expected date of submission of the TE (or 11 months prior to the estimated operational closure date).

The evaluation will be 'independent, impartial and rigorous'. The evaluator(s) that UNDP will hire to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from BPPS NCE.

The final TE report will be publicly available in English and posted on the UNDPHY ERC by the TE submission date included on cover page of this project document. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report submission to the GEF.

Per the GEF Terminal Evaluation requirements, for cancelled full-sized projects, Terminal Evaluations are required if the GEF grant expenditure exceeds more than US$ 2 million.

Final Report:
The project's final GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans**.**

Monitoring Plan: The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored by the Project Management Unit annually, and will be reported in the GEF PIR every year, and will be evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. Project risks, as outlined in the risk register, will be monitored quarterly.

Monitoring and Evaluation Plan and Budget:		
GEF M&E requirements	**Indicative costs (US$)**	**Time frame**
Inception Workshop	10,000	Within 60 days of CEO endorsement of this project.
Inception Report	None	Within 90 days of CEO endorsement of this project.
M&E of GEF core indicators and project results framework	10,000	Throughout project period. More intensively during inception phase (first year) and before the mid-term and terminal evaluations.
Monitoring of Social and Environmental Safeguards	86,940	Throughout the project period
Monitoring of Gender and Community Engagement protocols and safeguards	52,030	Throughout project period
Project Steering Committee Meetings	10,000	Annually
Supervision missions	None	Annually
Oversight missions	12,740	Troubleshooting as needed
Local consultants for Mid-term Review* (covered by UNDP TRAC fund)	12,000	22 June 2026
Independent Mid-term Review (MTR) and management response	30,000	22 June 2026
Local consultant for Terminal Evaluation* (covered by UNDP TRAC fund)	12,000	23 May 2029
Independent Terminal Evaluation (TE) and management response	36,000	23 May 2029
Translation of MTR and TE reports into English	None	
Total	**271,710**	

The Monitoring and Evaluation Budget is 2.8% of the total GEF project budget (9,384,703 USD)(below the maximum of 3% allowed for GEF project grants between USD 5–10 million).

*** Local consultants for the mid-term review and terminal evaluation will be financed by UNDP's co-financing.**

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

UNDP due diligence tools PCAT and HACT

The HACT micro assessment for the implementing partner: World Vision South Sudan, was conducted in 2022 (reference annex 17a. The overall risk rating of the IP was low. A report with issues and follow up actions has been developed and is presented in annex 17b.

Section 1: General roles and responsibilities in the projects' governance mechanism

Implementing Partner: The Implementing Partner for this project is World Vision South Sudan.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan.
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties: Responsible parties for the project will be finalized at the time of implementation based on criteria such as technical expertise and local presence. Areas of expertise that are required are provided in Annex 8, which include:
1. Watershed restoration through soil and water conservation, afforestation, rangeland restoration, reforestation and water harvesting.
2. Climate smart agricultural interventions including livestock and animal health.
3. Agro-processing and agricultural value chains as well as entrepreneurship development with communities.

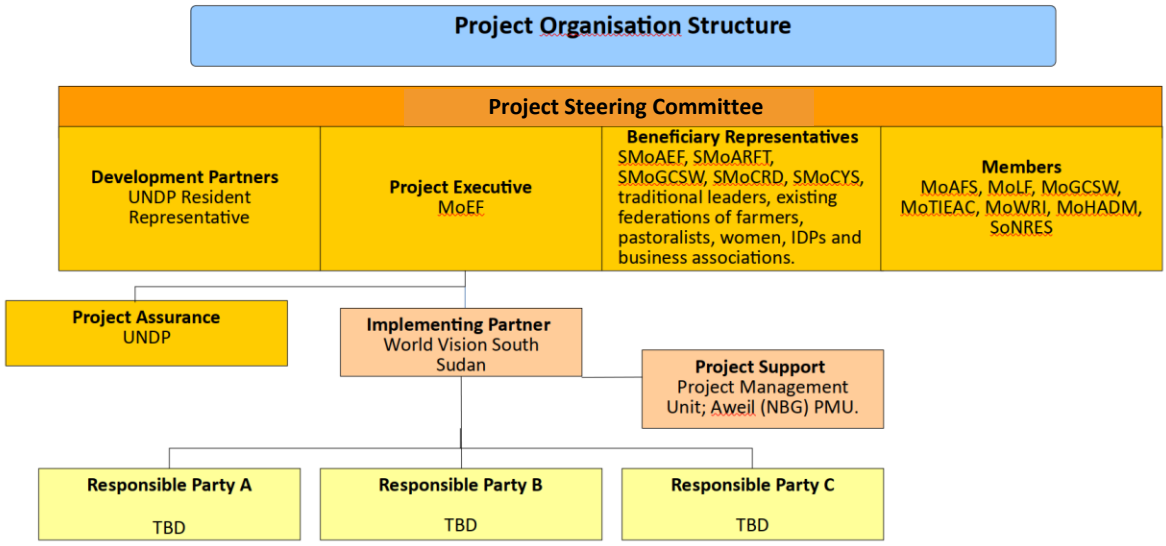
Project stakeholders and target groups: Decision making at the project will be done at four levels:
1. At the national level, the steering committee will provide overall guidance and ensure coordination between ministries and government agencies, including policy level support and direction.
2. At the state and county levels, Aweil East and Aweil Centre, government agencies from relevant ministries and departments, specifically the SMoAEF and SMoARFT, will provide direction and support in terms of assigning extension and development staff at the county level to the project for training and for outreach activities. The SMoAEF will also house the local project offices on their premises. Other ministries and departments to be involved include State Ministry of Gender, Child and Social Welfare (SMoGCSW), State Ministry of Culture, Youth and Sports (SMoCYS), State Ministry of Finance, Planning and Investments (MoFPI), State Ministry of Cooperatives and Rural Development (SMoCRD) and the State Relief and Rehabilitation Commission (RRC). Relevant departments at the Payam level e.g. Department of Agriculture, Forestry, Livestock etc. will act as the focal entry points, coordination and facilitation for project implementation at the community level.
3. At the micro-watershed level, multiple stakeholder micro-watershed committees will be formed comprising of representatives of community-based organizations (user groups and committees described below) and extension and development staff from the government and on-ground responsible parties. These micro-watershed committees will ensure coordination of all project activities and sharing of knowledge and lessons learned between the stakeholders. The committees will function as coordination offices with responsibilities including regular monitoring and reporting.
4. The project will undertake a comprehensive awareness generation and mobilization targeting the primary stakeholders who have been identified during the PPG process (Annex 9, Stakeholder Engagement Plan and Annex 9a: Stakeholder Engagement Report). Groups and committees will be strengthened and integrated or created, centered around adaptation and resilience building activities. Representation of women and vulnerable groups will be ensured by providing for a minimum proportion of membership and official positions and by creating groups who are comprised entirely of women and vulnerable persons and communities.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the

project DOA, suspend or cancel this GEF project. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

Section 2: Project governance structure

Project organization structure:



UNDP BPPS NCE assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A UNDP BPPS NCE representative will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

Section 3: Segregation of duties and firewalls vis-à-vis UNDP representation on the project board:

As noted in the Minimum Fiduciary Standards for GEF Partner Agencies, in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and accountability within the GEF Partner Agency between the project implementation oversight and
execution functions.

In this case, UNDP is only performing an implementation oversight role in the project vis-à-vis our role in the Project board and in the project assurance function and therefore a full separation of project implementation oversight and execution duties has been assured.

Section 4: Roles and Responsibilities of the Project Organization Structure:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or Steering committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Steering Committee (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

The two main (mandatory) roles of the Project Steering Committee are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the "Provide Oversight" section of the POPP). This is the primary function of the Project Steering Committee and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or

remedial measures to address them effectively. The Project Steering Committee reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Steering Committee is responsible for taking corrective action as needed to ensure the project achieves the desired results.

2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the "Manage Change" section of the POPP).

Requirements to serve on the Project Steering commmittee:

- ✓ Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- ✓ Meet annually; at least once.
- ✓ Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- ✓ Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- ✓ Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board

Consensus decision making:

- Consensus decision making:
- The project steering committee provides overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
- Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
- The project board is responsible for making management decisions by consensus.
- In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.
- In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

Oversee project execution:

- Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
- Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.
- Address any high-level project issues as raised by the project manager and project assurance;
- Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);
- Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.
- Track and monitor co-financed activities and realisation of co-financing amounts of this project.
- Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.

Risk Management:

- Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.

- Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.
- Address project-level grievances.

Coordination:

- Ensure coordination between various donor and government-funded projects and programmes.
- Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board: The composition of the Project Steering Committee must include individuals assigned to the following three roles: :

- **Project Executive:** This Is an individual who represents ownership of the project and chairs the Project Board. The Executive is usually the national counterpart. The Project Executive is: Under Secretary for Environment, Ministry of Environment and Forestry,
  Other members of the Project Board are: Ministry of Agriculture and Food Security (MoAFS), Ministry of Livestock and Fisheries (MoLF), Ministry of Gender Child and Social Welfare (MoGCSW), Ministry of Trade and Industry (MoTI), Ministry of Water Resources and Irrigation (MoWRI), Ministry of Humanitarian Affairs and Disaster Management (MoHADM) , School of Natural Resources and Environmental Studies – University of Juba (SoNRES).
- **Beneficiary Representative(s):** Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the Steering Committee is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives civil society, inductsry association, and other government entities benefiting from the project who can fulfill this role. There can be be multiple beneficiary representatives in the Project Board the Beneficiary representative (s) are the State Ministry of Agriculture and Forestry (SMoAEF), State Ministry Animals Resources, Fisheries and Tourism (SMoARFT), State Ministry of Gender and Social Welfare (SMoGCSW), State Ministry of Cooperatives and Rural Development (SMoCRD), State Ministry of Culture Youth and Sports (SMoCYS) traditional leaders and existing federations of farmers, pastoral groups, women, IDPs and business associations. Additional CBOs will be strengthened and integrated into the project or formed during the mobilization phase.
- **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is/are: UNDP Resident Representative.

b) Project Assurance: Project assurance is the responsibility of each Project Board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is/are: UNDP Chief Programme Advisor Stabilization Recovery and Resilience STARR and Team Leader, Stabilization Recovery and Resilience UNDP South Sudan.

c) Project Management – Execution of the Project: The Project Manager (PM) (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative.

The primary PMU representative attending board meetings is the Project Manager.

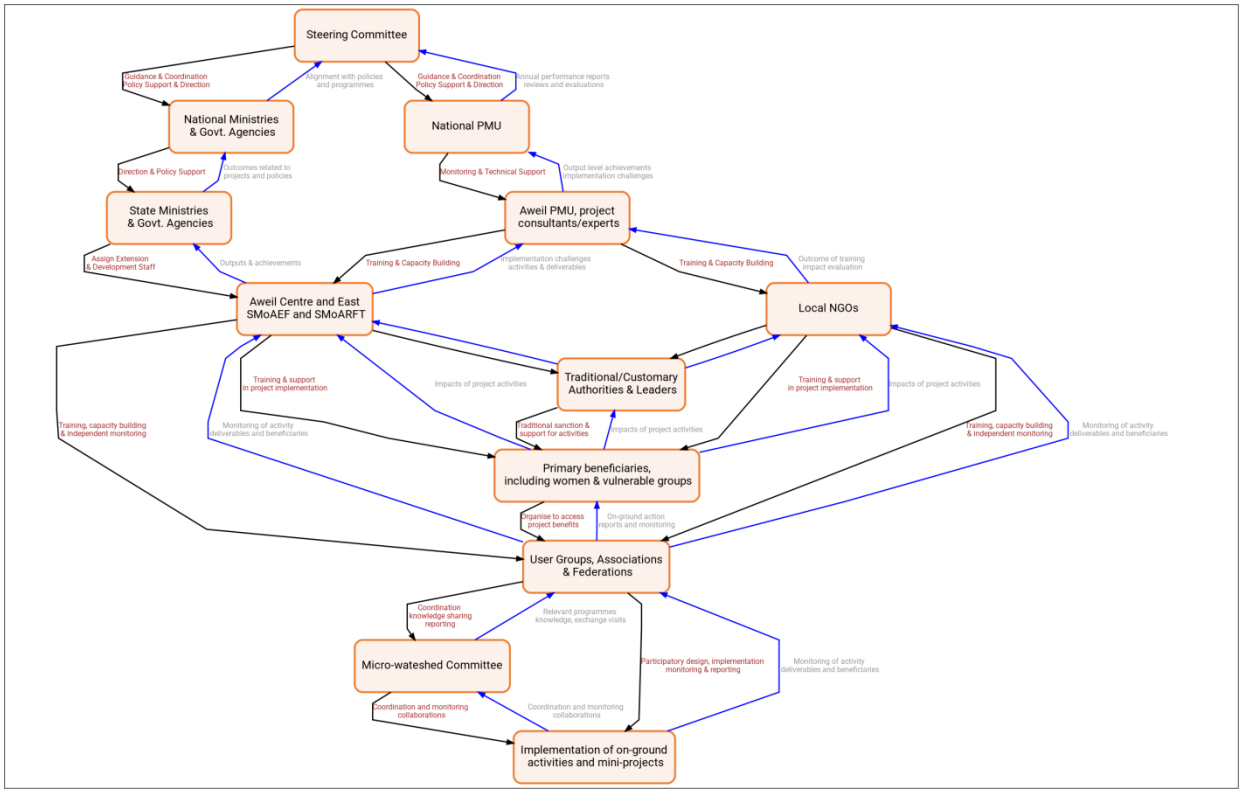


Figure 2. A diagrammatic representation of the flow of information between different actors in the project.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 33,392,335. This is financed through an LDCF grant of USD 6,896,461 administered by UNDP, a GEF Trust Fund grant of USD 913,242 administered by UNDP, USD 126,000 in kind and USD 24,000 cash co-financing to be administered by UNDP, a cash co-financing of USD 780,000 to be administered by World Vision South Sudan, an additional LDCF grant of USD 1,575,000, in kind co-financing of USD 950,000 and in cash co-financing of USD 50,000 to be administered by UNIDO, and a total in-kind co-financing of USD 17,209,211.00 and in cash co-financing of USD 4,868,421 from the Government of South Sudan. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Co-financing: The actual realization of project co-financing amounts will be monitored by the UNDP Country Office and the PMU on an annual basis in the GEF PIF and will be reported to the GEF during the mid-term review and terminal evaluation process as follows:

Co-financing source	Co-financing type	Name of Co-financier	Investment Mobilized	Co-financing amount
Government	In kind	Ministry of Environment & Forestry	Investment Mobilized	2,202,632
Government	In kind	Ministry of Environment & Forestry	Investment Mobilized	3,000,000

Government	In kind	Ministry of Agriculture & Food Security	Investment Mobilized	5,000,000
Government	Public investment	Ministry of Agriculture & Food Security	Investment mobilized	2,665,789
Government	In-kind	Ministry of Water Resources & Irrigation	Investment Mobilized	6,209,211
Government	In-kind	Ministry of Trade and Industry	Investment mobilized	3,000,000
Executing Entity	In-kind	UNIDO	Investment mobilized	950,000
Executing Entity	Cash	UNIDO	Investment Mobilized	50,000
Executing Entity	Cash	UNDP	Investment mobilized	24,000
Executing Entity	In-kind	UNDP	Investment mobilized	126,000
NGO	Cash	World vision South Sudan	Investment mobilized	780,000
			Total	**24,007,632**

Budget Revision and Tolerance:
As per UNDP POPP, the project board may agree with the project manager on a tolerance level for each detailed plan under the overall multi-year workplan. The agreed tolerance should be written in the project document or approved project board meeting minutes. It should normally not exceed 10 percent of the agreed annual budget at the activity level, but within the overall approved multi-year workplan at the activity level. Within the agreed tolerances, the project manager can operate without intervention from the project board. Restrictions apply as follows:

Should the following deviations occur, the Project Manager/IP through UNDP Country Office will seek the approval of the BPPS/NCE-VF team to ensure accurate reporting to the GEF. It is **strongly encouraged** to maintain the expenditures within the approved budget at the budgetary account and at the component level:

a) Budget reallocations must prove that the suggested changes in the budget will not lead to material changes in the results to be achieved by the project. A strong justification is required and will be approved on an exceptional basis. Budget re-allocations among the components (including PMC) of the approved Total Budget and Work Plans (TBWP) that represent a value greater than 10% of the total GEF grant.
b) Introduction of new outputs/activities (i.e. budget items) that were not part of the agreed project document and TBWP that represent a value greater than 5% of the total GEF grant. The new budget items must be eligible as per the GEF and UNDP policies.
c) Project management cost (PMC): budget under PMC component is capped and cannot be increased.

UNDP is not in a position to increase the total budget above the amount approved by the donor, therefore any over-expenditure would have to be absorbed from non-GEF resources by the Implementing Partner (GEF Executing Entity).

Project extensions:
The UNDP-BPPS-NCE team Executive Coordinator must approve all requests for extension of the Project Completion Date and for other milestone extensions with hard deadlines. All extensions impose additional time and cost burdens at all levels and the GEF project budget cannot be increased beyond its originally approved amount. A single extension may be granted on an exceptional basis and subject to the conditions and maximum durations set out in the UNDP POPP. The project management costs during the

extension period must remain within the originally approved amount, and any increase in PMC costs shall be covered by non-GEF resources; the additional UNDP oversight costs during the extension period must be covered by non-GEF resources, in accordance with UNDP's policy as set out in UNDP POPP.

For any extension request, UNDP CO and IP will consult and jointly present a clear plan indicating how and from which specific sources the additional oversight costs that will be incurred by UNDP will be covered during the extended period. The BPPS-NCE Executive Coordinator will consult the Regional Bureaux (RBX) and may reject the extension request if no (external co-financing by the IP or internal UNDP CO resources) can be identified.

All extension requests, along with all supporting documentation, shall be submitted by the IP to the UNDP CO in line with the requirements and within the deadlines set out in the UNDP SOPs and policies in UNDP POPP.

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project, however must be done before the operational closure date. In all cases of transfer, a transfer document must be prepared and kept on file . The transfer should be done before Project Management Unit complete their assignments.

Completion Date: The project completion date is the date of Project Document Signature plus project duration. This date can only be extended through a formal extension request. Prior to completion date, all UNDP-financed inputs must be provided and related activities for the Project completed. No activities, except for the final clearance of the Terminal Evaluation Report and the corresponding management response and the end-of-project review Project Board Meeting should take place after the Completion Date.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

- **Operational Closure**: Operational closure must happen within 9 months from project completion date. Prior to operational closure, the Terminal Evaluation must have been submitted and the corresponding TE management response and the end-of-project review Project Board meeting must have been completed. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. Before Operational Closure, the project must have completed the transfer or disposal of any equipment that is still the property of UNDP.
- **Financial Closure:** Financial closure must happen within 6 months of operational closure or after the date of cancellation. The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to BPPS/NCE for confirmation before the project will be financially closed in Quantum by the UNDP Country Office.

Cancellation and Suspension: All projects considering going through cancellation or suspension must follow UNDP and GEF requirements. Guidance can be found in the UNDP POPP (SOPs for management actions of Vertical Fund projects escalated to the Executive Coordinator and Guidance for GEF project revisions).

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/NCE team Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF. Unspent project balance is not permitted to be transferred to any other projects.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Quantum Award IDs:	00122467.1, 1133121, 1214337	Quantum Output Project ID:	00122467
Quantum Proposal or Award Title:	*Watershed Approaches for Clima-UNDP-SSD-00122467*		
Quantum Business Unit	UNDP-SSD		
Quantum Primary Output Project Title	*Watershed Approaches for Clima-UNDP-SSD-00122467*		
UNDP-GEF PIMS No.	6011		
Implementing Partner	*World Vision South Sudan*		

Atlas Activity (GEF Component)	Atlas Implementing Agent (Responsible Party, IP, or UNDP)	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
Component 1: Institutional capacities for gender-responsive climate change adaptation across the agricultural sector.	WVSS/UNDP [70]	62160	LDCF	71200	International Consultants	57,000	6,000	0	0	6,000	69,000	1
				71200	International Consultants	0	0	30,000	0	0	30,000	
				71300	Local Consultants	23,000	3,000	0	0	0	26,000	2
				71600	Travel	89,089	39,282	30,287	30,287	36,222	225,167	3
				71800	Contractual Services-Imp Partn	80,148	90,332	88,832	88,832	78,654	426,798	4
				72200	Equipment and Furniture	5,400	3,000	3,000	3,000	3,000	17,400	5
				72300	Materials & Goods	12,150	7,200	7,200	7,200	6,150	39,900	6

[70] UNDP is responsible party for Mid-Term review

				72800	Information Technology Equipmt	5,250	0	0	0	0	5,250	7
				73300	Rental & Maint of Info Tech Eq	200	200	200	200	200	1,000	8
				74200	Audio Visual&Print Prod Costs	20,936	17,936	17,936	17,936	17,939	92,683	9
				75700	Training	23,520	18,160	18,160	18,160	18,160	96,160	10
					Sub-total LDCF	316,693	185,110	195,615	165,615	166,325	1,029,358	
					Total Outcome 1	316,693	185,110	195,615	165,615	166,325	1,029,358	
Component 2 Climate change resilient agriculture and food value chains.	WVSS/UNDP [71]	62160	LDCF	71200	International Consultants	0	6,000	6,000	6,000	0	18,000	11
				71200	International Consultants	0	0	0	0	36,000	36,000	
				71300	Local Consultants	24,800	2,800	2,800	2,800	2,800	36,000	12
				71600	Travel	80,245	66,400	66,400	66,400	61,125	340,570	13
				71800	Contractual Services-Imp Partn	106,062	122,170	122,170	122,170	108,129	580,701	14
				72200	Equipment and Furniture	70,000	0	0	0	0	70,000	15
				72300	Materials & Goods	112,200	486,378	486,378	412,631	323,831	1,821,418	16
				72400	Communic & Audio Visual Equip	0	13,200	13,200	13,200	13,200	52,800	17
				72600	Grants	0	28,125	28,125	28,125	28,125	112,500	18
				72800	Information Technology Equipmt	2,520	0	0	0	0	2,520	19
				74200	Audio Visual&Print Prod Costs	23,807	25,807	25,807	25,807	25,809	127,037	20
				74700	Transport	3,000	6,000	6,000	6,000	3,000	24,000	21
				75700	Training	52,800	80,520	80,520	80,520	75,720	370,080	22

[71] UNDP is responsible party for the Terminal Evaluation

					Sub-total LDCF	475,434	837,400	837,400	763,653	677,739	3,591,626	
					Total Outcome 2	475,434	837,400	837,400	763,653	677,739	3,591,626	
Component 3 Community based natural resources management to offset the impacts of climate change on ecosystem goods and services.	WVSS	62160	LDCF	71600	Travel	16,200	9,600	9,600	9,600	9,600	54,600	23
				71800	Contractual Services-Imp Partn	34,543	48,037	48,037	48,037	34,547	213,201	24
				72100	Contractual Services-Companies	0	298,540	298,540	298,540	298,544	1,194,164	25
				72200	Equipment and Furniture	15,000	18,750	18,750	18,750	18,750	90,000	26
				72300	Materials & Goods	3,000	3,000	3,000	3,000	3,000	15,000	27
				72600	Grants	0	9,375	9,375	9,375	9,375	37,500	28
				72800	Information Technology Equipmt	2,520	0	0	0	0	2,520	29
				74200	Audio Visual&Print Prod Costs	22,240	16,240	16,240	16,240	16,241	87,201	30
				74700	Transport	3,000	6,000	6,000	6,000	3,000	24,000	31
				75700	Training	62,400	12,000	12,000	12,000	12,000	110,400	32
					Sub-total LDCF	158,903	421,542	421,542	421,542	405,057	1,828,586	
			GEF TF	72100	Contractual Services-Companies	0	228,310	228,310	228,310	228,312	913,242	33
					Sub-total GEFTF	0	228,310	228,310	228,310	228,312	913,242	
					Total Outcome 3	158,903	649,852	649,852	649,852	633,369	2,741,828	
Project Management Cost	WVSS/UNDP [72]	62160	LDCF	71600	Travel	5,198	5,748	5,748	5,748	10,198	32,640	34
				71800	Contractual Services-Imp Partn	46,455	46,455	46,455	46,455	46,455	232,275	35
				72500	Supplies	10,000	0	0	0	0	10,000	36
				72800	Information Technology Equipmt	1,260	0	0	0	0	1,260	37
				74100	Professional Services	8,000	8,000	8,000	8,000	8,000	40,000	38
				74200	Audio Visual&Print Prod Costs	25,443	25,443	25,443	25,443	25,444	127,216	39
				75700	Training	3,500	0	0	0	0	3,500	40

[72] UNDP is the responsible party for the PMU audit.

					Sub-Total LDCF	99,856	85,646	85,646	85,646	90,097	446,891	
	UNDP	04000	UNDP	71300	Local Consultants	0	0	12,000	0	12,000	24,000	41
					Sub-total UNDP	0	0	12,000	0	12,000	24,000	
					Total Project Management Cost	99,856	85,646	97,646	85,646	102,097	470,891	
					Total LDCF	**1,050,886**	**1,529,698**	**1,540,203**	**1,436,456**	**1,339,218**	**6,896,461**	
					Total GEFTF	**0**	**228,310**	**228,310**	**228,310**	**228,312**	**913,242**	
					Total UNDP	**0**	**0**	**12,000**	**0**	**12,000**	**24,000**	
					Grand Total (LDCF+GEFTF+UNDP)	**1,050,886**	**1,758,008**	**1,780,513**	**1,664,766**	**1,579,530**	**7,833,703**	

Justification for purchase of field vehicles:

World Vision South Sudan will purchase 1 vehicle with the project budget and will rent on a needs basis when additional transportation is required. The total savings on vehicle hire (which cost USD 250 per day in Aweil), for the four UNDP components is USD 139,500 (USD 67,500, USD 47,000, 10,000 and USD 15,000 respectively). Budget notes refer to the costs that would have been incurred by the project if a field vehicle were not available. The costs of purchasing one 4x4 pickup truck along with driver and fuel/maintenance costs is estimated to be about 90,000. Having a vehicle at the disposal of the project would provide a number of advantages. Key among these is the availability of vehicles during critical periods, including during inclement weather when vehicles may not be available for hire. Safe, secure and reliable transport during the entire project and the flexibility provided by having project vehicles are further advantages. Finally, these vehicles will be transferred to the relevant government agencies on project completion which will support the sustainability of project activities.

UNDP will use its vehicle park to support the project transportation needs in the capital city, Juba. However, the availability of a vehicle is crucial for the project's ability to intervene in the target area, around Aweil and government and UNDP resources are insufficient to cover direct project-related transportation costs as co-financing there.

Budget Notes

No.	Note
1	71200 International Consultants i) Output 1.1: Independent Mid-term Review (MTR) and management response Independent evaluation consultants. Calculation: unit cost @ 30000 X 1 (units) [, Year 3: 30000] Sub-total = 30000
	ii) Output 1.1.: CTA: i) Develop geospatial datasets; ii)Training field staff in biophysical assessments; iii) Publish data on online repository;Preparing a strategy and framework for capacity enhancement of local partners; iii) Preparing a comprehensive social mobilization strategy and action plan; iv) Identifying appropriate agriculture, animal husbandry, income and livelihood diversification options and developing site specific extension and advisory packages for agro-pastoral communities; v) Designing capacity assessment tool for partner agencies; vi) Review of policies and plans; ;vii Identifying easy to measure, gender-responsive quantitative socioeconomic vulnerability indicators; vii) Overall programme support. Fee for international consultant (CTA) for 150 days in year 1. Calculation: unit cost @ 300 X 1 (units) X 150 (days) X 1 (times) [Year 1: 45000] Sub-total = 45000
	iii) Output 1.1.: Developing monitoring and reporting site specific social and environmental safeguards including environmental impact assessments where needed. Fee for international social and environmental safeguards expert for 40 days year 1 and 20 days each year 2 and 5. Calculation: unit cost @ 300 X 1 (units) X 80 (days) [Year 1: 12000, Year 2: 6000, Year 5: 6000] Sub-total = 24000 Total = 99000
2	71300 Local Consultants i) Output 1.1.: Compile statistical baselines Fee for local statistician/economist. Calculation: unit cost @ 200 X 1 (units) X 20 (days) X 1 (times) [Year 1: 4000] Sub-total = 4000
	ii) Output 1.1.: Developing, monitoring and reporting site specific gender and community engagement strategies and safeguards Fee for national gender and community engagement expert. Calculation: unit cost @ 200 X 1 (units) X 30 (days) X 1 (times) [Year 1: 3000, Year 2: 3000] Sub-total = 6000
	iii) Output 1.1.: Translation of training materials for print and podcast. Fee for local consultant. Calculation: unit cost @ 200 X 1 (units) X 20 (days) X 1 (times) [Year 1: 4000] Sub-total = 4000
	iv) Output 1.3.: Preparing audio recordings and audio-visual versions of the guides in Dinka and Arabic. Local expert translator from English to Arabic and Dinka. Calculation: unit cost @ 200 X 1 (units) X 20 (days) [Year 1: 4000] Sub-total = 4000
	v) Output 1.3.: Repackaging materials for print, social media and web-based distribution. Local communication specialist with experience in social media. Calculation: unit cost @ 200 X 1 (units) X 20 (days) X 1 (times) [Year 1: 4000] Sub-total = 4000
	vi) Output 1.3.: Translation of packages into local languages (Dinka and Arabic). Local expert translator from English to Arabic and Dinka. Calculation: unit cost @ 200 X 1 (units) X 20 (days) [Year 1: 4000] Sub-total = 4000 Total = 26000
3	71600 Travel i) Output 1.1.: CTA: DSA for 90 days. DSA for international consultants for 90 days in y ear 1. Calculation: unit cost @ 192 X 1 (units) X 90 (days) X 1 (times) [Year 1: 17280] Sub-total = 17280

	ii) Output 1.1.: Develop land-use and land-cover maps DSA for field staff. Calculation: unit cost @ 11 X 4 (units) X 30 (days) X 1 (times) [Year 1: 1320] Sub-total = 1320
	iii) Output 1.1.: Develop land-use and land-cover maps Vehicle hire for field surveys and collection of ground control points. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) [Year 1: 5000] Sub-total = 5000
	iv) Output 1.1.: Developing monitoring and reporting site specific social and environmental safeguards including environmental impact assessments where needed. Air fare for consultants within South Sudan. Calculation: unit cost @ 550 X 2 (units) X 6 (times) [Year 1: 3300, Year 2: 1650, Year 5: 1650] Sub-total = 6600
	v) Output 1.1.: Developing monitoring and reporting site specific social and environmental safeguards including environmental impact assessments where needed. DSA for international social and environmental safeguards expert for 30 days in year 1 and 15 days each in year 2 and 5. Calculation: unit cost @ 192 X 1 (units) X 60 (days) X 1 (times) [Year 1: 5760, Year 2: 2880, Year 5: 2880] Sub-total = 11520
	vi) Output 1.1.: Developing monitoring and reporting site specific social and environmental safeguards including environmental impact assessments where needed. DSA for local consultants. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 910, Year 2: 455, Year 5: 455] Sub-total = 1820
	vii) Output 1.1.: Developing monitoring and reporting site specific social and environmental safeguards including environmental impact assessments where needed. Travel for international social and environmental safeguards expert.. Calculation: unit cost @ 2000 X 1 (units) X 3 (times) [Year 1: 2000, Year 2: 2000, Year 5: 2000] Sub-total = 6000
	viii) Output 1.1.: Developing, monitoring and reporting site specific gender and community engagement strategies and safeguards Air fare for consultants within South Sudan. Calculation: unit cost @ 550 X 2 (units) X 2 (times) [Year 1: 1100, Year 2: 1100] Sub-total = 2200
	ix) Output 1.1.: Developing, monitoring and reporting site specific gender and community engagement strategies and safeguards DSA for local consultants. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 910, Year 2: 910] Sub-total = 1820
	x) Output 1.1.: Field surveys, including mapping, measurements of potential sites and collection of soil samples. DSA for project team/volunteers (four per site). Calculation: unit cost @ 11 X 12 (units) X 30 (days) X 1 (times) [Year 1: 3960] Sub-total = 3960
	xi) Output 1.1.: Organising local knowledge sharing events DSA for attendees (communities), (20 per site). Calculation: unit cost @ 11 X 60 (units) X 2 (days) X 5 (times) [Year 1: 1320, Year 2: 1320, Year 3: 1320, Year 4: 1320, Year 5: 1320] Sub-total = 6600
	xii) Output 1.1.: Organising local knowledge sharing events DSA for field staff (2 per site) for meetings with CBO reps, traditional leaders and govt. agency reps.. Calculation: unit cost @ 11 X 6 (units) X 2 (days) X 5 (times) [Year 1: 132, Year 2: 132, Year 3: 132, Year 4: 132, Year 5: 132] Sub-total = 660
	xiii) Output 1.1.: Participation in national, regional and international knowledge sharing events Conference fee and related costs (1 per site, 2 national). Calculation: unit cost @ 500 X 5 (units) X 5 (times) [Year 1: 2500, Year 2: 2500, Year 3: 2500, Year 4: 2500, Year 5: 2500] Sub-total = 12500

	xiv) Output 1.1.: Participation in national, regional and international knowledge sharing events DSA for participants (3 persons from sites and 2 nationally).. Calculation: unit cost @ 221 X 5 (units) X 5 (days) X 5 (times) [Year 1: 5525, Year 2: 5525, Year 3: 5525, Year 4: 5525, Year 5: 5525] Sub-total = 27625
	xv) Output 1.1.: Participation in national, regional and international knowledge sharing events Flights from Aweil to Juba for local consultants (one per site). Calculation: unit cost @ 550 X 3 (units) X 5 (times) [Year 1: 1650, Year 2: 1650, Year 3: 1650, Year 4: 1650, Year 5: 1650] Sub-total = 8250
	xvi) Output 1.1.: Participation in national, regional and international knowledge sharing events international travel costs of participants (3 persons, from sites and 2 nationally). Calculation: unit cost @ 1000 X 5 (units) X 5 (times) [Year 1: 5000, Year 2: 5000, Year 3: 5000, Year 4: 5000, Year 5: 5000] Sub-total = 25000
	xvii) Output 1.1.: Participatory appraisals and mapping with communities DSA for project team/volunteers (four per site). Calculation: unit cost @ 11 X 12 (units) X 30 (days) X 1 (times) [Year 1: 3960] Sub-total = 3960
	xviii) Output 1.1.: Training of field staff for surveying and biophysical assessments DSA for participants (4 per site) including stay at Juba. Calculation: unit cost @ 91 X 12 (units) X 5 (days) X 1 (times) [Year 1: 5460] Sub-total = 5460
	xix) Output 1.1.: Training of field staff for surveying and biophysical assessments Travel costs for participants (4 per site). Calculation: unit cost @ 11 X 12 (units) X 1 (times) [Year 1: 132] Sub-total = 132
	xx) Output 1.1.: Validating intervention strategies with communities. DSA for community representatives for validation workshops (4 per boma, 12 bomas). Calculation: unit cost @ 11 X 48 (units) X 5 (days) [Year 1: 2640] Sub-total = 2640
	xxi) Output 1.1.: Validating intervention strategies with communities. DSA for project staff (4 per site). Calculation: unit cost @ 11 X 12 (units) X 5 (days) X 2 (times) [Year 1: 1320] Sub-total = 1320
	xxii) Output 1.1.: Validating intervention strategies with communities. Venue and refreshments for participants (4 per boma for 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 5 (days) [Year 1: 4800] Sub-total = 4800
	xxiii) Output 1.4: Vehicle hire to support the transportation of staff and light materials to project sites. This is intended to supplement use of the purchased vehicle to ensure staff movement between two counties. Vehicle hire to support staff for Component 1 activities . Calculation: unit cost @ 250 X 1 (units) X 120 (times) [Year 1: 6000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 30000
	xxiv) Output 1.4.: Identification and training of extension workers for CSA DSA for participants (4 per site). Calculation: unit cost @ 11 X 12 (units) X 4 (days) X 5 (times) [Year 1: 528, Year 2: 528, Year 3: 528, Year 4: 528, Year 5: 528] Sub-total = 2640
	xxv) Output 1.4.: Identification and training, including refresher courses for veterinary extension and community animal health workers DSA for participants (4 per site). Calculation: unit cost @ 11 X 12 (units) X 4 (days) X 5 (times) [Year 1: 528, Year 2: 528, Year 3: 528, Year 4: 528, Year 5: 528] Sub-total = 2640
	xxvi) Output 1.4.: Identification, training and refresher courses for community mobilisers DSA for participants (4 per site). Calculation: unit cost @ 11 X 12 (units) X 4 (days) X 5 (times) [Year 1: 528, Year 2: 528, Year 3: 528, Year 4: 528, Year 5: 528] Sub-total = 2640

	xxvii) Output 1.4.: Identification, training and refresher courses for extension workers and line staff held DSA for participants (4 per site). Calculation: unit cost @ 11 X 12 (units) X 4 (days) X 5 (times) [Year 1: 528, Year 2: 528, Year 3: 528, Year 4: 528, Year 5: 528] Sub-total = 2640
	xxviii) Output 1.4.: Identification, training and refresher courses for watershed restoration technical leads DSA for participants (4 per site). Calculation: unit cost @ 11 X 12 (units) X 4 (days) X 5 (times) [Year 1: 528, Year 2: 528, Year 3: 528, Year 4: 528, Year 5: 528] Sub-total = 2640
	xxix) Output 1.4.: Training national and sub-national focal points on watershed approaches for CCA DSA for 20 trainee. Calculation: unit cost @ 11 X 20 (units) X 3 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	xxx) Output 1.4.: Training national and sub-national focal points on watershed approaches for CCA Travel for 20 trainee. Calculation: unit cost @ 11 X 20 (units) X 3 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	xxxi) Output 3.1: Motorcycle fuel and maintenance: WVSS will allocate one motorcycle for use by the Water Engineer/ Manager and Officer to travel to project sites. Fuel and maintenance will be charged to the project Motorcycle fuel and maintenance for 54 months. Calculation: unit cost @ 350 X 1 (units) X 54 (times) [Year 1: 3150, Year 2: 4200, Year 3: 4200, Year 4: 4200, Year 5: 3150] Sub-total = 18900 Total = 225167
4	71800 Contractual Services-Imp Partn i) Output 1.1.: Developing monitoring and reporting site specific social and environmental safeguards including environmental impact assessments where needed. Fee for local social and environmental safeguards expert. Calculation: unit cost @ 200 X 1 (units) X 30 (days) X 1 (times) [Year 1: 3000, Year 2: 1500, Year 5: 1500] Sub-total = 6000
	ii) Output 1.4: Costs for Senior Project Manager toward project execution; This staff is responsible for oversight and management of all Components and ensuring quality and timely implementation. S/he will also provide technical expertise in climate related programming. S/he will also lead coordination with UNDP and with relevant counterparts in the three government ministries. Senior Project Manager @30% charged to Component 1. Calculation: unit cost @ 3150 X 1 (units) X 60 (times) [Year 1: 37800, Year 2: 37800, Year 3: 37800, Year 4: 37800, Year 5: 37800] Sub-total = 189000
	iii) Output 1.4: Costs for Water Engineer/Manager towards project execution; The staff will be hired on a full-time basis and responsible for overseeing implementation and monitoring of outputs under component 3 and contributing to related to watershed management under Component 1. S/he will also be responsible for coordination with relevant counterparts within the Ministry of Water Resources and Ministry of Environment. Water Engineer/ Manager @ 25% charged to Component 1. Calculation: unit cost @ 927.25 X 1 (units) X 54 (times) [Year 1: 8345, Year 2: 11127, Year 3: 11127, Year 4: 11127, Year 5: 8345.5] Sub-total = 50071
	iv) Output 3.1: Costs for Water Engineer/Manager towards project execution; The staff will be hired on a full-time basis and responsible for overseeing implementation and monitoring of outputs under component 3 and contributing to related to watershed management under Component 1. S/he will also be responsible for coordination with relevant counterparts within the Ministry of Water Resources and Ministry of Environment. Water Engineer/ Manager @ 80% charged to Component 3. Calculation: unit cost @ 2967.2 X 1 (units) X 54 (times) [Year 1: 26704, Year 2: 35606, Year 3: 35606, Year 4: 35606, Year 5: 26706.8] Sub-total = 160228

	v) PMU : Costs for Northern Bahr el Ghazal Area Manager towards project execution; This staff is responsible for overseeing the support functions in Northern Bahr el Ghazal. He will be responsible for supporting the Project Manager in coordinating adequate human resources, procurement, and logistics support to the project. NBeG Area Manager @10% charged to Component 1. Calculation: unit cost @ 358.3 X 1 (units) X 60 (times) [Year 1: 4299, Year 2: 4299, Year 3: 4299, Year 4: 4299, Year 5: 4302] Sub-total = 21498 Total = 426798
5	72200 Equipment and Furniture i) Output 1.1.: Develop land-use and land-cover maps Purchase of GPS (Garmin GPSMAP® 64csx) . Calculation: unit cost @ 600 X 4 (units) X 1 (times) [Year 1: 2400] Sub-total = 2400
	ii) Output 1.3.: Dissemination of materials to extension services and farmers Procurement of motorcycles, 1 per site.. Calculation: unit cost @ 5000 X 3 (units) X 1 (times) [Year 1: 3000, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 15000 Total = 17400
6	72300 Materials & Goods i) Output 1.1.: Training of field staff for surveying and biophysical assessments Procurement of field implements (augers, spades, shovels) for collection of samples from field. One set per site.. Calculation: unit cost @ 2000 X 3 (units) X 1 (times) [Year 1: 6000] Sub-total = 6000
	ii) Output 1.3.: Dissemination of materials to extension services and farmers Annual fuel and maintenance of motorcycle.. Calculation: unit cost @ 1000 X 3 (units) X 5 (times) [Year 1: 3000, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 15000
	iii) PMU : Motorcycle fuel and maintenance: WVSS will allocate one motorcycle for use by the Project Manager to travel to project sites. Fuel and maintence will be charged to the project Motorcycle fuel and maintenance for 54 months. Calculation: unit cost @ 350 X 1 (units) X 54 (times) [Year 1: 3150, Year 2: 4200, Year 3: 4200, Year 4: 4200, Year 5: 3150] Sub-total = 18900 Total = 39900
7	72800 Information Technology Equipmt i) Output 1.1.: Training of field staff for surveying and biophysical assessments Procurement of Android based survey tablets (2 per site). Calculation: unit cost @ 500 X 6 (units) X 1 (times) [Year 1: 3000] Sub-total = 3000
	ii) Output 1.1.: Training of field staff for surveying and biophysical assessments Procurement of low cost drones to assist participatory transects (one per site). Calculation: unit cost @ 750 X 3 (units) X 1 (times) [Year 1: 2250] Sub-total = 2250 Total = 5250
8	73300 Rental & Maint of Info Tech Eq i) Output 1.1.: Web hosting fee on cloud service/online repository. Online hosting account. Calculation: unit cost @ 200 X 1 (units) X 5 (times) [Year 1: 200, Year 2: 200, Year 3: 200, Year 4: 200, Year 5: 200] Sub-total = 1000 Total = 1000

9	74200 Audio Visual&Print Prod Costs i) Output 1: Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. [Year 1: 15936, Year 2: 15936, Year 3: 15936, Year 4: 15936, Year 5: 15939] Sub-total = 79683
	ii) Output 1.1.: Establishing partnerships for knowledge sharing with relevant fora Printing of proceedings and brochures. Calculation: unit cost @ 1000 X 1 (units) X 5 (times) [Year 1: 1000, Year 2: 1000, Year 3: 1000, Year 4: 1000, Year 5: 1000] Sub-total = 5000
	iii) Output 1.1.: Publish proceedings of national dialogue, prepare policy brief. Printing of proceedings and recommendations. Calculation: unit cost @ 1000 X 1 (units) X 1 (times) [Year 1: 1000] Sub-total = 1000
	iv) Output 1.1.: Translation of training materials for print and podcast. Printing of materials. Calculation: unit cost @ 1000 X 1 (units) X 1 (times) [Year 1: 1000] Sub-total = 1000
	v) Output 1.3.: Dissemination of materials to extension services and farmers Printing and publication. Calculation: unit cost @ 1000 X 1 (units) X 5 (times) [Year 1: 1000, Year 2: 1000, Year 3: 1000, Year 4: 1000, Year 5: 1000] Sub-total = 5000
	vi) Output 1.3.: Preparing a comprehensive social mobilization strategy and action plan Printing of reports and brochures. Calculation: unit cost @ 500 X 1 (units) X 1 (times) [Year 1: 500] Sub-total = 500
	vii) Output 1.3.: Preparing a strategy and framework for capacity enhancement of local partners. Printing of reports and brochures. Calculation: unit cost @ 500 X 1 (units) X 1 (times) [Year 1: 500] Sub-total = 500 Total = 92683
10	75700 Training i) Output 1.1.: Establishing partnerships for knowledge sharing with relevant fora Travel costs per participant.. Calculation: unit cost @ 11 X 40 (units) X 3 (days) X 5 (times) [Year 1: 1320, Year 2: 1320, Year 3: 1320, Year 4: 1320, Year 5: 1320] Sub-total = 6600
	ii) Output 1.1.: Establishing partnerships for knowledge sharing with relevant fora Workshop venue, cost per participant. Calculation: unit cost @ 30 X 40 (units) X 3 (days) X 5 (times) [Year 1: 3600, Year 2: 3600, Year 3: 3600, Year 4: 3600, Year 5: 3600] Sub-total = 18000
	iii) Output 1.1.: Organising local knowledge sharing events Costs of venue and refreshments (20 attendees per site). Calculation: unit cost @ 20 X 60 (units) X 2 (days) X 5 (times) [Year 1: 2400, Year 2: 2400, Year 3: 2400, Year 4: 2400, Year 5: 2400] Sub-total = 12000
	iv) Output 1.1.: Publish proceedings of national dialogue, prepare policy brief. Travel reimbursements for local participants.. Calculation: unit cost @ 11 X 40 (units) X 1 (times) [Year 1: 440] Sub-total = 440
	v) Output 1.1.: Publish proceedings of national dialogue, prepare policy brief. Venue and refreshments for validation workshop cost per participant. Calculation: unit cost @ 30 X 40 (units) X 1 (times) [Year 1: 1200] Sub-total = 1200
	vi) Output 1.1.: Training of field staff for surveying and biophysical assessments Travel costs per participant. Calculation: unit cost @ 11 X 12 (units) X 5 (days) X 2 (times) [Year 1: 1320] Sub-total = 1320

	vii) Output 1.1.: Training of field staff for surveying and biophysical assessments Venue and refreshments for training workshop per participant (4 per site). Calculation: unit cost @ 20 X 12 (units) X 5 (days) X 2 (times) [Year 1: 2400] Sub-total = 2400
	viii) Output 1.4.: Identification and training of extension workers for CSA Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 12 (units) X 4 (days) X 5 (times) [Year 1: 960, Year 2: 960, Year 3: 960, Year 4: 960, Year 5: 960] Sub-total = 4800
	ix) Output 1.4.: Identification and training, including refresher courses for veterinary extension and community animal health workers Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 12 (units) X 4 (days) X 5 (times) [Year 1: 960, Year 2: 960, Year 3: 960, Year 4: 960, Year 5: 960] Sub-total = 4800
	x) Output 1.4.: Identification, training and refresher courses for community mobilisers Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 12 (units) X 5 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	xi) Output 1.4.: Identification, training and refresher courses for extension workers and line staff held Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 12 (units) X 4 (days) X 5 (times) [Year 1: 960, Year 2: 960, Year 3: 960, Year 4: 960, Year 5: 960] Sub-total = 4800
	xii) Output 1.4.: Identification, training and refresher courses for watershed restoration technical leads Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 12 (units) X 4 (days) X 5 (times) [Year 1: 960, Year 2: 960, Year 3: 960, Year 4: 960, Year 5: 960] Sub-total = 4800
	xiii) Output 1.4.: Training national and sub-national focal points on watershed approaches for CCA Venue and refreshments for trainees (20). Calculation: unit cost @ 30 X 20 (units) X 3 (days) X 5 (times) [Year 1: 1800, Year 2: 1800, Year 3: 1800, Year 4: 1800, Year 5: 1800] Sub-total = 9000
	xiv) PMU : Gender and safeguards training for project staff, including PMU staff, ahead of implementation Ensure that gender expertise is available within the PMU in both Juba and Aweil, including field staff (through awareness-raising and training on gender mainstreaming and gender aspects of climate change adaptation and resilience building). Calculation: unit cost @ 10000 [Year 1: 2000, Year 2: 2000, Year 3: 2000, Year 4: 2000, Year 5: 2000] Sub-total = 10000
	xv) PMU : Gender and safeguards training for project staff, including PMU staff, ahead of implementation Training on UNDP Social and Env. Safeguards, Grievance Redress Mechanisms, Monitoring, Reporting and Verification, FIPC and Stakeholder Engagement. Calculation: unit cost @ 10000 [Year 1: 2000, Year 2: 2000, Year 3: 2000, Year 4: 2000, Year 5: 2000] Sub-total = 10000 Total = 96160
11	71200 International Consultants i) Output 2.1: Independent Terminal Evaluation (TE) and management response PMU: Terminal evaluation by UNDP Evaluation Specialists and independent evaluation consultants. Calculation: unit cost @ 30000 X 1 (units) [, Year 5: 30000] Sub-total = 30000

	ii) Output 2.1.: International Safeguards expert. Developing, monitoring and reporting site specific interventions strategies including environmental impact assessments where needed. Fee for international social and environmental safeguards expert, 20 days each year from year 2-4. Calculation: unit cost @ 300 X 1 (units) X 80 (days) [, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 24000 Total = 54000
12	71300 Local Consultants i) Output 2.4.: Designing a mobile ICT based system for recording and communicating records maintained by focal points in farming and pastoral communities Local consultant. Calculation: unit cost @ 200 X 1 (units) X 20 (days) X 1 (times) [Year 1: 4000] Sub-total = 4000
	ii) Output 2.4.: Identifying easy to measure indicators of biophysical parameters for crop health, soil moisture, rangeland condition and livestock health. Local consultant. Calculation: unit cost @ 200 X 1 (units) X 30 (days) X 1 (times) [Year 1: 6000] Sub-total = 6000. Repeated with 2 target groups/sites. Sub-total = 12000
	iii) Output 2.4.: Identifying easy to measure, gender-responsive quantitative socioeconomic vulnerability indicators. Local consultant. Calculation: unit cost @ 200 X 1 (units) X 30 (days) X 1 (times) [Year 1: 6000] Sub-total = 6000
	iv) Output 2.4.: Training and facilitation of focal points and volunteers for recording monitoring data Local expert in use of mobile ICT tools for monitoring and reporting. Calculation: unit cost @ 200 X 1 (units) X 7 (days) X 5 (times) [Year 1: 1400, Year 2: 1400, Year 3: 1400, Year 4: 1400, Year 5: 1400] Sub-total = 7000
	v) Output 2.4.: Training and facilitation of project staff and extension services in collection and transmission of data to PMU Local expert in use of mobile ICT tools for monitoring and reporting. Calculation: unit cost @ 200 X 1 (units) X 7 (days) X 5 (times) [Year 1: 1400, Year 2: 1400, Year 3: 1400, Year 4: 1400, Year 5: 1400] Sub-total = 7000 Total = 36000
13	71600 Travel i) Output 2.1.: Conducting study tours between progressive farmers, extension staff and agricultural experts including site visits. DSA for workshop participants (5 per boma for 12 bomas). Calculation: unit cost @ 11 X 60 (units) X 5 (days) X 5 (times) [Year 1: 3300, Year 2: 3300, Year 3: 3300, Year 4: 3300, Year 5: 3300] Sub-total = 16500
	ii) Output 2.1.: Excursions to cattle markets with progressive pastoralists and extension staff. DSA for progressive pastoralists (4 per boma, 12 bomas).. Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 4 (times) [Year 1: 2640, Year 2: 2640, Year 3: 2640, Year 4: 2640] Sub-total = 10560
	iii) Output 2.1.: Identification, training and capacity building of progressive pastoralists through excursions and exchange visits DSA for workshop participants (4 per boma, 12 bomas). Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 5 (times) [Year 1: 2640, Year 2: 2640, Year 3: 2640, Year 4: 2640, Year 5: 2640] Sub-total = 13200
	iv) Output 2.1.: Identify and create networks by organizing visits between livestock owners and private sector suppliers. DSA for workshop participants (4 per boma, 12 bomas).. Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 4 (times) [Year 1: 2640, Year 2: 2640, Year 3: 2640, Year 4: 2640] Sub-total = 10560

	v) Output 2.1.: International Safeguards expert. Developing monitoring and reporting site specific interventions strategies including environmental impact assessments where needed. Travel for international social and environmental safeguards expert. Calculation: unit cost @ 2000 X 1 (units) X 4 (times) [, Year 2: 2000, Year 3: 2000, Year 4: 2000, Year 5: 2000] Sub-total = 8000
	vi) Output 2.1.: International Safeguards expert. Developing, monitoring and reporting site specific interventions strategies including environmental impact assessments where needed. DSA for international social and environmental safeguards expert, 20 days each year from year 2-4. Calculation: unit cost @ 192 X 1 (units) X 80 (days) X 1 (times) [, Year 2: 3840, Year 3: 3840, Year 4: 3840, Year 5: 3840] Sub-total = 15360
	vii) Output 2.1.: Organizing visits and exchange events between farmers. DSA for workshop participants (20 per boma, 12 bomas). Calculation: unit cost @ 11 X 240 (units) X 2 (days) X 4 (times) [, Year 2: 5280, Year 3: 5280, Year 4: 5280, Year 5: 5280] Sub-total = 21120
	viii) Output 2.1.: Training and capacity building of nursery groups including women groups DSA for workshop participants (5 per boma, 12 bomas,each year). Calculation: unit cost @ 11 X 60 (units) X 5 (days) X 5 (times) [Year 1: 3300, Year 2: 3300, Year 3: 3300, Year 4: 3300, Year 5: 3300] Sub-total = 16500
	ix) Output 2.2: Vehicle hire to support the transportation of staff and light materials to project sites. This is intended to supplement use of the purchased vehicle to ensure staff movement between two counties. Vehicle hire to support staff for Component 2 activities . Calculation: unit cost @ 250 X 1 (units) X 120 (times) [Year 1: 6000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 30000
	x) Output 2.2.: Awareness raising and gender sensitisation of CBOs DSA for meeting participants (5 CBO reps per boma, 12 bomas). Calculation: unit cost @ 11 X 60 (units) X 2 (days) X 5 (times) [, Year 2: 1650, Year 3: 1650, Year 4: 1650, Year 5: 1650] Sub-total = 6600
	xi) Output 2.2.: Build women's leadership capacity through trainings for both men and women in local institutions and CBOs Air travel for gender specialist from Juba to Aweil. Calculation: unit cost @ 550 X 1 (units) X 5 (times) [, Year 2: 687, Year 3: 687, Year 4: 687, Year 5: 689] Sub-total = 2750
	xii) Output 2.2.: Build women's leadership capacity through trainings for both men and women in local institutions and CBOs DSA for meeting participants (4 CBO reps per boma, 12 bomas). Calculation: unit cost @ 11 X 48 (units) X 3 (days) X 5 (times) [, Year 2: 1980, Year 3: 1980, Year 4: 1980, Year 5: 1980] Sub-total = 7920
	xiii) Output 2.2.: Build women's leadership capacity through trainings for both men and women in local institutions and CBOs Travel and DSA for gender specialist, including air travel.. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) [, Year 2: 568, Year 3: 568, Year 4: 568, Year 5: 571] Sub-total = 2275
	xiv) Output 2.2.: Formation of community based groups, associations and committees for project implementation. DSA for meeting participants (15 persons per site). Four meetings a month for six months.. Calculation: unit cost @ 11 X 45 (units) X 2 (days) X 12 (times) [Year 1: 11880] Sub-total = 11880
	xv) Output 2.2.: Identification and mobilisation of groups and committees for proposed activities. DSA for village meetings with participants (10 persons per boma). Calculation: unit cost @ 11 X 120 (units) X 5 (days) X 2 (times) [Year 1: 13200] Sub-total = 13200
	xvi) Output 2.2.: Identifying and training key informers within pastoral groups. DSA for staff to assist in workshops (2 per site). Calculation: unit cost @ 11 X 6 (units) X 5 (days) X 5 (times) [Year 1: 330, Year 2: 330, Year 3: 330, Year 4: 330, Year 5: 330] Sub-total = 1650

	xvii) Output 2.2.: Identifying and training key informers within pastoral groups. Travel and DSA for focal points and volunteers (4 per boma, 12 bomas). Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 5 (times) [Year 1: 2640, Year 2: 2640, Year 3: 2640, Year 4: 2640, Year 5: 2640] Sub-total = 13200
	xviii) Output 2.2.: Providing extension services to crop farmers. Annual O&M and fuel costs for truck. Calculation: unit cost @ 1000 X 1 (units) X 57 (times) [Year 1: 9000, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 57000
	xix) Output 2.2.: Training and facilitation of project staff and extension services in collection and transmission of data, including on social and environmental safeguards and gender and community engagement to PMU DSA for staff to attend workshop in Aweil (10 persons per site). Calculation: unit cost @ 11 X 30 (units) X 5 (days) X 5 (times) [Year 1: 1650, Year 2: 1650, Year 3: 1650, Year 4: 1650, Year 5: 1650] Sub-total = 8250
	xx) Output 2.2.: Training representatives of CBOs in leadership and organisational functions and procedures. DSA for meeting participants (10 CBO reps per boma, 12 bomas). Calculation: unit cost @ 11 X 120 (units) X 2 (days) X 5 (times) [, Year 2: 3300, Year 3: 3300, Year 4: 3300, Year 5: 3300] Sub-total = 13200
	xxi) Output 2.4.: Designing a mobile ICT based system for recording and communicating records maintained by focal points in farming and pastoral communities DSA for key informers among farmers and pastoralists (4 per boma, 12 bomas). Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 1 (times) [Year 1: 2640] Sub-total = 2640
	xxii) Output 2.4.: Identifying easy to measure indicators of biophysical parameters for crop health, soil moisture, rangeland condition and livestock health. Air fare for local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) [Year 1: 550] Sub-total = 550
	xxiii) Output 2.4.: Identifying easy to measure indicators of biophysical parameters for crop health, soil moisture, rangeland condition and livestock health. Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) [Year 1: 550] Sub-total = 550
	xxiv) Output 2.4.: Identifying easy to measure indicators of biophysical parameters for crop health, soil moisture, rangeland condition and livestock health. DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820. Repeated with 2 target groups/sites. Sub-total = 3640
	xxv) Output 2.4.: Identifying easy to measure indicators of biophysical parameters for crop health, soil moisture, rangeland condition and livestock health. DSA for staff to assist local consultant. Calculation: unit cost @ 11 X 2 (units) X 20 (days) X 1 (times) [Year 1: 440] Sub-total = 440. Repeated with 2 target groups/sites. Sub-total = 880
	xxvi) Output 2.4.: Identifying easy to measure, gender-responsive quantitative socioeconomic vulnerability indicators. Air travel by local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) [Year 1: 550] Sub-total = 550
	xxvii) Output 2.4.: Identifying easy to measure, gender-responsive quantitative socioeconomic vulnerability indicators. DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820
	xxviii) Output 2.4.: Identifying easy to measure, gender-responsive quantitative socioeconomic vulnerability indicators. DSA for staff to assist local consultant. Calculation: unit cost @ 11 X 2 (units) X 20 (days) X 1 (times) [Year 1: 440] Sub-total = 440

	xxix) Output 2.4.: Participatory planning to identify and implement livelihood diversification activities by relevant CBOs DSA for meeting participants (20 persons per site). Calculation: unit cost @ 11 X 60 (units) X 2 (days) X 5 (times) [Year 1: 1320, Year 2: 1320, Year 3: 1320, Year 4: 1320, Year 5: 1320] Sub-total = 6600
	xxx) Output 2.4.: Training and capacity enhancement of pond user and fishing groups DSA for workshop participants (4 per boma, 12 bomas, twice a year). Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 5 (times) [Year 1: 2640, Year 2: 2640, Year 3: 2640, Year 4: 2640, Year 5: 2640] Sub-total = 13200
	xxxi) Output 2.4.: Training and facilitation of focal points and volunteers for recording monitoring data DSA for staff to assist in workshops (2 per site). Calculation: unit cost @ 11 X 6 (units) X 5 (days) X 5 (times) [Year 1: 330, Year 2: 330, Year 3: 330, Year 4: 330, Year 5: 330] Sub-total = 1650
	xxvii) Output 2.4.: Training and facilitation of focal points and volunteers for recording monitoring data Travel and DSA for focal points and volunteers (4 per boma, 12 bomas). Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 5 (times) [Year 1: 2640, Year 2: 2640, Year 3: 2640, Year 4: 2640, Year 5: 2640] Sub-total = 13200
	xxviii) Output 2.4.: Training and facilitation of project staff and extension services in collection and transmission of data to PMU DSA for staff to attend workshop in Aweil (5 persons per site). Calculation: unit cost @ 11 X 15 (units) X 5 (days) X 5 (times) [Year 1: 825, Year 2: 825, Year 3: 825, Year 4: 825, Year 5: 825] Sub-total = 4125
	xxix) PMU : Quarterly travel for Senior Project Manager; provision for quarterly flights from Aweil to Juba for R&R benefit for international staff assignees (international travel for R&R is included in salary unit cost). Travel from Aweil to Juba for R&R in hardship posting. Calculation: unit cost @ 550 X 20 (times) [Year 1: 2200, Year 2: 2200, Year 3: 2200, Year 4: 2200, Year 5: 2200] Sub-total = 11000 Total = 340570
14	71800 Contractual Services-Imp Partn xxx) Output 2.2: Costs for Agriculture and Livelihoods Officer towards project execution; This staff is responsible for supporting the Manager in the implementation of outputs under Component 2, especially identifying and mobilizing beneficiaries, delivering training according to his/her expertise where relevant, and supporting monitoring efforts. Agriculture and Livelihoods Officers @100% charged to Component 2 for 48 months. Calculation: unit cost @ 2249 X 1 (units) X 48 (times) [Year 1: 13494, Year 2: 26988, Year 3: 26988, Year 4: 26988, Year 5: 13494] Sub-total = 107952
	xxxi) Output 2.2: Costs for Project Manager towards project execution; The staff will be hired on a full-time basis and responsible for overseeing implementation and monitoring of outputs. It is also expected that the Manager will bring climate-related expertise to the project. S/he will also be responsible for coordination with relevant counterparts within the partner government line ministries. Agricuture and Livelihoods Manager @ 25% charged to Component 2. Calculation: unit cost @ 927.25 X 1 (units) X 60 (times) [Year 1: 11127, Year 2: 11127, Year 3: 11127, Year 4: 11127, Year 5: 11127] Sub-total = 55635

	xxxii) Output 2.2: Costs for Senior Project Manager toward project execution; This staff is responsible for oversight and management of all Components and ensuring quality and timely implementation. S/he will also provide technical expertise in climate related programming. S/he will also lead coordination with UNDP and with relevant counterparts in the three government ministries. Senior Project Manager @55% charged to Component 2. Calculation: unit cost @ 5775 X 1 (units) X 60 (times) [Year 1: 69300, Year 2: 69300, Year 3: 69300, Year 4: 69300, Year 5: 69300] Sub-total = 346500
	xxxiii) Output 2.2.: Providing extension services to crop farmers. Salaries for professional drivers familiar with the terrain and security procedures. Calculation: unit cost @ 688 X 1 (units) X 57 (times) [Year 1: 6192, Year 2: 8256, Year 3: 8256, Year 4: 8256, Year 5: 8256] Sub-total = 39216
	xxxiv) PMU : Costs for Northern Bahr el Ghazal Area Manager towards project execution; This staff is responsible for overseeing the support functions in Northern Bahr el Ghazal. He will be responsible for supporting the Project Manager in coordinating adequate human resources, procurement, and logistics support to the project. NBeG Area Manager @10% charged to Component 1. Calculation: unit cost @ 358.3 X 1 (units) X 60 (times) [Year 1: 4299, Year 2: 4299, Year 3: 4299, Year 4: 4299, Year 5: 4302] Sub-total = 21498
	xxxv) PMU : Quarterly travel for Project Manager; provision for quarterly flights from Aweil to Juba for R&R benefit for relocatable national staff assignees who have deployed from Juba to the field site. Travel from Aweil to Juba for R&R in hardship posting. Calculation: unit cost @ 550 X 18 (times) [Year 1: 1650, Year 2: 2200, Year 3: 2200, Year 4: 2200, Year 5: 1650] Sub-total = 9900 Total = 580701
15	72200 Equipment and Furniture i) Output 2.2.: Formation of community based groups, associations and committees for project implementation. Procurement of motorcycles, 1 per site.. Calculation: unit cost @ 5000 X 3 (units) X 1 (times) [Year 1: 15000] Sub-total = 15000
	ii) Output 2.2.: Providing extension services to crop farmers. Procurement of one 4X4 pick up truck for transport of materials and staff to sites. This is justified on the following grounds: 1) Cost of hiring a 4X4 is USD 250 in Aweil. It will be cheaper to outright purchase vehicles than to hire them for the proposed activities; 2) Availability of vehicles is low, especially for long periods and when used off-road. Not having a reliable vehicle to transport materials and personnel can jeopardize project implementation; 3) Security considerations require that a trained and experienced driver is available at all times who follows UNDP norms and protocols for the safety of project staff and visiting consultants and dignitaries. Calculation: unit cost @ 55000 X 1 (units) X 1 (times) [Year 1: 55000] Sub-total = 55000 Total = 70000
16	72300 Materials & Goods i) Output 2.1.: Establishing demonstration sites on progressive farmer fields Setting up demonstrations on progressive farmer sites, five farmers per boma per year.. Calculation: unit cost @ 700 X 60 (units) X 4 (times) [, Year 2: 42000, Year 3: 42000, Year 4: 42000, Year 5: 42000] Sub-total = 168000
	ii) Output 2.1.: Excursions to cattle markets with progressive pastoralists and extension staff. Provision of veterinary supplies, materials and care (on two locations at each site). Calculation: unit cost @ 5000 X 6 (units) X 4 (times) [Year 1: 30000, Year 2: 30000, Year 3: 30000, Year 4: 30000] Sub-total = 120000
	iii) Output 2.1.: Identifying sites and setting up plant nurseries Preparation and planting of farms (2 per boma, 12 bomas, yearly). Calculation: unit cost @ 750 X 12 (units) X 4 (times) [, Year 2: 18000, Year 3: 18000] Sub-total = 36000

	iv) Output 2.1.: Identifying sites and setting up plant nurseries Supply of seeds and implements (5 per boma, 12 bomas, yearly.. Calculation: unit cost @ 2000 X 58.0697 (units) X 3 (times) [, Year 2: 114978, Year 3: 114978, Year 4: 59231, Year 5: 59231.2] Sub-total = 348418
	v) Output 2.1.: Training cum demonstration camps for pastoralists Provision of veterinary supplies, materials and care (2 per boma, 12 bomas). Calculation: unit cost @ 1200 X 24 (units) X 4 (times) [Year 1: 28800, Year 2: 28800, Year 3: 28800, Year 4: 28800] Sub-total = 115200
	vi) Output 2.1.: Training cum demonstration camps for pastoralists Upgrading facilities on cattle camps and holding pens (2 per boma, 12 bomas). Calculation: unit cost @ 5000 X 24 (units) X 1 (times) [Year 1: 30000, Year 2: 30000, Year 3: 30000, Year 4: 30000] Sub-total = 120000
	vii) Output 2.2.: Formation of community based groups, associations and committees for project implementation. Annual fuel and maintenance of motorcycle. Calculation: unit cost @ 1000 X 3 (units) X 5 (times) [Year 1: 3000, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 15000
	viii) Output 2.2.: Materials for CSA distributed to attending farmer groups. Kits of implements including lining for irrigation channels and piping for drip irrigation. 20 per boma, 12 bomas.. Calculation: unit cost @ 50 X 240 (units) X 4 (times) [, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 48000
	ix) Output 2.2.: Materials for CSA distributed to attending farmer groups. Packages of saplings/seedlings of suitable varieties, 20 per boma, 12 bomas. Calculation: unit cost @ 50 X 240 (units) X 4 (times) [, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 48000
	x) Output 2.2.: Materials for CSA distributed to attending farmer groups. Seed packages. 20 per boma, 12 bomas.. Calculation: unit cost @ 10 X 240 (units) X 4 (times) [, Year 2: 2400, Year 3: 2400, Year 4: 2400, Year 5: 2400] Sub-total = 9600
	xi) Output 2.2.: Materials for CSA distributed to attending pastoral groups and associations. Packages of saplings/seedlings of suitable varieties. 20 per boma.. Calculation: unit cost @ 30 X 240 (units) X 4 (times) [, Year 2: 7200, Year 3: 7200, Year 4: 7200, Year 5: 7200] Sub-total = 28800
	xii) Output 2.2.: Materials for CSA distributed to attending pastoral groups and associations. Veterinary kits. 20 per boma, 12 bomas. Calculation: unit cost @ 150 X 240 (units) X 4 (times) [, Year 2: 36000, Year 3: 36000, Year 4: 36000, Year 5: 36000] Sub-total = 144000
	xiii) Output 2.2.: Providing extension services to crop farmers. Materials for CSA: Kits of implements and lining for irrigation channels, piping for drip irrigation. 20 per boma.. Calculation: unit cost @ 50 X 240 (units) X 8 (times) [, Year 2: 24000, Year 3: 24000, Year 4: 24000, Year 5: 24000] Sub-total = 96000
	xiv) Output 2.2.: Providing extension services to crop farmers. Materials for CSA: packages of saplings/seedlings of suitable varieties. 20 per boma.. Calculation: unit cost @ 50 X 240 (units) X 8 (times) [, Year 2: 24000, Year 3: 24000, Year 4: 24000, Year 5: 24000] Sub-total = 96000
	xv) Output 2.2.: Providing extension services to crop farmers. Materials for CSA: seed kits. 20 per boma.. Calculation: unit cost @ 30 X 240 (units) X 8 (times) [, Year 2: 14400, Year 3: 14400, Year 4: 14400, Year 5: 14400] Sub-total = 57600
	xvi) Output 2.2.: Providing extension services to vegetable farmers. Materials for CSA: Kits of implements and lining for irrigation channels, piping for drip irrigation. 10 per boma.. Calculation: unit cost @ 50 X 120 (units) X 8 (times) [, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 48000
	xvii) Output 2.2.: Providing extension services to vegetable farmers. Materials for CSA: packages of saplings/seedlings of suitable varieties. 10 per boma.. Calculation: unit cost @ 50 X 120 (units) X 8 (times) [, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 48000

	xviii) Output 2.2.: Providing extension services to vegetable farmers. Materials for CSA: seed packages, 10 per boma, 12 bomas.. Calculation: unit cost @ 30 X 120 (units) X 8 (times) [, Year 2: 7200, Year 3: 7200, Year 4: 7200, Year 5: 7200] Sub-total = 28800
	xix) Output 2.2.: Providing veterinary and animal health services to pastoral and agro-pastoral groups . Packages of saplings/seedlings of suitable varieties, 10 per boma.. Calculation: unit cost @ 50 X 120 (units) X 8 (times) [, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 48000
	xx) Output 2.2.: Providing veterinary and animal health services to pastoral and agro-pastoral groups . Veterinary supplies (vaccinations, medicines) to each boma. Calculation: unit cost @ 1000 X 12 (units) X 8 (times) [, Year 2: 24000, Year 3: 24000, Year 4: 24000, Year 5: 24000] Sub-total = 96000
	xxi) Output 2.4.: Providing support for income diversification to vulnerable groups Beehives and implements for bee keeping (2 groups per boma, 12 bomas).. Calculation: unit cost @ 50 X 24 (units) X 10 (times) [Year 1: 2400, Year 2: 2400, Year 3: 2400, Year 4: 2400, Year 5: 2400] Sub-total = 12000
	xxii) Output 2.4.: Providing support for income diversification to vulnerable groups Implements and containers for collecting and processing gum arabic (2 groups per boma, 12 bomas).. Calculation: unit cost @ 100 X 24 (units) X 10 (times) [Year 1: 4800, Year 2: 4800, Year 3: 4800, Year 4: 4800, Year 5: 4800] Sub-total = 24000
	xxiii) Output 2.4.: Providing support for income diversification to vulnerable groups Small ruminants and poultry (2 groups per boma, 12 bomas).. Calculation: unit cost @ 150 X 24 (units) X 10 (times) [Year 1: 7200, Year 2: 7200, Year 3: 7200, Year 4: 7200, Year 5: 7200] Sub-total = 36000
	xxiv) Output 2.4.: Training and capacity enhancement of pond user and fishing groups Distribution of fishing gear, lining for ponds and meshes to remove debris and maintain water quality (2 fisher group reps per boma, 12 bomas). Calculation: unit cost @ 250 X 24 (units) X 5 (times) [Year 1: 6000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 30000 Total = 1821418
17	72400 Communic & Audio Visual Equip i) Output 2.2.: Training materials disseminated. SD cards (10 CBO reps per boma, 12 bomas). Calculation: unit cost @ 5 X 120 (units) X 4 (times) [, Year 2: 600, Year 3: 600, Year 4: 600, Year 5: 600] Sub-total = 2400. Repeated with 2 target groups/sites. Sub-total = 4800
	ii) Output 2.2.: Training materials disseminated. Solar/ hand crank radios with MP3 players and card slots (10 CBO reps per boma, 12 bomas). Calculation: unit cost @ 50 X 120 (units) X 4 (times) [, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 24000. Repeated with 2 target groups/sites. Sub-total = 48000 Total = 52800
18	72600 Grants i) Output 2.4.: Providing support for income diversification to vulnerable groups Grant to NGO to support ten community saving groups each year who are engaged in livelihood diversification including financial literacy trainings.. Calculation: unit cost @ 750 X 30 (units) X 5 (times) [, Year 2: 28125, Year 3: 28125, Year 4: 28125, Year 5: 28125] Sub-total = 112500 Total = 112500

19	72800 Information Technology Equipmt i) Output 2.2: Laptop computers for new Agriculture and Livelihoods staff to foster communication and reporting Laptops to foster communication and reporting. Calculation: unit cost @ 1260 X 2 (units) X 1 (times) [Year 1: 2520] Sub-total = 2520 Total = 2520
20	74200 Audio Visual&Print Prod Costs i) Output 2: Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Calculation: unit cost @ 119037 [Year 1: 23807, Year 2: 23807, Year 3: 23807, Year 4: 23807, Year 5: 23809] Sub-total = 119,037
	ii) Output 2.2.: Training materials disseminated. Print materials (20 CBO reps per boma, 12 bomas). Calculation: unit cost @ 1000 X 1 (units) X 4 (times) [, Year 2: 1000, Year 3: 1000, Year 4: 1000, Year 5: 1000] Sub-total = 4000. Repeated with 2 target groups/sites. Sub-total = 8000 Total = 127037
21	74700 Transport i) Output 2.4: Transportation of materials (seeds, agricultural tools and kits, veterinary items and kits, and other materials which can not be purchased in Aweil) from Juba to Aweil Cargo transportation by truck rental from Juba to Aweil. Calculation: unit cost @ 3000 X 1 (units) X 8 (times) [Year 1: 3000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 3000] Sub-total = 24000 Total = 24000
22	75700 Training i) Output 2.1.: Conducting study tours between progressive farmers, extension staff and agricultural experts including site visits. Venue and refreshments for participants (5 per boma for 12 bomas). Calculation: unit cost @ 20 X 60 (units) X 5 (days) X 5 (times) [Year 1: 6000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 30000
	ii) Output 2.1.: Identification, training and capacity building of progressive pastoralists through excursions and exchange visits Venue and refreshments for participants (4 per boma, 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 5 (days) X 5 (times) [Year 1: 4800, Year 2: 4800, Year 3: 4800, Year 4: 4800, Year 5: 4800] Sub-total = 24000
	iii) Output 2.1.: Identify and create networks by organizing visits between livestock owners and private sector suppliers. Venue and refreshments for participants (4 per boma, 12 bomas).. Calculation: unit cost @ 20 X 48 (units) X 5 (days) X 4 (times) [Year 1: 4800, Year 2: 4800, Year 3: 4800, Year 4: 4800] Sub-total = 19200
	iv) Output 2.1.: Organizing visits and exchange events between farmers. Venue and refreshments for participants (20 per boma, 12 bomas). Calculation: unit cost @ 20 X 240 (units) X 2 (days) X 4 (times) [, Year 2: 9600, Year 3: 9600, Year 4: 9600, Year 5: 9600] Sub-total = 38400
	v) Output 2.1.: Training and capacity building of nursery groups including women groups Venue and refreshments for participants (5 per boma, 12 boma,wach years). Calculation: unit cost @ 20 X 60 (units) X 5 (days) X 5 (times) [Year 1: 6000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 30000

	vi) Output 2.2.: Annual pastoral field schools held in progressive pastoralist camps and settlements. Venue and food for participating pastoralists (00 CBO reps per boma, 12 bomas). Calculation: unit cost @ 20 X 120 (units) X 3 (days) X 4 (times) [, Year 2: 7200, Year 3: 7200, Year 4: 7200, Year 5: 7200] Sub-total = 28800
	vii) Output 2.2.: Awareness raising and gender sensitisation of CBOs Venue and refreshments for participants (5 CBO reps per boma, 12 bomas). Calculation: unit cost @ 20 X 60 (units) X 2 (days) X 5 (times) [, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 12000
	viii) Output 2.2.: Build women's leadership capacity through trainings for both men and women in local institutions and CBOs Venue and refreshments for participants (4 CBO reps per boma, 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 3 (days) X 5 (times) [, Year 2: 3600, Year 3: 3600, Year 4: 3600, Year 5: 3600] Sub-total = 14400
	ix) Output 2.2.: Farmer field schools held in progressive farmer owned plots Venue and food for participating farmers (20 CBO reps per boma, 12 bomas). Calculation: unit cost @ 11 X 240 (units) X 3 (days) X 4 (times) [, Year 2: 7920, Year 3: 7920, Year 4: 7920, Year 5: 7920] Sub-total = 31680
	x) Output 2.2.: Identification and mobilisation of groups and committees for proposed activities. Venue and refreshments for participants (10 persons per boma). Calculation: unit cost @ 20 X 120 (units) X 2 (days) X 2 (times) [Year 1: 9600] Sub-total = 9600
	xi) Output 2.2.: Identifying and training key informers within pastoral groups. Venue hire for workshop at Aweil for 30 participants plus 5 staff. Calculation: unit cost @ 20 X 35 (units) X 5 (days) X 5 (times) [Year 1: 3500, Year 2: 3500, Year 3: 3500, Year 4: 3500, Year 5: 3500] Sub-total = 17500
	xii) Output 2.2.: Training and facilitation of project staff and extension services in collection and transmission of data, including on social and environmental safeguards and gender and community engagement to PMU Venue hire for workshop at Aweil for 30 participants. Calculation: unit cost @ 20 X 30 (units) X 5 (days) X 5 (times) [Year 1: 3000, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 15000
	xiii) Output 2.2.: Training representatives of CBOs in leadership and organisational functions and procedures. Venue and refreshments for participants (10 CBO reps per boma, 12 bomas). Calculation: unit cost @ 20 X 120 (units) X 2 (days) X 5 (times) [, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 6000] Sub-total = 24000
	xiv) Output 2.4.: Designing a mobile ICT based system for recording and communicating records maintained by focal points in farming and pastoral communities Venue and food for participating key farmers and pastoralists (4 per boma, 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 5 (days) X 5 (times) [Year 1: 4800, Year 2: 4800, Year 3: 4800, Year 4: 4800, Year 5: 4800] Sub-total = 24000
	xv) Output 2.4.: Training and capacity enhancement of pond user and fishing groups Venue and refreshments for participants (4 per boma, 12 boma, twice a years). Calculation: unit cost @ 20 X 48 (units) X 5 (days) X 5 (times) [Year 1: 4800, Year 2: 4800, Year 3: 4800, Year 4: 4800, Year 5: 4800] Sub-total = 24000
	xvi) Output 2.4.: Training and facilitation of focal points and volunteers for recording monitoring data Venue hire for workshop at Aweil for 30 participants plus 5 staff. Calculation: unit cost @ 20 X 35 (units) X 5 (days) X 5 (times) [Year 1: 3500, Year 2: 3500, Year 3: 3500, Year 4: 3500, Year 5: 3500] Sub-total = 17500

	xvii) Output 2.4.: Training and facilitation of project staff and extension services in collection and transmission of data to PMU Venue hire for workshop at Aweil for 20 participants. Calculation: unit cost @ 20 X 20 (units) X 5 (days) X 5 (times) [Year 1: 2000, Year 2: 2000, Year 3: 2000, Year 4: 2000, Year 5: 2000] Sub-total = 10000 Total = 370080
23	71600 Travel i) Output 3.1: Vehicle hire to support the transportation of staff and light materials to project sites. This is intended to supplement use of the purchased vehicle to ensure staff movement between two counties. Vehicle hire to support staff for Component 2 activities. Calculation: unit cost @ 250 X 1 (units) X 60 (times) [Year 1: 3000, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 15000
	ii) Output 3.1.: Consulting with local authorities to identify key households to include in watershed committees DSA for meeting participants. Calculation: unit cost @ 11 X 30 (units) X 20 (days) X 1 (times) [Year 1: 6600] Sub-total = 6600
	iii) Output 3.1.: Validating technical drawings and plans with the watershed committees. DSA for meeting participants. Calculation: unit cost @ 11 X 30 (units) X 20 (days) X 1 (times) [Year 1: 6600] Sub-total = 6600
	iv) Output 3.4.: Training of water user groups for administration and O&M DSA for meeting participants (4 per boma). Calculation: unit cost @ 11 X 48 (units) X 5 (days) X 10 (times) [, Year 2: 6600, Year 3: 6600, Year 4: 6600, Year 5: 6600] Sub-total = 26400 Total = 54600
24	71800 Contractual Services-Imp Partn i) Output 3.1: Costs for Senior Project Manager toward project execution; This staff is responsible for oversight and management of all Components and ensuring quality and timely implementation. S/he will also provide technical expertise in climate related programming. S/he will also lead coordination with UNDP and with relevant counterparts in the three government ministries. Senior Project Manager @15% charged to Component 3. Calculation: unit cost @ 1575 X 1 (units) X 60 (times) [Year 1: 18900, Year 2: 18900, Year 3: 18900, Year 4: 18900, Year 5: 18900] Sub-total = 94500
	ii) Output 3.1: Costs for Water Officer towards project execution; This staff is responsible for supporting the Manager in the implementation of outputs under Component 2, especially identifying and mobilizing beneficiaries, delivering training according to his/her expertise where relevant, and supporting monitoring efforts. Water Officers @100% charged to Component 3 for 48 months. Calculation: unit cost @ 2249 X 1 (units) X 48 (times) [Year 1: 13494, Year 2: 26988, Year 3: 26988, Year 4: 26988, Year 5: 13494] Sub-total = 107952
	iii) PMU : Costs for Northern Bahr el Ghazal Area Manager towards project execution; This staff is responsible for overseeing the support functions in Northern Bahr el Ghazal. He will be responsible for supporting the Project Manager in coordinating adequate human resources, procurement, and logistics support to the project. NBeG Area Manager @5% charged to Component 3. Calculation: unit cost @ 179.15 X 1 (units) X 60 (times) [Year 1: 2149, Year 2: 2149, Year 3: 2149, Year 4: 2149, Year 5: 2153] Sub-total = 10749 Total = 213201
25	72100 Contractual Services-Companies i) Output 3.2.: Organising watering and replanting of dead saplings in the micro-watersheds. Watering and replanting. Aroyo and Akuem (3,000 ha). Calculation: unit cost @ 15 X 2 (units) X 1500 (ha) [, Year 2: 11250, Year 3: 11250, Year 4: 11250, Year 5: 11250] Sub-total = 45000

	ii) Output 3.2.: Undertaking assisted natural regeneration in catchment areas. Planting/afforestation Aroyo and Akuem (3,000 ha). Calculation: unit cost @ 106758 X 1 (units) [, Year 2: 26689, Year 3: 26689, Year 4: 26689, Year 5: 26691] Sub-total = 106758
	iii) Output 3.2.: Undertaking soil and water conservation measures on farmer fields. Soil & water conservation Aroyo, Akuem and Wardit (300 ha), multiple sites as identified during inception phase.. Calculation: unit cost @ 100 X 3 (units) X 100 (ha) [, Year 2: 7500, Year 3: 7500, Year 4: 7500, Year 5: 7500] Sub-total = 30000
	iv) Output 3.3.: Constructing and maintaining fences and enclosures to protect water harvesting points on community lands. Fence maintenance. Aroyo, Akuem and Wardit (300 ha). Calculation: unit cost @ 20 X 3 (units) X 250 (ha) [, Year 2: 3750, Year 3: 3750, Year 4: 3750, Year 5: 3750] Sub-total = 15000
	v) Output 3.3.: Constructing flood control and drainage structures on farm lands. Flood control. Aroyo, Akuem and Wardit (300 ha). Calculation: unit cost @ 250 X 3 (units) X 100 (ha) [, Year 2: 18750, Year 3: 18750, Year 4: 18750, Year 5: 18750] Sub-total = 75000
	vi) Output 3.3.: Constructing flood control structure on community lands. Flood control. Aroyo and Akuem (5,000 ha). Calculation: unit cost @ 94.88125 X 2 (units) X 2500 (ha) [, Year 2: 118601, Year 3: 118601, Year 4: 118601, Year 5: 118603.25] Sub-total = 474406
	vii) Output 3.3.: Organizing maintenance camps for flood control structures on farm lands. Maintenance camps. Aroyo, Akuem and Wardit (300 ha). Calculation: unit cost @ 20 X 3 (units) X 100 (ha) [, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 6000
	viii) Output 3.3.: Organizing watering and replanting of dead saplings on private farms and homesteads. Watering and replanting. Aroyo, Akuem and Wardit (300 ha). Calculation: unit cost @ 20 X 3 (units) X 100 (ha) [, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 6000
	ix) Output 3.3.: Vegetative strengthening of structures. Planting. Aroyo and Akuem (2,000 ha). Calculation: unit cost @ 50 X 2 (units) X 1000 (ha) [, Year 2: 25000, Year 3: 25000, Year 4: 25000, Year 5: 25000] Sub-total = 100000
	x) Output 3.4.: Installing pumps and protecting water points from contamination. Platforms and fencing to separate livestock and people. 4 per boma.. Calculation: unit cost @ 100 X 48 (units) [, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 4800
	xi) Output 3.4.: Installing pumps and protecting water points from contamination. Solar pumps. Two per site.. Calculation: unit cost @ 10000 X 6 (units) [, Year 2: 15000, Year 3: 15000, Year 4: 15000, Year 5: 15000] Sub-total = 60000
	xii) Output 3.4.: Installing pumps and protecting water points from contamination. Treadle pumps. 4 per boma.. Calculation: unit cost @ 400 X 48 (units) [, Year 2: 4800, Year 3: 4800, Year 4: 4800, Year 5: 4800] Sub-total = 19200
	xiii) Output 3.4.: Restoring and constructing community water harvesting structures. Hafirs restored, 2 in Aroyo, 1 in Akuem catchments.. Calculation: unit cost @ 60000 X 3 (units) [, Year 2: 45000, Year 3: 45000, Year 4: 45000, Year 5: 45000] Sub-total = 180000
	xiv) Output 3.4.: Restoring and constructing community water harvesting structures. Water points/ponds created or restored. 3 per boma. . Calculation: unit cost @ 1500 X 36 (units) [, Year 2: 13500, Year 3: 13500, Year 4: 13500, Year 5: 13500] Sub-total = 54000
	xv) Output 3.4.: Restoring and drilling community owned shallow bores holes and wells. Shallow wells dug or repaired. 3 per boma.. Calculation: unit cost @ 1000 X 18 (units) [, Year 2: 4500, Year 3: 4500, Year 4: 4500, Year 5: 4500] Sub-total = 18000 Total = 1194164
26	72200 Equipment and Furniture i) Output 3.1.: Consulting with local authorities to identify key households to include in watershed committees Procurement of motorcycles, 1 per site.. Calculation: unit cost @ 5000 X 3 (units) X 1 (times) [Year 1: 15000] Sub-total = 15000

	ii) Output 3.4.: Linking water points with small scale and micro-irrigation. Procurement of micro-irrigation kits (10 kits per year for 3 sites). Calculation: unit cost @ 500 X 30 (units) X 5 (times) [, Year 2: 18750, Year 3: 18750, Year 4: 18750, Year 5: 18750] Sub-total = 75000 Total = 90000
27	72300 Materials & Goods i) Output 3.1.: Consulting with local authorities to identify key households to include in watershed committees Annual fuel and maintenance of motorcycle.. Calculation: unit cost @ 1000 X 3 (units) X 5 (times) [Year 1: 3000, Year 2: 3000, Year 3: 3000, Year 4: 3000, Year 5: 3000] Sub-total = 15000 Total = 15000
28	72600 Grants i) Output 3.4.: Support water user groups to set up a fee and savings structure and financial literacy training. Grant to NGO to support registered water user groups for savings and financial literacy. 10 groups per site each year. Calculation: unit cost @ 250 X 30 (units) X 5 (times) [, Year 2: 9375, Year 3: 9375, Year 4: 9375, Year 5: 9375] Sub-total = 37500 Total = 37500
29	72800 Information Technology Equipmt i) Output 3.1: Laptop computers for new Water staff to foster communication and reporting Laptops to foster communication and reporting. Calculation: unit cost @ 1260 X 2 (units) X 1 (times) [Year 1: 2520] Sub-total = 2520 Total = 2520
30	74200 Audio Visual&Print Prod Costs i) Output 3: Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Calculation: unit cost @ 81201 [Year 1: 16240, Year 2: 16240, Year 3: 16240, Year 4: 16240, Year 5: 16241] Sub-total = 81201
	ii) Output 3.1.: Resource use mapping of watershed areas and resource use patterns of settlements in selected sites building on activity 1.1.4. Printouts, stationary and materials for participatory exercises (one per boma). Calculation: unit cost @ 500 X 12 (units) X 1 (times) [Year 1: 6000] Sub-total = 6000 Total = 87201
31	74700 Transport i) Output 3.4: Transportation of materials for the restoration or construction of materials for water infrastructures and for tools and other items for watershed management activities from Juba to Aweil Cargo transportation by truck rent from Juba to Aweil. Calculation: unit cost @ 3000 X 1 (units) X 8 (times) [Year 1: 3000, Year 2: 6000, Year 3: 6000, Year 4: 6000, Year 5: 3000] Sub-total = 24000 Total = 24000
32	75700 Training i) Output 3.1.: Conducting community meetings for forming watershed committees and selecting of office bearers Venue and refreshments for participants (4 per boma, 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 20 (days) X 1 (times) [Year 1: 19200] Sub-total = 19200

	ii) Output 3.1.: Consulting with local authorities to identify key households to include in watershed committees Venue and refreshments for participants in meeting (10 per site). Calculation: unit cost @ 20 X 30 (units) X 20 (days) X 1 (times) [Year 1: 12000] Sub-total = 12000
	iii) Output 3.1.: Resource use mapping of watershed areas and resource use patterns of settlements in selected sites building on activity 1.1.4. Venue and refreshments for participants (4 per boma, 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 20 (days) X 1 (times) [Year 1: 19200] Sub-total = 19200
	iv) Output 3.1.: Validating technical drawings and plans with the watershed committees. Venue and refreshments for participants (10 per watershed committee/site). Calculation: unit cost @ 20 X 30 (units) X 20 (days) X 1 (times) [Year 1: 12000] Sub-total = 12000
	v) Output 3.4.: Training of water user groups for administration and O&M Venue and refreshments for participants (4 per boma for 12 bomas). Calculation: unit cost @ 20 X 48 (units) X 5 (days) X 10 (times) [, Year 2: 12000, Year 3: 12000, Year 4: 12000, Year 5: 12000] Sub-total = 48000 Total = 110400
33	72100 Contractual Services-Companies i) Output 3.2.: Constructing and maintaining fences and enclosures. Fencing and enclosures. Aroyo and Akuem (500 ha) using local materials. Costs for all sites. Calculation: unit cost @ 60242 X 1 (units) [, Year 2: 15060, Year 3: 15060, Year 4: 15060, Year 5: 15062] Sub-total = 60242
	ii) Output 3.2.: Organising maintenance camps through watershed committees. Maintenance camp. Aroyo and Akuem (10,000 ha). Calculation: unit cost @ 10 X 2 (units) X 5000 (ha) [, Year 2: 25000, Year 3: 25000, Year 4: 25000, Year 5: 25000] Sub-total = 100000
	iii) Output 3.2.: Setting up and monitoring no-grazing zones. Protection measure for grazing. Aroyo and Akuem (1,000 ha). Calculation: unit cost @ 13 X 2 (units) X 500 (ha) [, Year 2: 3250, Year 3: 3250, Year 4: 3250, Year 5: 3250] Sub-total = 13000
	iv) Output 3.2.: Undertaking soil and water conservation measures in catchment areas. SWC in Aroyo and Akuem catchments (totally 10,000 ha).. Calculation: unit cost @ 74 X 2 (units) X 5000 (ha) [, Year 2: 185000, Year 3: 185000, Year 4: 185000, Year 5: 185000] Sub-total = 740000 Total = 913242
34	71600 Travel i) PMU : Quarterly travel for Water Engineer/Manager; provision for quarterly flights from Aweil to Juba for R&R benefit for relocatable national staff assignees who have deployed from Juba to the field site. Travel from Aweil to Juba for R&R in hardship posting. Calculation: unit cost @ 550 X 18 (times) [Year 1: 1650, Year 2: 2200, Year 3: 2200, Year 4: 2200, Year 5: 1650] Sub-total = 9900
	ii) PMU : Training and facilitation of project staff and extension services in collection and transmission of data to PMU DSA for local for site visits for 2 PSC members or staff for 7 days twice a year for 5 years.. Calculation: unit cost @ 91 X 2 (units) X 14 (days) X 5 (times) [Year 1: 2548, Year 2: 2548, Year 3: 2548, Year 4: 2548, Year 5: 2548] Sub-total = 12740
	iii) PMU: Mid-term GEF and/or LDCF/SCCF Core indicators and METT or other required Tracking Tools PMU: Annually prior to GEF PIR. This will include GEF core indicators. Involves data collection through travel to sites and offices by PMU staff. Calculation: unit cost @ 5000 X 1 (units) [Year 1: 1000, Year 2: 1000, Year 3: 1000, Year 4: 1000, Year 5: 1000] Sub-total = 5000
	iv) PMU: Terminal LDCF Core indicators PMU: Travel by project manager and other staff to sites and offices to gather data on core indicators using tracking tools. Calculation: unit cost @ 5000 X 1 (units) [, Year 5: 5000] Sub-total = 5000 Total = 32640

35	71800 Contractual Services-Imp Partn i) Output PMU: Costs for Project Manager towards project execution; The staff will be hired on a full-time basis and responsible for overseeing implementation and monitoring of outputs. It is also expected that the Manager will bring climate-related expertise to the project. S/he will also be responsible for coordination with relevant counterparts within the partner government line ministries. Project Manager @75% charged to PMU. Calculation: unit cost @ 2781.75 X 1 (units) X 60 (times) [Year 1: 33381, Year 2: 33381, Year 3: 33381, Year 4: 33381, Year 5: 33381] Sub-total = 166905
	ii) PMU : Costs for Finance and Administration Officer towards project execution; This staff will ensure that the project expenses are captured and reported correctly, and all controls are in place to ensure adequate finance processes. This position will be shared with other projects in Greater Bahr el Ghazal. Finance and Administration Officer @50% charged to PMU (other 50% shared with other projects). Calculation: unit cost @ 1089.5 X 1 (units) X 60 (times) [Year 1: 13074, Year 2: 13074, Year 3: 13074, Year 4: 13074, Year 5: 13074] Sub-total = 65370 Total = 232275
36	72500 Supplies i) PMU : Visibility Items: The project will procure materials with project information, including WVSS, UNDP, and government names and logos. This will include sign boards for static project sites, banners for events, and stickers for labeling assets. It may also include vests and caps for staff. Visibility to communicate project information. Calculation: unit cost @ 10000 X 1 (units) [Year 1: 10000] Sub-total = 10000 Total = 10000
37	72800 Information Technology Equipmt i) PMU : Laptop for Project Manager to foster communication and reporting Laptop to foster communication and reporting. Calculation: unit cost @ 1260 X 1 (units) X 1 (times) [Year 1: 1260] Sub-total = 1260 Total = 1260
38	74100 Professional Services i) PMU : Audit PMU: Audit firm appointed for project audits. Calculation: unit cost @ 40000 X 1 (units) [Year 1: 8000, Year 2: 8000, Year 3: 8000, Year 4: 8000, Year 5: 8000] Sub-total = 40000 Total = 40000
39	74200 Audio Visual&Print Prod Costs i) Output PMU PMU : Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Project Support Services: Contribution to WVSS project support services rate including human resources, procurement, and logistics staffing services, mobile phone credit, stationaries and consumable supplies, and internet subscriptions. Calculation: unit cost @ 127216 [Year 1: 25443, Year 2: 25443, Year 3: 25443, Year 4: 25443, Year 5: 25444] Sub-total = 127216 Total = 127216
40	75700 Training i) PMU : Inception Workshop Inception workshop within 60 days of CEO approval. Calculation: unit cost @ 3500 X 1 (units) X 1 (times) [Year 1: 3500] Sub-total = 3500 Total = 3500

41	71300 Local Consultants Local consultants for conducting Mid-Term review at Year 3 = 12,000 and terminal Evaluation at Year 5 = 12,000

LDCF Budget administered by UNIDO

Atlas Activity (GEF Component)	Atlas Implementing Agent (Responsible Party/ , IP, or UNDP)	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
Component 1: Institutional capacities for gender-responsive climate change adaptation across the agricultural sector.	UNIDO		LDCF	71200	International Consultants	32,500	0	0	0	0	32,500	UNIDO 1
				71300	Local Consultants	46,500	7,500	7,500	7,500	7,500	76,500	UNIDO 2
				71400	Contractual Services – Individ	576	0	0	0	0	576	UNIDO 3
				71600	Travel	65,232	15,447	15,249	14,754	14,358	125,040	UNIDO 4
				74200	Audio Visual&Print Prod Costs	5,672	4,922	2,522	1,772	1,776	16,664	UNIDO 5
				75700	Training	10,620	9,900	9,600	9,600	9,000	48,720	UNIDO 6
					Sub-total of outcome	**161,100**	**37,769**	**34,871**	**33,626**	**32,634**	**300,000**	
Component 2 Climate change resilient agriculture and food value chains.	UNIDO	62160	LDCF	71300	Local Consultants	45,600	18,600	15,000	15,000	15,000	109,200	UNIDO 7
				71400	Contractual Services – Individ	60,000	0	0	0	0	60,000	UNIDO 8
				71600	Travel	94,109	47,666	42,628	42,628	42,628	269,659	UNIDO 9
				72200	Equipment and Furniture	201,000	0	0	0	0	201,000	UNIDO 10
				72300	Materials & Goods	168,336	42,000	42,000	42,000	0	294,336	UNIDO 11
				74200	Audio Visual&Print Prod Costs	1,261	1,261	1,261	1,261	1,261	6,305	UNIDO 12
				74700	Transport	70,000	0	0	0	0	70,000	UNIDO 13
				75700	Training	52,900	52,900	52,900	52,900	52,900	264,500	UNIDO 14
					Sub-total of outcome	**693,206**	**162,427**	**153,789**	**153,789**	**111,789**	**1,275,000**	

					Total (LDCF administered by UNIDO)	**854,306**	**200,196**	**188,660**	**187,415**	**144,423**	**1,575,000**	

UNIDO Budget Note description

No.	Note
UNIDO 1	71200 International Consultants i) Output 1.2.: Developing relevant training materials on introducing climate adaptation solutions in value chain Fee for International Consultant . Calculation: unit cost @ 650 X 1 (units) X 20 (days) X 1 (times) [Year 1: 13000] Sub-total = 13000
	ii) Output 1.2.: Undertake national and sub national dialogue on incorporating strategies for climate-friendly agribusiness value chain standards into the South Sudan Industrial Policy Framework Draft, 2018 International consultant. Calculation: unit cost @ 650 X 1 (units) X 30 (days) X 1 (times) [Year 1: 19500] Sub-total = 19500 Total = 32500
UNIDO 2	71300 Local Consultants i) Output 1.2.: Development and dissemination of Information, Education and Communication (IEC) and value chain extension materials (Charts, videos, flyers etc.) Fee for the National consultant to develop the Climate friendly Value chain IEC materials and messages translated in local language . Calculation: unit cost @ 300 X 1 (units) X 30 (days) X 1 (times) [Year 1: 9000] Sub-total = 9000
	ii) Output 1.2.: Conduct rapid market analysis to identify the potential commodities Fee for National consultant. Calculation: unit cost @ 300 X 1 (units) X 30 (days) X 1 (times) [Year 1: 9000] Sub-total = 9000
	iii) Output 1.2.: Conduct Stakeholder Value chain support policy dialogue to identified gaps for Climate change adaptation mainstreaming Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1500, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 7500
	i) Output 1.2.: Developing Specific training materials for each of the Five (5) identify Value chain commodities Local consultant. Calculation: unit cost @ 300 X 1 (units) X 20 (days) X 1 (times) [Year 1: 6000] Sub-total = 6000
	ii) Output 1.2.: Implementing the upgraded strategies for the selected 5-6 potential Value chain commodities Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1500, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 7500
	iii) Output 1.2.: Organize trainings to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1500, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 7500

	iv) Output 1.2.: Training of public-sector officials on best practices in climate friendly agribusiness value-chain governance Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1500, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 7500
	v) Output 1.2.: Undertake a value chain Analysis and Mapping of non- agro and agro-based commodities Fee for Value chain National consultant. Calculation: unit cost @ 300 X 1 (units) X 20 (days) X 1 (times) [Year 1: 6000] Sub-total = 6000
	vi) Output 1.2.: Undertake national and sub national dialogue on incorporating strategies for climate-friendly agribusiness value chain standards into the South Sudan Industrial Policy Framework Draft, 2018 Local consultant. Calculation: unit cost @ 300 X 1 (units) X 30 (days) X 1 (times) [Year 1: 9000] Sub-total = 9000
	vii) Output 1.2.: Workshops on climate-proofing agri-business commodities value chain with value chain actors Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1500, Year 2: 1500, Year 3: 1500, Year 4: 1500, Year 5: 1500] Sub-total = 7500 Total = 76500
UNIDO 3	71400 Contractual Services – Individ i) Output 1.2.: Conduct rapid market analysis to identify the potential commodities Hiring of Enumerator for data collection 12 enumerators for 2 days in each of the 12 Boma . Calculation: unit cost @ 12 X 12 (units) X 2 (days) X 1 (times) [Year 1: 288] Sub-total = 288
	ii) Output 1.2.: Undertake a value chain Analysis and Mapping of non- agro and agro-based commodities Hiring of Enumerator for data collection . Calculation: unit cost @ 12 X 12 (units) X 2 (days) X 1 (times) [Year 1: 288] Sub-total = 288 Total = 576
UNIDO 4	71600 Travel i) Output 1.2.: Development and dissemination of Information, Education and Communication (IEC) and value chain extension materials (Charts, videos, flyers etc.) DSA for the field staffs to disseminate printing materials . Calculation: unit cost @ 11 X 12 (units) X 5 (days) X 3 (times) [Year 1: 990, Year 2: 495, Year 3: 495] Sub-total = 1980
	ii) Output 1.2.: Development and dissemination of Information, Education and Communication (IEC) and value chain extension materials (Charts, videos, flyers etc.) DSA for the National Consultant . Calculation: unit cost @ 91 X 1 (units) X 30 (days) X 1 (times) [Year 1: 2730] Sub-total = 2730
	iii) Output 1.2.: Advocacy with relevant public sector departments in the targeted watershed to regulate the adoption of environmentally friendly value chain practices and technologies DSA for field staff (2 per site). Calculation: unit cost @ 11 X 6 (units) X 2 (days) X 5 (times) [Year 1: 165, Year 2: 165, Year 3: 132, Year 4: 132, Year 5: 66] Sub-total = 660
	iv) Output 1.2.: Advocacy with relevant public sector departments in the targeted watershed to regulate the adoption of environmentally friendly value chain practices and technologies DSA for public and private sector participants during advocacy meeting (10 per site for 3 sites). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 825, Year 2: 825, Year 3: 660, Year 4: 660, Year 5: 330] Sub-total = 3300
	v) Output 1.2.: Conduct rapid market analysis to identify the potential commodities DSA for National consultant. Calculation: unit cost @ 91 X 1 (units) X 30 (days) X 1 (times) [Year 1: 2730] Sub-total = 2730

	vi) Output 1.2.: Conduct rapid market analysis to identify the potential commodities Local travel for consultant, including air. Calculation: unit cost @ 550 X 1 (units) X 1 (times) [Year 1: 550] Sub-total = 550
	vii) Output 1.2.: Conduct rapid market analysis to identify the potential commodities Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) [Year 1: 5000] Sub-total = 5000
	viii) Output 1.2.: Conduct Stakeholder Value chain support policy dialogue to identified gaps for Climate change adaptation mainstreaming DSA for staff to attend work-shop in Aweil (10 persons per site). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	ix) Output 1.2.: Developing relevant training materials on introducing climate adaptation solutions in value chain Air fare for the International consultants. Calculation: unit cost @ 2000 X 1 (units) X 1 (times) [Year 1: 2000] Sub-total = 2000
	x) Output 1.2.: Developing relevant training materials on introducing climate adaptation solutions in value chain DSA for International consultants. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820
	xi) Output 1.2.: Developing relevant training materials on introducing climate adaptation solutions in value chain Vehicle hire for consultants. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) [Year 1: 5000] Sub-total = 5000
	xii) Output 1.2.: Developing relevant training materials on introducing climate adaptation solutions in value chain Visa and Allien Registration-Expartriate . Calculation: unit cost @ 400 X 1 (units) X 1 (times) [Year 1: 400] Sub-total = 400
	xiii) Output 1.2.: Developing Specific training materials for each of the Five (5) identify Value chain commodities Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 2 (times) [Year 1: 1100] Sub-total = 1100
	xiv) Output 1.2.: Developing Specific training materials for each of the Five (5) identify Value chain commodities DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820
	xv) Output 1.2.: Developing Specific training materials for each of the Five (5) identify Value chain commodities Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) [Year 1: 5000] Sub-total = 5000
	xvi) Output 1.2.: Development of market information system with respect to price, quantity, quality and supplying timings for the targeted value chains Local travel for consultant, including air. Calculation: unit cost @ 550 X 1 (units) X 4 (days) X 1 (times) [Year 1: 2200] Sub-total = 2200
	xvii) Output 1.2.: Implementing the upgraded strategies for the selected 5-6 potential Value chain commodities Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) [Year 1: 550, Year 2: 550, Year 3: 550, Year 4: 550, Year 5: 550] Sub-total = 2750
	xviii) Output 1.2.: Implementing the upgraded strategies for the selected 5-6 potential Value chain commodities DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) [Year 1: 455, Year 2: 455, Year 3: 455, Year 4: 455, Year 5: 455] Sub-total = 2275
	xix) Output 1.2.: Implementing the upgraded strategies for the selected 5-6 potential Value chain commodities DSA for participants during training (10 per site, 3 sites). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300

	xx) Output 1.2.: Implementing the upgraded strategies for the selected 5-6 potential Value chain commodities Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1250, Year 2: 1250, Year 3: 1250, Year 4: 1250, Year 5: 1250] Sub-total = 6250
	xxi) Output 1.2.: Organised stakeholder workshop to disseminate the finding of the market and Value chain and integrate recommendations plans Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 12 (days) X 1 (times) [Year 1: 3000] Sub-total = 3000
	xxii) Output 1.2.: Organize trainings and workshops to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 2 (days) X 5 (times) [Year 1: 1100, Year 2: 1100, Year 3: 1100, Year 4: 1100, Year 5: 1100] Sub-total = 5500
	xxiii) Output 1.2.: Organize trainings and workshops to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices DSA for workshop participants (10 per site for 3 sites). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	xxiv) Output 1.2.: Organize trainings and workshops to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Travel and DSA for field staff (2 per site). Calculation: unit cost @ 11 X 6 (units) X 2 (days) X 5 (times) [Year 1: 132, Year 2: 132, Year 3: 132, Year 4: 132, Year 5: 132] Sub-total = 660
	xxv) Output 1.2.: Organize trainings and workshops to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Vehicle hire during the workshop. Calculation: unit cost @ 250 X 1 (units) X 2 (days) X 5 (times) [Year 1: 500, Year 2: 500, Year 3: 500, Year 4: 500, Year 5: 500] Sub-total = 2500
	xxvi) Output 1.2.: Organize trainings to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) [Year 1: 550, Year 2: 550, Year 3: 550, Year 4: 550, Year 5: 550] Sub-total = 2750
	xxvii) Output 1.2.: Organize trainings to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) [Year 1: 455, Year 2: 455, Year 3: 455, Year 4: 455, Year 5: 455] Sub-total = 2275
	xxviii) Output 1.2.: Organize trainings to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices DSA for participants (10 per site, 3 sites). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	xxix) Output 1.2.: Organize trainings to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 2 (days) X 5 (times) [Year 1: 500, Year 2: 500, Year 3: 500, Year 4: 500, Year 5: 500] Sub-total = 2500

	xxx) Output 1.2.: Potential commodities identified for addition and value chain development Hiring of Field data collectors/Enumerators. Calculation: unit cost @ 12 X 12 (units) X 2 (days) X 1 (times) [Year 1: 288] Sub-total = 288
	xxxi) Output 1.2.: Stakeholder workshop for the confirmation of upgrading strategies and list of actions for each commodity finalised DSA for the workshop participants. Calculation: unit cost @ 11 X 36 (units) X 1 (times) [Year 1: 396] Sub-total = 396
	xxxii) Output 1.2.: Stakeholder workshop for the confirmation of upgrading strategies and list of actions for each commodity finalised Travel and DSA for staff (3 per boma). Calculation: unit cost @ 11 X 36 (units) X 1 (times) [Year 1: 396] Sub-total = 396
	xxxiii) Output 1.2.: Stakeholder workshop for the confirmation of upgrading strategies and list of actions for each commodity finalised Vehicle hire (one per site). Calculation: unit cost @ 250 X 3 (units) X 1 (times) [Year 1: 750] Sub-total = 750
	xxxiv) Output 1.2.: Training of public-sector officials on best practices in climate friendly agribusiness value-chain governance Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) [Year 1: 550, Year 2: 550, Year 3: 550, Year 4: 550, Year 5: 550] Sub-total = 2750
	xxxv) Output 1.2.: Training of public-sector officials on best practices in climate friendly agribusiness value-chain governance DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) [Year 1: 455, Year 2: 455, Year 3: 455, Year 4: 455, Year 5: 455] Sub-total = 2275
	xxxvi) Output 1.2.: Training of public-sector officials on best practices in climate friendly agribusiness value-chain governance DSA for participants (10 per site, 3 sites). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	xxxvii) Output 1.2.: Training of public-sector officials on best practices in climate friendly agribusiness value-chain governance Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1250, Year 2: 1250, Year 3: 1250, Year 4: 1250, Year 5: 1250] Sub-total = 6250
	xxxviii) Output 1.2.: Undertake a value chain Analysis and Mapping of non- agro and agro-based commodities DSA for National consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820
	xxxix) Output 1.2.: Undertake a value chain Analysis and Mapping of non- agro and agro-based commodities Local travel for consultant, including flight booking. Calculation: unit cost @ 550 X 2 (units) X 1 (times) [Year 1: 1100] Sub-total = 1100
	xl) Output 1.2.: Undertake a value chain Analysis and Mapping of non- agro and agro-based commodities Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) [Year 1: 5000] Sub-total = 5000
	xli) Output 1.2.: Undertake national and sub national dialogue on incorporating strategies for climate-friendly agribusiness value chain standards into the South Sudan Industrial Policy Framework Draft, 2018 Air travel by local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) [Year 1: 550] Sub-total = 550
	xlii) Output 1.2.: Undertake national and sub national dialogue on incorporating strategies for climate-friendly agribusiness value chain standards into the South Sudan Industrial Policy Framework Draft, 2018 DSA for international consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820

	xliii) Output 1.2.: Undertake national and sub national dialogue on incorporating strategies for climate-friendly agribusiness value chain standards into the South Sudan Industrial Policy Framework Draft, 2018 DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) [Year 1: 1820] Sub-total = 1820
	xliv) Output 1.2.: Undertake national and sub national dialogue on incorporating strategies for climate-friendly agribusiness value chain standards into the South Sudan Industrial Policy Framework Draft, 2018 Travel for international consultant. Calculation: unit cost @ 2000 X 1 (units) X 1 (times) [Year 1: 2000] Sub-total = 2000
	xlv) Output 1.2.: Workshops on climate-proofing agri-business commodities value chain with value chain actors Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) [Year 1: 550, Year 2: 550, Year 3: 550, Year 4: 550, Year 5: 550] Sub-total = 2750
	xlvi) Output 1.2.: Workshops on climate-proofing agri-business commodities value chain with value chain actors DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) [Year 1: 455, Year 2: 455, Year 3: 455, Year 4: 455, Year 5: 455] Sub-total = 2275
	xlvii) Output 1.2.: Workshops on climate-proofing agri-business commodities value chain with value chain actors DSA for participants (10 per site, 3 sites). Calculation: unit cost @ 11 X 30 (units) X 2 (days) X 5 (times) [Year 1: 660, Year 2: 660, Year 3: 660, Year 4: 660, Year 5: 660] Sub-total = 3300
	xlviii) Output 1.2.: Workshops on climate-proofing agri-business commodities value chain with value chain actors Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) [Year 1: 1250, Year 2: 1250, Year 3: 1250, Year 4: 1250, Year 5: 1250] Sub-total = 6250 Total = 125040
UNIDO 5	74200 Audio Visual&Print Prod Costs i) Output 1: Office stationary, printing, flash drives and stationary for field work [Year 1: 1772, Year 2: 1772, Year 3: 1772, Year 4: 1772, Year 5: 1776] Sub-total = 8864
	ii) Output 1.2.: Development and dissemination of Information, Education and Communication (IEC) and value chain extension materials (Charts, videos, flyers etc.) Flash Drives, SD cards containing Climate friendly Value chain Videos, Messages (20 pcs for distribution to CBO reps per boma, 12 bomas). Calculation: unit cost @ 10 X 240 (units) X 2 (times) [Year 1: 2400, Year 2: 2400] Sub-total = 4800
	iii) Output 1.2.: Development and dissemination of Information, Education and Communication (IEC) and value chain extension materials (Charts, videos, flyers etc.) Printing Materials) brochure, leaflets, poster, stickers and flyers for distribution and display (500 pcs of Printing Materials per Boma, 12 Bomas). Calculation: unit cost @ 1000 X 1 (units) X 3 (times) [Year 1: 1500, Year 2: 750, Year 3: 750] Sub-total = 3000 Total = 16664
UNIDO 6	75700 Training i) Output 1.2.: Advocacy with relevant public sector departments in the targeted watershed to regulate the adoption of environmentally friendly value chain practices and technologies Venue and refreshments for participants during advocacy meeting (10 per site). Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1500, Year 2: 1500, Year 3: 1200, Year 4: 1200, Year 5: 600] Sub-total = 6000

	ii) Output 1.2.: Conduct Stakeholder Value chain support policy dialogue to identified gaps for Climate change adaptation mainstreaming Venue and refreshments for participants (10 per watershed/site . Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	iii) Output 1.2.: Conduct Stakeholder Value chain support policy dialogue to identified gaps for Climate change adaptation mainstreaming Venue hire for workshop at Aweil for 30 participants for all the watershed . Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	iv) Output 1.2.: Implementing the upgraded strategies for the selected 5-6 potential Value chain commodities Venue and refreshments for participants (10 per site each year, 3 sites). Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	v) Output 1.2.: Organize trainings and workshops to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Venue and refreshments for participants (10 per site for 3 sites). Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	vi) Output 1.2.: Organize trainings and workshops to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Venue and refreshments for participants (10 per site). Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	vii) Output 1.2.: Organize trainings to raise awareness among civil (community and market actors), private and public sector actors on environmentally safe and climate friendly production and value-addition practices Venue and refreshments for participants (10 per site, 3 sites). Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000
	viii) Output 1.2.: Stakeholder workshop for the confirmation of upgrading strategies and list of actions for each commodity finalised Venue and refreshments for participants (3 representative per Boma for all the 12 Boma in the targeted watershed. Calculation: unit cost @ 20 X 36 (units) X 1 (times) [Year 1: 720] Sub-total = 720
	ix) Output 1.2.: Workshops on climate-proofing agri-business commodities value chain with value chain actors Venue and refreshments for participants (10 per site each year, 3 sites). Calculation: unit cost @ 20 X 30 (units) X 2 (days) X 5 (times) [Year 1: 1200, Year 2: 1200, Year 3: 1200, Year 4: 1200, Year 5: 1200] Sub-total = 6000 Total = 48720
UNIDO 7	71300 Local Consultants i) Output 2.3.: Conduct situation analysis on post-harvest losses with focus on gender roles Fee for Local Consultant. Calculation: unit cost @ 300 X 1 (units) X 30 (days) X 1 (times) during year 1 = 9000

	ii) Output 2.3.: Conduct training on financial literacy and business management skills to (middlemen/associations/cooperatives and processing in functional literacy, business planning and business management skills Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 7500
	iii) Output 2.3.: Conduct training to women and men private operators on basic maintenance and operation and sustainability of power-operated processing equipment for each processing unit Local consultant. Calculation: unit cost @ 300 X 1 (units) X 12 (days) X 2 (times) during year 1, 2 = 7200
	iv) Output 2.3.: Develop Entrepreneurship Training Manuals: Start and Improve Your Business (SIYB) training Manual and Generate Your Own business idea Manual (GYBI) with innovative strategies for value-added Agricultural processing products Local consultant (One to develop SIYB and One for GYBI manual). Calculation: unit cost @ 300 X 1 (units) X 30 (days) X 1 (times) during year 1 = 9000
	v) Output 2.3.: Identifying existing self-initiative buisness oriented post harvesting processing women and men groups for value addition. Local consultant. Calculation: unit cost @ 300 X 1 (units) X 30 (days) X 1 (times) during year 1 = 9000
	vi) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Local consultant to trained post harvesting farmers on storage of food grain crop using purdue Improved Crop Storage (PICS), pastic silo and metal silo. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 7500
	vii) Output 2.3.: Train eight (8) value addition post harvesting groups to engage in cleaner production and energy saving technologies and practice Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 7500
	viii) Output 2.3.: Training of Trainers (TOT) on post harvest management and storage of food grains Local consultant hired, once in a year for five years. Calculation: unit cost @ 300 X 5 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 37500
	ix) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials Local consultant. Calculation: unit cost @ 300 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 7500. Repeated with 2 target groups/sites. Sub-total = 15000 Total = 109200
UNIDO 8	71400 Contractual Services – Individ i) Output 2.3.: Design and construction of 2 climate-proofed post-processing units for cleaning, drying and storage in each of the targeted watershed Construction of 2 climate-proofed post-processing units for cleaning, drying and storage in each site. Calculation: unit cost @ 10000 X 6 (units) X 1 (times) during year 1 = 60000 Total = 60000
UNIDO 9	71600 Travel i) Output 2.3.: Provide regular technical assistance, advisory and mentoring services to the producers, fishermen, agribusiness MSMEs (Improve the technical capacities of public and private sector service providers/facilitators) on integrating climate adaptation in business plans DSA for meeting participants (25 per Boma, 12 Bomas. Calculation: unit cost @ 11 X 60 (units) X 2 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6600

	ii) Output 2.3.: Provide regular technical assistance, advisory and mentoring services to the producers, fishermen, agribusiness MSMEs (Improve the technical capacities of public and private sector service providers/facilitators) on integrating climate adaptation in business plans Travel and DSA for field staff (3 per site). Calculation: unit cost @ 11 X 9 (units) X 2 (days) X 10 (times) during year 1, 2, 3, 4, 5 = 1980
	iii) Output 2.3.: Conduct situation analysis on post-harvest losses with focus on gender roles Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) during year 1 = 550
	iv) Output 2.3.: Conduct situation analysis on post-harvest losses with focus on gender roles DSA for field staffs supporting the local consultant. Calculation: unit cost @ 11 X 2 (units) X 20 (days) X 1 (times) during year 1 = 440
	v) Output 2.3.: Conduct situation analysis on post-harvest losses with focus on gender roles DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 30 (days) X 1 (times) during year 1 = 2730
	vi) Output 2.3.: Conduct situation analysis on post-harvest losses with focus on gender roles Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) during year 1 = 5000
	vii) Output 2.3.: Conduct training on financial literacy and business management skills to (middlemen/associations/cooperatives and processing in functional literacy, business planning and business management skills Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) during year 1, 2, 3, 4, 5 = 2750
	viii) Output 2.3.: Conduct training on financial literacy and business management skills to (middlemen/associations/cooperatives and processing in functional literacy, business planning and business management skills DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 2275
	ix) Output 2.3.: Conduct training on financial literacy and business management skills to (middlemen/associations/cooperatives and processing in functional literacy, business planning and business management skills DSA for participants (5 per Boma, 12 Bomas). Calculation: unit cost @ 11 X 60 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 16500
	x) Output 2.3.: Conduct training on financial literacy and business management skills to (middlemen/associations/cooperatives and processing in functional literacy, business planning and business management skills Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6250
	xi) Output 2.3.: Conduct training to women and men private operators on basic maintenance and operation and sustainability of power-operated processing equipment for each processing unit Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 2 (times) during year 1, 2 = 1100
	xii) Output 2.3.: Conduct training to women and men private operators on basic maintenance and operation and sustainability of power-operated processing equipment for each processing unit DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 12 (days) X 2 (times) during year 1, 2 = 2184
	xiii) Output 2.3.: Conduct training to women and men private operators on basic maintenance and operation and sustainability of power-operated processing equipment for each processing unit DSA for participants (1 per site). Calculation: unit cost @ 11 X 3 (units) X 12 (days) X 2 (times) during year 1, 2 = 792
	xiv) Output 2.3.: Conduct training to women and men private operators on basic maintenance and operation and sustainability of power-operated processing equipment for each processing unit Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 12 (days) X 2 (times) during year 1, 2 = 6000

	xv) Output 2.3.: Develop and implement climate friendly business plans for the each of agro processing unit in each watershed DSA for action plan parts (communities), (25 per site). Calculation: unit cost @ 11 X 75 (units) X 2 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 8250
	xvi) Output 2.3.: Develop and implement climate friendly business plans for the each of agro processing unit in each watershed DSA for field staff (2 per site) for meetings with post harvesting farmers groups member rep, traditional leaders and govt. Calculation: unit cost @ 11 X 6 (units) X 2 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 660
	xvii) Output 2.3.: Develop and implement climate friendly business plans for the each of agro processing unit in each watershed Vehicle hire for action plan meetings/consultation (one per site). Calculation: unit cost @ 250 X 3 (units) X 2 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 7500
	xviii) Output 2.3.: Develop Entrepreneurship Training Manuals: Start and Improve Your Business (SIYB) training Manual and Generate Your Own business idea Manual (GYBI) with innovative strategies for value-added Agricultural processing products Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) during year 1, 2, 3, 4, 5 = 550
	xix) Output 2.3.: Develop Entrepreneurship Training Manuals: Start and Improve Your Business (SIYB) training Manual and Generate Your Own business idea Manual (GYBI) with innovative strategies for value-added Agricultural processing products DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 30 (days) X 1 (times) during year 1 = 2730
	xx) Output 2.3.: Establishment of management board for the agro processing centres in each of the targeted watershed DSA for government counterpart during the establishment of agro-processing unit. Calculation: unit cost @ 68 X 6 (units) X 1 (times) during year 1 = 408
	xxi) Output 2.3.: Establishment of management board for the agro processing centres in each of the targeted watershed DSA for meeting participants during Board establishment (5 persons per Boma, 12 Bomas).. Calculation: unit cost @ 11 X 60 (units) X 2 (days) X 1 (times) during year 1 = 1320
	xxii) Output 2.3.: Establishment of management board for the agro processing centres in each of the targeted watershed Travel and DSA for field staff (2 per site). Calculation: unit cost @ 11 X 6 (units) X 5 (days) X 1 (times) during year 1 = 330
	xxiii) Output 2.3.: Establishment of management board for the agro processing centres in each of the targeted watershed Vehicle hire for travel to the field. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 1 (times) during year 1 = 1250
	xxiv) Output 2.3.: Identifying existing self-initiative business oriented post harvesting processing women and men groups for value addition. Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 1 (times) during year 1 = 550
	xxv) Output 2.3.: Identifying existing self-initiative business oriented post harvesting processing women and men groups for value addition. DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 20 (days) X 1 (times) during year 1 = 1820
	xxvi) Output 2.3.: Identifying existing self-initiative business oriented post harvesting processing women and men groups for value addition. DSA for staff to assist local consultant. Calculation: unit cost @ 11 X 4 (units) X 20 (days) X 1 (times) during year 1 = 880
	xxvii) Output 2.3.: Identifying existing self-initiative business oriented post harvesting processing women and men groups for value addition. Vehicle hire for site visits for local consultant. Calculation: unit cost @ 250 X 1 (units) X 20 (days) X 1 (times) during year 1 = 5000

	xxviii) Output 2.3.: Mobilized and Established potential new business-oriented post harvesting processing women and men farmers groups DSA for field staffs/local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 1 (times) during year 1 = 455
	xxix) Output 2.3.: Mobilized and Established potential new business-oriented post harvesting processing women and men farmers groups DSA for government counterparts. Calculation: unit cost @ 68 X 3 (units) X 5 (days) X 1 (times) during year 1 = 1020
	xxx) Output 2.3.: Mobilized and Established potential new business-oriented post harvesting processing women and men farmers groups DSA for participants (8 groups 10 members per group). Calculation: unit cost @ 11 X 80 (units) X 5 (days) X 1 (times) during year 1 = 4400
	xxxi) Output 2.3.: Mobilized and Established potential new business-oriented post harvesting processing women and men farmers groups Travel and DSA for field staff (two per site). Calculation: unit cost @ 11 X 6 (units) X 5 (days) X 5 (times) during year 1 = 1650
	xxxii) Output 2.3.: Mobilized and Established potential new business-oriented post harvesting processing women and men farmers groups Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 1 (times) during year 1 = 1250
	xxxiii) Output 2.3.: Post harvesting Farmers training on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Travel and DSA for field staff (2 per site) twice in the year. Calculation: unit cost @ 11 X 2 (units) X 5 (days) X 10 (times) during year 1, 2, 3, 4, 5 = 1100
	xxxiv) Output 2.3.: Post harvesting Farmers training on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Travel and DSA for field staff (2 per site). Calculation: unit cost @ 11 X 6 (units) X 5 (days) X 10 (times) during year 1, 2, 3, 4, 5 = 3300
	xxxv) Output 2.3.: Post harvesting Farmers training on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Vehicle hire (one per site). Calculation: unit cost @ 250 X 3 (units) X 5 (days) X 10 (times) during year 1, 2, 3, 4, 5 = 37500
	xxxvi) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) during year 1, 2, 3, 4, 5 = 2750
	xxxvii) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) DSA for local consultant to trained post harvesting farmers storage of food grain crop using purdue Improved Crop Storage (PICS), pastic silo and metal silo. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 2275
	xxxviii) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) DSA for participants (5 per boma for 12 bomas). Calculation: unit cost @ 11 X 60 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 16500
	xxxix) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6250

	xl) Output 2.3.: Selection of private operators for the agro processing unit in each targeted watershed DSA for meeting private operators for the agro processing unit . Calculation: unit cost @ 11 X 10 (units) X 5 (days) X 1 (times) during year 1 = 550
	xli) Output 2.3.: Selection of private operators for the agro processing unit in each targeted watershed Travel and DSA for field staff, two per site. Calculation: unit cost @ 11 X 6 (units) X 5 (days) X 1 (times) during year 1 = 330. Repeated with 2 target groups/sites. Sub-total = 660
	xlii) Output 2.3.: Train eight (8) value addition post harvesting groups to engage in cleaner production and energy saving technologies and practice DSA for staff to assist in training (1 per site). Calculation: unit cost @ 11 X 3 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 825
	xliii) Output 2.3.: Train eight (8) value addition post harvesting groups to engage in cleaner production and energy saving technologies and practice Travel and DSA for local consultant . Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 2275
	xliv) Output 2.3.: Train eight (8) value addition post harvesting groups to engage in cleaner production and energy saving technologies and practice Vehicle hire for train-ining in the field . Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6250
	xlv) Output 2.3.: Train post harvesting farmers groups on post-harvest losses and use of hermetic storage tarpaulins DSA for workshop participants (5 post harvesting farmers per boma, 12 bomas). Calculation: unit cost @ 11 X 60 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 16500
	xlvi) Output 2.3.: Train post harvesting farmers groups on post-harvest losses and use of hermetic storage tarpaulins Travel and DSA for field staff (2 per site, twice a year). Calculation: unit cost @ 11 X 24 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6600
	xlvii) Output 2.3.: Training of Trainers (TOT) on post harvest management and storage of food grains DSA for workshop participants (36 omen and men participants from Public and private secto, 3 per boma, 12 bomas). Calculation: unit cost @ 11 X 36 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 9900
	xlviii) Output 2.3.: Training of Trainers (TOT) on post harvest management and storage of food grains Travel for local consultant (flights to Aweil). Calculation: unit cost @ 250 X 1 (units) X 10 (times) during year 1, 2, 3, 4, 5 = 2500
	xlix) Output 2.3.: Training of Trainers (TOT) on post harvest management and storage of food grains Vehicle hire for site visits for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6250
	l) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials Air travel for local consultant. Calculation: unit cost @ 550 X 1 (units) X 5 (times) during year 1, 2, 3, 4, 5 = 2750. Repeated with 2 target groups/sites. Sub-total = 5500
	li) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials DSA for local consultant. Calculation: unit cost @ 91 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 2275. Repeated with 2 target groups/sites. Sub-total = 4550
	lii) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials DSA for participants (10 per per site). Calculation: unit cost @ 11 X 30 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 8250

	liii) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials DSA for participants (10 per site). Calculation: unit cost @ 11 X 30 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 8250
	liv) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials Vehicle hire for local consultant. Calculation: unit cost @ 250 X 1 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6250. Repeated with 2 target groups/sites. Sub-total = 12500
	lv) Output 2.3.: Transporation of post harvesting equipments and materials Vehicle hire for transportation to the site. Calculation: unit cost @ 250 X 1 (units) X 1 (times) during year 1 = 250
	lvi) Output 2.3.: Undertake a comprehensive assessment of the current operational status of the agro processing unit and plans for action prepared based on the assessments DSA for local consultant to design assessment tools and analyze the results of agro processing operation, capacity and prepared action plan HH survey results. Calculation: unit cost @ 91 X 1 (units) X 30 (days) X 1 (times) during year 1 = 2730
	lvii) Output 2.3.: Undertake a comprehensive assessment of the current operational status of the agro processing unit and plans for action prepared based on the assessments Travel and DSA for field staff (3 per site). Calculation: unit cost @ 11 X 9 (units) X 30 (days) X 1 (times) during year 1 = 2970
	lviii) Output 2.3.: Undertake a comprehensive assessment of the current operational status of the agro processing unit and plans for action prepared based on the assessments Vehicle for local consultant travel. Calculation: unit cost @ 250 X 1 (units) X 30 (days) X 1 (times) during year 1 = 7500 Total = 269659
UNIDO 10	72200 Equipment and Furniture i) Output 2.3.: Procurement of processing equipment and machinery e.g sorghum grinder, groundnut paste machine, groundnut sheller, manual sorghum grinders and tricycle Procurement of groundnut paste machine, groundnut sheller, 3 per site. Calculation: unit cost @ 4000 X 9 (units) X 1 (times) during year 1 = 36000
	ii) Output 2.3.: Procurement of processing equipment and machinery e.g sorghum grinder, groundnut paste machine, groundnut sheller, manual sorghum grinders and tricycle Procurement of manual sorghum grinders and tricycle, 3 per site.. Calculation: unit cost @ 5000 X 9 (units) X 1 (times) during year 1 = 45000
	iii) Output 2.3.: Procurement of processing equipment and machinery e.g sorghum grinder, groundnut paste machine, groundnut sheller, manual sorghum grinders and tricycle Procurement of sorghum grinder, 2 per site.. Calculation: unit cost @ 20000 X 6 (units) X 1 (times) during year 1 = 120000 Total = 201000
UNIDO 11	72300 Materials & Goods i) Output 2.3.: Establishment of management board for the agro processing centres in each of the targeted watershed Procurement of Motor Cycles + Accessories (e.g Helmets, Reflectors, Parts) for agro-processing unit field coordination . Calculation: unit cost @ 5000 X 6 (units) X 1 (times) during year 1 = 30000
	ii) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Procurement of metal silos (12 metal silos per Boma, 12 Bomas). Calculation: unit cost @ 22 X 144 (units) X 1 (times) during year 1 = 3168

	iii) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Procurement of plastic silos (12 pastic silos per Boma, 12 Bomas). Calculation: unit cost @ 22 X 144 (units) X 1 (times) during year 1 = 3168
	iv) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Procurement of purdue Improved Crop Storage (PICS. Calculation: unit cost @ 16 X 1200 (units) X 5 (times) during year 1, 2, 3, 4 = 96000
	v) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Procurement of airtight bags (100 airtight bag per Boma, 12 Bomas). Calculation: unit cost @ 12 X 1200 (units) X 5 (times) during year 1, 2, 3, 4 = 72000
	vi) Output 2.3.: Procurement of materials for post harvesting unit construction Procurement of Materials for post harvesting Unit. Calculation: unit cost @ 15000 X 6 (units) X 1 (times) during year 1 = 90000 Total = 294336
UNIDO 12	74200 Audio Visual&Print Prod Costs i) Output 2: Office stationary, printing, flash drives and stationary for field work during year 1, 2, 3, 4, 5 = 6305 Total = 6305
UNIDO 13	74700 Transport i) Output 2.3.: Transportation of post harvesting equipments and materials 1. Calculation: unit cost @ 7000 X 1 (units) X 1 (times) during year 1 = 7000
	ii) Output 2.3.: Transportation of the Processing equipment and machinery- Flight charter . Calculation: unit cost @ 7000 X 9 (units) X 1 (times) during year 1 = 63000 Total = 70000
UNIDO 14	75700 Training i) Output 2.3.: Provide regular technical assistance, advisory and mentoring services to the producers, fishermen, agribusiness MSMEs (Improve the technical capacities of public and private sector service providers/facilitators) on integrating climate adaptation in business plans Venue and refreshments for participants (25 per Boma, 12 bomas). Calculation: unit cost @ 20 X 60 (units) X 2 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 12000
	ii) Output 2.3.: Conduct training on financial literacy and business management skills to (middlemen/associations/cooperatives and processing in functional literacy, business planning and business management skills Venue and refreshments for participants (5 per Boma and 12 Bomas). Calculation: unit cost @ 20 X 60 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 30000
	iii) Output 2.3.: Develop and implement climate friendly business plans for the each of agro processing unit in each watershed Costs of venue and refreshments (25 participants per site). Calculation: unit cost @ 20 X 75 (units) X 2 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 15000
	iv) Output 2.3.: Post harvesting Farmers training on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Venue and refreshments for 300 participants (5 post harvesting famers per boma for 12 bomas) once twice in a year. Calculation: unit cost @ 20 X 60 (units) X 5 (days) X 10 (times) during year 1, 2, 3, 4, 5 = 60000

	v) Output 2.3.: Procurement of purdue Improved Crop Storage (PICS), airtight bags, metal and plastic silos and post harvesting farmers trained on post harvest and storage of food grain crop using purdue Improved Crop Storage (PICS) Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 12 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 6000
	vi) Output 2.3.: Train eight (8) value addition post harvesting groups to engage in cleaner production and energy saving technologies and practice Venue and refreshment for participants (5 per group). Calculation: unit cost @ 20 X 40 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 20000
	vii) Output 2.3.: Train post harvesting farmers groups on post-harvest losses and use of hermetic storage tarpaulins Venue and refreshments for participants (5 per post harvesting farmers per boma, 12 boma, twice a years). Calculation: unit cost @ 20 X 60 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 30000
	viii) Output 2.3.: Training of Trainers (TOT) on post harvest management and storage of food grains Venue and refreshments for participants (36 Women and men participants from Public and private sector , 3 persons per boma For 12 Boma, once a years). Calculation: unit cost @ 20 X 36 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 18000
	ix) Output 2.3.: Training of Trainers (TOT) on post harvest management and storage of food grains Venue and refreshments for participants (4 per site). Calculation: unit cost @ 20 X 75 (units) X 12 (days) X 2 (times) during year 1, 2, 3, 4, 5 = 36000
	x) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials Venue and refreshments for participants (10 participants per Site). Calculation: unit cost @ 20 X 30 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 15000
	xi) Output 2.3.: Training on business management, accounting, book keeping and marketing for the manager of the agro processing units, farmers union, representatives from Chamber of commerce and state government officials Venue and refreshments for participants (10 per site). Calculation: unit cost @ 20 X 30 (units) X 5 (days) X 5 (times) during year 1, 2, 3, 4, 5 = 15000
	xii) Output 2.3.: Undertake a comprehensive assessment of the current operational status of the agro processing unit and plans for action prepared based on the assessments Refreshment with agro-processing farmers during action plan (25 pax per site, 3 sites). Calculation: unit cost @ 20 X 75 (units) X 5 (days) X 1 (times) during year 1, 2, 3, 4, 5 = 7500 Total = 264500

Summary of Funds

	Amount	Amount	Amount	Amount	Amount	Total
	Year1	Year 2	Year 3	Year 4	Year 5	
LDCF	1,050,886	1,529,698	1,540,203	1,436,456	1,339,218	6,896,461
GEFTF	0	228,310	228,310	228,310	228,312	913,242
Ministry of Environment & Forestry, Govt. of South Sudan (public investment)	440,526	440,526	440,526	440,526	440,528	2,202,632
Ministry of Agriculture & Food Security, Govt. of South Sudan (public investment)	533,157	533,157	533,157	533,157	533,161	2,665,789
Ministry of Water Resources & Irrigation, Govt. of South Sudan (in-kind)	0	1,552,302	1,552,302	1,552,302	1,552,305	6,209,211
Ministry of Trade and Industry (in-kind)	600,000	600,000	600,000	600,000	600,000	3,000,000
Ministry of Agriculture & Food Security, Govt. of South Sudan (in- kind)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Ministry of Environment & Forestry, Govt. of South Sudan (in-kind)	600,000	600,000	600,000	600,000	600,000	3,000,000
WVSS	156,000	156,000	156,000	156,000	156,000	780,000
UNDP TRAC (in-kind)	74,000	19,000	7,000	19,000	7,000	126,000
UNDP TRAC (grant)	0	0	12,000	0	12,000	24,000
UNIDO (LDCF Funding for Component 1 and 2)	854,306	200,196	188,660	187,415	144,423	1,575,000
UNIDO (in kind)	190,000	190,000	190,000	190,000	190,000	950,000
UNIDO (grant)	10,000	10,000	10,000	10,000	10,000	50,000
Subtotal LDCF + GEFTF (WVSS + UNIDO)	**1,905,192**	**1,958,204**	**1,957,173**	**1,852,181**	**1,711,953**	**9,384,703**
Subtotal Co-financing	**3,603,683**	**5,100,985**	**5,100,985**	**5,100,985**	**5,100,994**	**24,007,632**
TOTAL	**5,508,875**	**7,059,189**	**7,058,158**	**6,953,166**	**6,812,947**	**33,392,335**

X. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of South Sudan and UNDP, signed on 16 November 2011. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by World Vision South Sudan ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

XI. RISK MANAGEMENT

Option C. CSO/NGO/Non-UN or other IGO with no signed SBEAA with UNDP

1. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document and the Project Cooperation Agreement between UNDP and the Implementing Partner.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the United Nations Security Council Sanctions Consolidated Sanctions List, and that no UNDP funds received pursuant to the Project Document are used for money laundering activities. The United Nations Security Council Sanctions Consolidated Sanctions List can be accessed via https://www.un.org/securitycouncil/content/un-sc-consolidated-list.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities,

the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. SH may occur in the workplace or in connection with work. While typically involving a pattern of conduct, SH may take the form of a single incident. In assessing the reasonableness of expectations or perceptions, the perspective of the person who is the target of the conduct shall be considered.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities) and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will, and will require that such sub-parties will take all appropriate measures to:

    i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

    ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4, have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and such sub-parties may use the training material available at UNDP;

    iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

    iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

    v. Promptly and confidentially, record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

    b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan

prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

9. UNDP is committed to the highest ethical standards and will not tolerate the diversion of the resources entrusted to it through Money Laundering or Terrorist Financing and will not partner with entities that tolerate the diversion of resources through Money Laundering or Terrorist Financing. To that effect, the Implementing Partner represents and warrants that it has not, and it shall not, at any time in the implementation of the Project engage in Terrorism Financing or Money Laundering. The Implementing Partner shall communicate the restriction of this paragraph to its and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Documents and shall take all reasonable measures to ensure that such persons do not engage in Terrorism Financing or Money Laundering.

10. The Implementing Partner shall immediately disclose to UNDP any actual, apparent, potential or attempted Terrorism Financing or Money Laundering activity that it becomes aware of. The Implementing Partner shall fully cooperate with any investigation or review of Terrorism Financing or Money Laundering activity by UNDP.

11. The Implementing Partner acknowledges and agrees that Terrorism Financing or Money Laundering constitute financial irregularities and that if the Implementing Partner or any of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document engages in Terrorism Financing or Money Laundering activity that would constitute a material breach of this Project Document, which entitles UNDP to immediately terminate the Project without incurring any liability or penalty.

12. Furthermore, the Implementing Partner expressly acknowledges and agrees that, in the event that UNDP were to determine through an investigation or otherwise that Terrorism Financing or Money Laundering occurred, UNDP shall have, in addition to its right to immediately terminate the Project, the rights to:

    i. apply and enforce the relevant sanctions in accordance with UNDP internal regulations, rules, procedures, practices, policies and guidelines, including referral of the matter to national authorities when appropriate; and
    ii. recover all losses, financial or otherwise, suffered by UNDP in connection with such Terrorism Financing or Money Laundering activity.

13. For the purpose of this Project Document the following terms shall have the definition ascribed to the below:

    i. “Money Laundering” is generally considered as concealment of the origins of money obtained illegally, typically by passing it through a complex sequence of financial or commercial transactions. ML usually involves three stages: (i) introducing the proceeds of crime into the financial system (placement); (ii) transactions to convert or transfer the funds to other locations or financial institutions (layering); and (iii) reintroducing the funds into the legitimate economy as "clean" money and investing it in various assets or business ventures (reintegration) appearing to have been

legally obtained. The FATF recommends that ML be criminalized by every country on the basis of article 3(1)(b) and (c) of the Vienna Convention and article 6(1) of the Palermo Convention.

ii. "Terrorist Financing" means providing support to individuals or entities that appear on the United Nations Security Council Consolidated Sanctions List accessible at https://www.un.org/securitycouncil/content/un-sc-consolidated-list.

14. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using the UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption, anti-fraud and anti-money laundering and countering the financing of terrorism policies are in place and enforced for all funding received from or through UNDP.

15. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices (b) UNDP Anti-Money Laundering and Countering the Financing of Terrorism Policy; and (c) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

16. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP programmes and projects in accordance with UNDP regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

17. The Implementing Partner will promptly inform UNDP in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

18. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud, corruption or other financial irregularity, or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud, corruption or other financial irregularity, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with the Implementing Partner, responsible parties, subcontractors and sub-recipients.

19. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

20. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management Standard Clauses" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document

XII. MANDATORY ANNEXES

1. GEF Budget Template (available from BPPS NCE-VF)
2. GEF Execution Support Letter (available at www.thegef.org or from BBPS NCE-VF)
3. Project Map and geospatial coordinates of the project area
4. Multiyear Workplan
5. Social and Environmental Screening Procedure (SESP), or justification of SESP exemption
6. UNDP Risk Register
7. Overview of technical consultancies/subcontracts
8. Stakeholder Engagement Plan
9. Environmental Social Management Framework (ESMF) or other SES frameworks/plans including the project's GRM, if required
10. Gender Analysis and Gender Action Plan
11. Procurement Plan – for first year of implementation especially GEF focal area specific annexes (e.g. METT, GHG calculations, target landscape profile, feasibility study, other technical reports)
12. Additional agreements: such as cost sharing agreements, project cooperation agreements signed with NGOs (where the NGO is designated as the "executing entity"), letters of financial commitments etc.
13. Signed LOA between UNDP and IP requesting UNDP support services (if required in exceptional basis and authorized by the GEF)
14. GEF CEO Endorsement/Approval
15. On-Granting Provisions Applicable to the Implementing Partner
16. Terms of Reference for Project Board and Project Team
17. GEF and/or LDCF/SCCF Core indicators (see template below)
18. GEF Taxonomy (see template below)
19. Results of the Partners Capacity Assessment Tool (PCAT) and HACT Micro Assessment
20. UNDP Project Quality Assurance Report (to be completed in UNDP online corporate planning system)

Annex 1: GEF Budget Template

Atlas Activity (GEF Component)	Atlas Implementing Agent (Responsible Party, IP, or UNDP)	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
Component 1: Institutional capacities for gender-responsive climate change adaptation across the agricultural sector.	WVSS/UNDP[73]	62160	LDCF	71200	International Consultants	57,000	6,000	0	0	6,000	69,000	1
				71200	International Consultants	0	0	30,000	0	0	30,000	
				71300	Local Consultants	23,000	3,000	0	0	0	26,000	2
				71600	Travel	89,089	39,282	30,287	30,287	36,222	225,167	3
				71800	Contractual Services-Imp Partn	80,148	90,332	88,832	88,832	78,654	426,798	4
				72200	Equipment and Furniture	5,400	3,000	3,000	3,000	3,000	17,400	5
				72300	Materials & Goods	12,150	7,200	7,200	7,200	6,150	39,900	6
				72800	Information Technology Equipmt	5,250	0	0	0	0	5,250	7
				73300	Rental & Maint of Info Tech Eq	200	200	200	200	200	1,000	8

[73] UNDP is responsible party for Mid-Term review

				74200	Audio Visual&Print Prod Costs	20,936	17,936	17,936	17,936	17,939	92,683	9
				75700	Training	23,520	18,160	18,160	18,160	18,160	96,160	10
					Sub-total LDCF	316,693	185,110	195,615	165,615	166,325	1,029,358	
					Total Outcome 1	316,693	185,110	195,615	165,615	166,325	1,029,358	
Component 2 Climate change resilient agriculture and food value chains.	WVSS/UNDP[74]	62160	LDCF	71200	International Consultants	0	6,000	6,000	6,000	0	18,000	11
				71200	International Consultants	0	0	0	0	36,000	36,000	
				71300	Local Consultants	24,800	2,800	2,800	2,800	2,800	36,000	12
				71600	Travel	80,245	66,400	66,400	66,400	61,125	340,570	13
				71800	Contractual Services-Imp Partn	106,062	122,170	122,170	122,170	108,129	580,701	14
				72200	Equipment and Furniture	70,000	0	0	0	0	70,000	15
				72300	Materials & Goods	112,200	486,378	486,378	412,631	323,831	1,821,418	16
				72400	Communic & Audio Visual Equip	0	13,200	13,200	13,200	13,200	52,800	17
				72600	Grants	0	28,125	28,125	28,125	28,125	112,500	18
				72800	Information Technology Equipmt	2,520	0	0	0	0	2,520	19
				74200	Audio Visual&Print Prod Costs	23,807	25,807	25,807	25,807	25,809	127,037	20
				74700	Transport	3,000	6,000	6,000	6,000	3,000	24,000	21
				75700	Training	52,800	80,520	80,520	80,520	75,720	370,080	22
					Sub-total LDCF	475,434	837,400	837,400	763,653	677,739	3,591,626	
					Total Outcome 2	475,434	837,400	837,400	763,653	677,739	3,591,626	
Component 3 Community based natural resources management to	WVSS	62160	LDCF	71600	Travel	16,200	9,600	9,600	9,600	9,600	54,600	23
				71800	Contractual Services-Imp Partn	34,543	48,037	48,037	48,037	34,547	213,201	24
				72100	Contractual Services-Companies	0	298,540	298,540	298,540	298,544	1,194,164	25
				72200	Equipment and Furniture	15,000	18,750	18,750	18,750	18,750	90,000	26
				72300	Materials & Goods	3,000	3,000	3,000	3,000	3,000	15,000	27

[74] UNDP is responsible party for the Terminal Evaluation

offset the impacts of climate change on ecosystem goods and services.				72600	Grants	0	9,375	9,375	9,375	9,375	37,500	28
				72800	Information Technology Equipmt	2,520	0	0	0	0	2,520	29
				74200	Audio Visual&Print Prod Costs	22,240	16,240	16,240	16,240	16,241	87,201	30
				74700	Transport	3,000	6,000	6,000	6,000	3,000	24,000	31
				75700	Training	62,400	12,000	12,000	12,000	12,000	110,400	32
					Sub-total LDCF	158,903	421,542	421,542	421,542	405,057	1,828,586	
			GEF TF	72100	Contractual Services-Compa-nies	0	228,310	228,310	228,310	228,312	913,242	33
					Sub-total GEFTF	0	228,310	228,310	228,310	228,312	913,242	
					Total Outcome 3	158,903	649,852	649,852	649,852	633,369	2,741,828	
Project Manage-ment Cost	WVSS/UNDP[75]	62160	LDCF	71600	Travel	5,198	5,748	5,748	5,748	10,198	32,640	34
				71800	Contractual Services-Imp Partn	46,455	46,455	46,455	46,455	46,455	232,275	35
				72500	Supplies	10,000	0	0	0	0	10,000	36
				72800	Information Technology Equipmt	1,260	0	0	0	0	1,260	37
				74100	Professional Services	8,000	8,000	8,000	8,000	8,000	40,000	38
				74200	Audio Visual&Print Prod Costs	25,443	25,443	25,443	25,443	25,444	127,216	39
				75700	Training	3,500	0	0	0	0	3,500	40
					Sub-Total LDCF	99,856	85,646	85,646	85,646	90,097	446,891	
					Total Project Management Cost	99,856	85,646	85,646	85,646	90,097	446,891	
					Total LDCF	**1,050,886**	**1,529,698**	**1,540,203**	**1,436,456**	**1,339,218**	**6,896,461**	
					Total GEFTF	**0**	**228,310**	**228,310**	**228,310**	**228,312**	**913,242**	
					Grand Total (LDCF+GEFTF)	**1,050,886**	**1,758,008**	**1,768,513**	**1,664,766**	**1,567,530**	**7,809,703**	

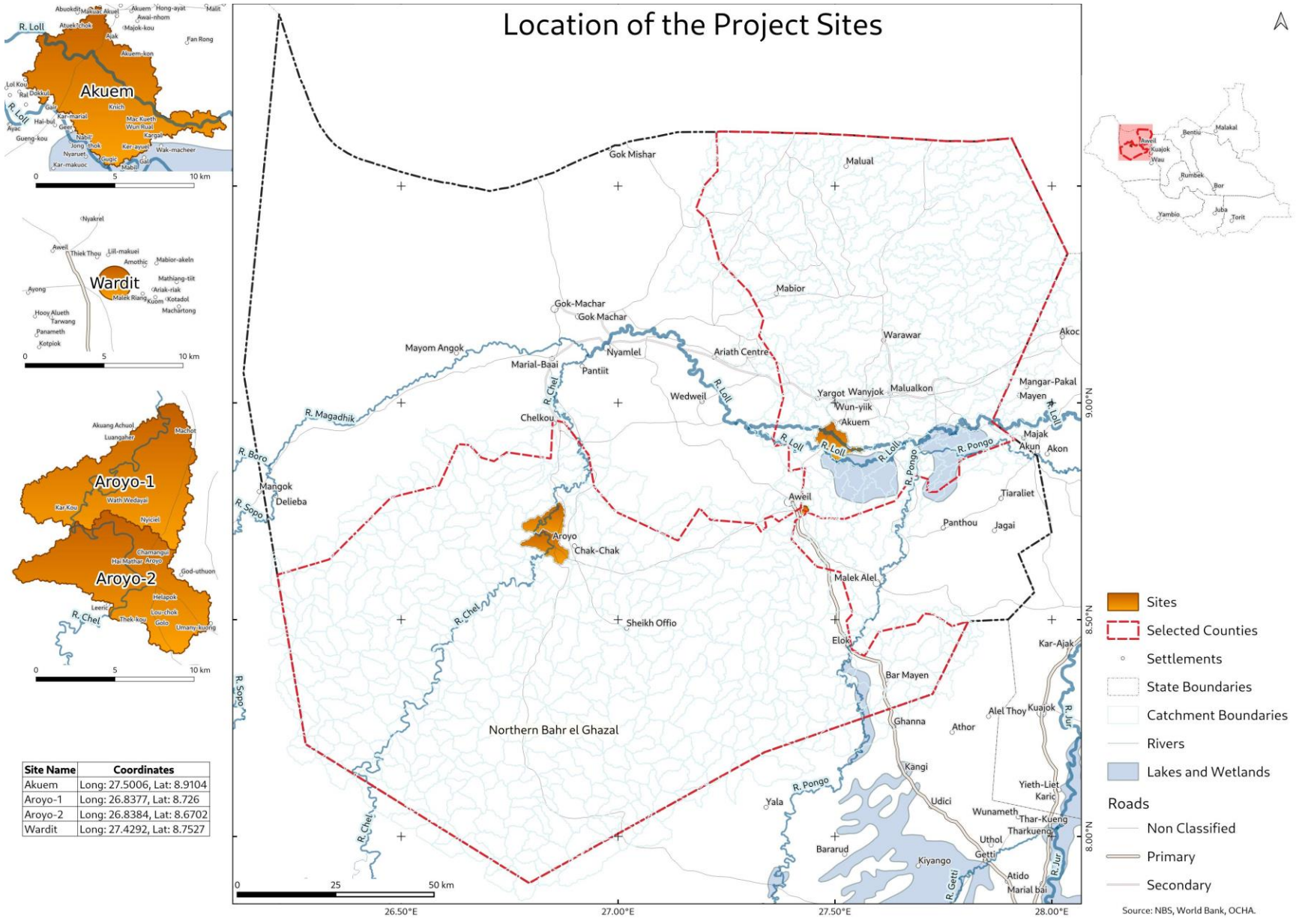
[75] UNDP is the responsible party for the PMU audit.

Annex 2: GEF execution support letter

Not applicable

Annex 3: Project map and Geospatial Coordinates of project sites

Additional maps are available from this link.



Site Name	Coordinates
Akuem	Long: 27.5006, Lat: 8.9104
Aroyo-1	Long: 26.8377, Lat: 8.726
Aroyo-2	Long: 26.8384, Lat: 8.6702
Wardit	Long: 27.4292, Lat: 8.7527

Annex 4: Multi Year Work Plan

Components	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Institutional capacities for gender-responsive climate change adaptation across the agricultural sector.	Outcome 1: Strategies and capacities to implement community based, gender-sensitive climate change adaptation for agriculture and food value chains across South Sudan.	1.1: Integration of climate change adaptation strategies in agriculture and natural resources management policies.	X	X	X	X				X			X	X				X			X	X
		1.2: Integration of adaptation measures in relevant value chains support policy frameworks.		X	X	X			X	X			X	X			X	X			X	X
		1.3: Guiding materials to support climate-responsive extension services developed, delivered and distributed.		X	X	X				X				X				X				X
		1.4: Training of trainers and extension personnel delivered to support climate-smart agriculture and natural resources management.		X				X				X				X				X		
Component 2: Climate change resilient agriculture and food value chains.	Outcome 2: Best practices in climate change resilient agriculture and food value chains adopted by rural communities.	2.1: Integrated and diversified climate-smart farming practices adopted to reduce risk of crop failure through improved seeds, multi-cropping, crop diversification, crop-livestock systems and agro-forestry.	X	X	X	X	X		X	X	X		X	X	X		X	X	X	X	X	
		2.2: Farmer field schools established and community based organizations strengthened to enable adaptive practices and provide local support to farmers with the adoption of low cost techniques for climate resilient agriculture.		X	X		X	X	X		X	X	X		X	X	X		X	X	X	
		2.3: Small scale agribusinesses engage in agro and food processing and preservation, and trigger investments in improved technology and facilities, and adapted uptake of skill training to increase the value of agricultural products.	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X		X	
		2.4: Alternative livelihood options such as bee keeping, backyard poultry, kitchen gardens and small ruminants made available to communities with a focus on vulnerable households.		X	X			X				X				X				X		
Component 3 Community based	Outcome 3: Communities in micro-watersheds adopt natural	3.1: Restoration plans based on ground surveys of micro-watersheds delivered, vetted and approved by micro-watershed based committees comprised of representatives of all stakeholders.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

natural resources management to offset the impacts of climate change on ecosystem goods and services.	resources management and restoration to reduce climate change impacts.	3.2:Improved ground water recharge and soil moisture retention through community based soil and water conservation measures in micro-watersheds.					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		3.3: Reduced impacts of floods through creation of water storage and spreading structures and drainage control measures in the catchment.					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		3.4: Increased resilience to drought through creation of water points from shallow boreholes.	X				X	X			X	X			X	X			X	X			

Annex 5: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[76]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project Objective: *Building resilience to climate change risks amongst agricultural and pastoral communities of South Sudan.*	***Indicator 1:*** *Direct project beneficiaries*	*75,000*	*35,729 male, 39,271 female*	*Household and focal group surveys/discussions, records and attendance registers*	*Annually* *Reported in DO tab of the GEF PIR*	*WVSS Country Office; WVSS field office Aweil.*	*Attendance registers, photographs, survey records*	*Insecurity does not prevent or disrupt/delay activities and events.* *High participation from communities, especially of women.* *Extreme weather events disrupt activities.* *Government and non-govt. stakeholders unable to fully participate in project.*
	Indicator 2: *Area of land to be managed for climate resilience (ha)*	*15,000*	*10,000ha under soil and water conservation, 5,000 ha under flood control.*	*Participatory mapping and GIS, drone surveys*	*Annually*	*WVSS Country office; WVSS field office Aweil*	*micro-watershed restoration plans and maps*	*Insecurity does not prevent or disrupt/delay activities and events. High participation from communities, especially of women. Extreme weather events do not disrupt activities or damage installations. Government and non-govt. stakeholders unable to fully participate.*
	Indicator 3: *Number of agricultural and NRM policies that*	*1*	*National Agriculture and Livestock Extension Policy (NALEP)*	*Review of the NALEP and related policy documents including the CAMP and IDMP.*	Year 1, once	*Project Consultant*	*Literature review, report and presentation with*	*Willingness of policy makers to engage with the review exercise both at national and sub-*

[76] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[76]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	integrate climate change						*recommendations.*	*national levels.* *Participation and support from government institutions and relevant research and development agencies, particularly at the national level.*
	Indicator 4: *Number of value chain support policies adopting climate adaptation measures*	*1*	*Comprehensive Industrial Policy Framework.*	*Review and recommendations for the existing framework for mainstreaming CCA and mitigation measures.*	*Year 1, once*	*Project Consultant*	*Review and recommendations*	*Participation and support of relevant govt. ministries.*
Project Outcome 1: *Strategies and capacities to implement community based and gender-sensitive climate change adaptation for agriculture and food value chains across South Sudan.*	***Indicator 5:*** *Number of strategy documents and advisory packages developed for gender responsive CCA and value chains in the agricultural sector*	*5*	*2 - Strategy papers (Ag. extension & Ag. value chains)* *3 - Advisory packages for farming, livestock and agro-forestry*	*Site specific strategy papers, reports and training materials covering agricultural extension, value chains, farming, livestock and agro-forestry.*	*Once, by end of year 1.*	*WVSS Country Office*	*Published strategy papers and advisory packages in English, Arabic , Dinka and Luo suitably illustrated and designed for on-ground use.*	*Insecurity does not delay or prevent necessary field work and studies required for developing the strategy and advisory materials.* *Willingness and cooperation from ground level agencies and communities in sharing information and advice with experts, including women and vulnerable groups.*
	Indicator 6: *Institutional and grassroots capacities demonstrate*	*6*	*6 - NBG state, Aweil Centre and Aweil East county institutions, CBOs in Wardit,*	*Training programme notes, registers and photographs of training events.*	*Annually*	*WVSS Country Office, WVSS Aweil field office*	*Review of attendance registers for meetings/work shop, field notes,*	*Government agencies at the sub-national level, particularly in NBGS and at the Aweil Centre and Aweil East counties are receptive*

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[76]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	d in coordinating and implementin g community based, gender responsive CCA in agriculture and NRM		*Aroyo and Akuem sites*				*photographs, survey records.*	*to the proposed strategies and meaningfully integrate them with in their programmes.* *Relevant state ministries (SMoAEF, SMoARFT, SMoGCSW, SMoCRD, SMoCYS) have financial resources to effectively utilise the strategy and advisory package.*
Project Outcome 2: *Best practices in climate change resilient agriculture and food value chains adopted by rural communities.*	***Indicator 7:*** *Number of women and men in agro-pastoral communities adopting CSA and climate resilient livelihoods*	*75,000*	*35,729 men, 39,271 women*	*Field surveys, maintaining notes/records, registers of meetings and events*	*Annually*	*WVSS Country office and Aweil Field Office.*	*Review of attendance registers for meetings/work shop, field notes, photographs, survey records.*	*Insecurity could prevent or disrupt/delay activities and events.* *Poor participation, especially of women and vulnerable groups could reduce effectiveness of interventions.* *Extreme weather events could disrupt activities.* *Preventive and mitigative measures for COVID-19 such as lockdowns and restrictions of travel could delay and/or disrupt field work.* *Government and non-govt. stakeholders may be unable or unwilling to fully participate in project.*
	Indicator 8:	*3 value*	*Reached 2,000 men and*	*Field surveys, maintaining*	*Annually*	*WVSS Country office and Aweil*	*Review of attendance*	*Continued inaccessibility of*

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[76]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Number of agri-businesses and value chains established	*chains* *20 organized enterprises, MSMEs, cooperatives, associations*	*women*	*notes/records, registers of meetings and events*		*Field Office.*	*registers for meetings/work shop, field notes, photographs, survey records.*	*project sites worsened by the measures for responding to the covid 19 pandemic, supply chains disrupted and*
Project Outcome 3: *Communities in micro-watersheds adopt natural resources management and restoration to reduce climate change impacts.*	***Indicator 9:*** *Number of hectares restored*	*15,000*	10,000 through soil and water conservation with planting on 3,000ha, 5,000 ha through flood control and drainage structures with planting on 2,000ha.	*Detailed landscape level plans, maps along with field survey with photographs, monitoring data from drones and indicators collected by focal points and volunteers within communities.*	*Annually*	*WVSS Country office and Aweil field office*	*Review of maps, field surveys, plans and agreements with CBOs.*	*Project staff are able to use training to develop detailed micro-watershed restoration plans for soil and water conservation and for flood control.* *Nursery groups are able to provide healthy saplings and seedlings of appropriate species for afforestation and assisted natural regeneration.* *Progressive farmers and pastoralists are able to provide seeds of drought and disease resistant varieties of crops, grasses, trees and shrubs for planting and broadcasting.* *Staff who have been trained in extension and planning do not get transferred out of project area or to other non-relevant departments/fields.* *Insecurity and impacts*

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[76]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
								of COVID-19 related measures may prevent or disrupt/delay activities and events. *Women and vulnerable groups may be unable or unwilling to fully participate and benefit from the project.*
	Indicator 10: *Number of micro-watershed committees established for sustainable management of catchment areas*	*2*	*In Aroyo and Akuem respectively.*	*Meeting registers with minutes. resolutions and attendance. Photographs of meetings and workshops by committees.*	*Annually*	*WVSS Aweil field office*	*Review of attendance registers for meetings/work shops, photographs, survey records.*	*Insecurity and impacts of COVID-19 related measures may prevent or disrupt/delay meetings and events.* *Participation of women and vulnerable groups in the committees may be constrained by dominant members of the community.*

Annex 6: UNDP Social and Environmental Screening Procedure (SESP)

Social and Environmental Screening Template

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.

Project Information

Project Information	
1. Project Title	Watershed approaches for climate resilience in agro-pastoral landscapes
2. Project Number (i.e. Atlas project ID, PIMS+)	6011
3. Location (Global/Region/Country)	South Sudan
4. Project stage (Design or Implementation)	Design
5. Date	10 May 2021

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the project mainstreams the human rights-based approach
Livelihoods of ninety five percent of South Sudan's population depends on climate sensitive natural resources including rain-fed agriculture, livestock raising[77] and forests, which provide all the energy needs of households[78]. Eighty five percent of the workforce is employed in subsistence agriculture. Extension services in South Sudan lack technical capacity and resources to effectively support farming and pastoral communities in climate change adaptation. Local level institutional mechanisms and arrangements are weak, preventing necessary coordination, planning and implementation of programmes and projects for climate change adaptation[79]. The combination of human development factors with the region's vulnerability to climate change puts the livelihood of smallholder farmers at risk. The objective of the proposed project is to reduce the vulnerability of communities in South Sudan and in particular in the region of Aweil to the additional risks posed by climate change. The project has a significant social and human rights benefits which will positively affect the overall well-being of vulnerable[80] communities living in South Sudan. The right to food security and the objective to advance poverty eradication in

[77] Nihal Fernando and Walter Garvey, "The Rapid Water Sector Needs Assessment and a Way Forward."
[78] Republic of South Sudan, "Intended Nationally Determined Contribution."
[79] Philip Omondi and Elliot Vhurumuku, "Climate Risk and Food Security in South Sudan."
[80] We understand 'vulnerable communities' and/or 'vulnerable groups' as a term which describes both the condition and the processes that prevent individuals or groups from

all its forms and dimensions is hence at the heart of this project.

Human rights-based approach to development programming, gender equality and women's empowerment, and environmental sustainability, are integrated into Project design by mainstreaming the safeguards in the project activities themselves. Capacity building will provide additional social and human right benefits with a specific focus on the access of vulnerable groups to trainings and project benefits. The training will contribute to developing more profitable and climate-resilient agricultural practices. As per the downstream activities to be implemented locally in selected project sites, they are designed to take into account existing tensions and conflicts around the use of agricultural resources, as well as social discriminations between men and women, among women, or between communities, in order to benefit to all stakeholders, particularly to the most vulnerable ones. Conflict-sensitivity has been adopted as a major guidance in project design.

Importantly, all project interventions will follow the UNDP Guidelines on equity, fairness and equal distribution of benefits among beneficiaries, and have been developed together with various stakeholders to ensure that no rights or laws are infringed by the proposed activities. This project will ensure that the principles of accountability and the rule of law, participation and inclusion, and equality and non-discrimination are taken into account by ensuring that there is an effective communication for the various stakeholders to share their insights and suggestions on the project, as well as their complaints if the project is not aligned with human-rights' principles.

The human-rights based approach has also been mainstreamed during the project preparation through consultations with the stakeholders. Consultations were held on the intervention sites in August 2020 in order to identify local key stakeholders such as beneficiaries, communities, locally elected officials, prefectures, civil society, and other key stakeholders. Stakeholders proposed several project sites; however, the final site selection was completed in consultation after this first mission. Additional engagement will be conducted throughout the project, supported by the Stakeholder Engagement Plan and Indigenous Peoples Plan. This will be done through consultations with community representatives on the basis of environmental and social criteria integrating participatory approaches to encourage farmer organizations to volunteer to participate and to integrate UNDP's human rights based approaches into their practices (for instance, pertaining to women's empowerment and to Indigenous Peoples rights). Reports of stakeholder consultations will be made available as required upon request by the UNDP-CO.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

Women have traditionally been underprivileged in South Sudan and are denied land tenure and ownership of assets. Classified as GEN[2] (i.e. gender equality is a significant objective), the project will implement a dedicated Gender Action Plan (GAP) with the aim to adopt a pro-active approach in gender mainstreaming to ensure activities undertaken at all levels support the empowerment of women. This will lead to policy guidelines, training materials and modules and on the ground activities with beneficiaries putting gender equity and representation of women in the forefront. Women based and gender equitable community-based organisations will be created at the grassroots level to ensure women are fairly represented in all decision making pertaining to the project. Awareness and training modules will be designed and delivered keeping in mind prevalent literacy rates among women and activities will be tailored to requirements of women and will strengthen their ownership and control of assets created by the project.

The largest proportion of beneficiaries of downstream activities will be women, as they play a dominant role in agriculture and are also active in animal husbandry. The inclusion of women aims to better assess and act upon women's needs and strategic interests in the planning and sharing of climate-smart agriculture techniques. The project will help women farmers better secure their resources, and will address some of their key concerns including the low level of equipment of women producers and / or the lack of improved equipment for certain essential agriculture activities; difficulties of access to improved seeds (short cycle and high yield) and inputs; lack of information on existing opportunities; barriers linked to access to appropriate technology and innovation in production, processing and marketing; the weakness of advisory support and technical training and in terms of structuring groups and cooperatives. Consequently, the project is expected to lead to climate change resilience being adopted by women beneficiaries in proportion to their role in the sector. It will strengthen local institutions to give women a fair representation and ownership of project activities and assets and will facilitate their participation in activities leading to mitigation of climate change related impacts on agriculture and animal husbandry and reduced vulnerabilities.

reaching sustainable development goals, or fully participating in social, economic and political life. In this document "vulnerable communities/groups" describes individuals or groups of people that face higher exposure to climate change, disaster risk and poverty, including but not limited to women, youth, children, elderly, differently-able people, indigenous peoples, disadvantaged families and those living in high risk areas and danger zones. 'Vulnerable' does not mean that the group is vulnerable per se, but that this vulnerability is the result of social, economic and political processes.

During the PPG phase, the project has consulted with women's group and representatives and prepared a gender analysis which is fully integrated and serves as a basis to the GAP. Consideration of gender specific indicators as well as allocation of budget resources to ensure that gender concerns are comprehensively dealt have been ensured in the project design.

The GAP further specifies how the project will (1) Establish a gender-balanced project management team that provides opportunities for women (national staff in particular) to take part and lead decision-making, implementation activities and monitoring processes; (2) Ensure that the project does not perpetuate existing inequalities but promote equitable opportunities for women in targeted areas to participate in, and benefit from activities; (3) Collect gender- and ethnicity-disaggregated data/information to inform M&E and adaptive management responses.

Briefly describe in the space below how the project mainstreams sustainability and resilience

The project will promote environmental sustainability as a core objective with a focus on sustainable and climate resilient agricultural practices. It will encourage the development of adapted techniques and approaches that favor agricultural development and environmental sustainability altogether. Interventions will be based on and careful assessment of site conditions. This includes an assessment of productivity potential (soil quality, water availability and prevalent practices). This contextual understanding will be coupled with approaches that seek to enhance natural productivity and resilience, for example conservation agriculture and assisted natural regeneration as opposed to high input agriculture.

Practices promoted by the project aim at increasing productivity in a sustainable way, enhancing resilience (adaptation), reducing or removing GHGs (mitigation) where possible, while also contributing to food security and development. This environmental and sustainable approach not only improves the livelihoods of the most vulnerable communities, who would otherwise be those most threatened and impacted by climate change, but also contribute to strengthening ecosystem services in the target areas. Community based micro-watershed restoration activities are expected to conserve soil and water, improve ground water recharge and coupled with afforestation and turfing, to significantly improve the productivities of watersheds. The better management of natural resources will directly improve the resilience of natural and semi-natural ecosystems to climate variability and will contribute to the revival of water bodies and streams in the dry seasons. Soil and nutrient management and moisture conservation practices on farms will reduce the loss or nutrients due to erosion and destructive practices such as burning. Improved soil moisture and introduction of micro-irrigation will enhance farm productivities even as water use is optimized. Proposed agroforestry interventions coupled with activities proposed in crop diversification and interventions proposed to diversify livelihoods will lead to a resilient and sustainable management of farmlands in response to changing environmental conditions. Groundwater extraction will be limited to shallow aquifers and coupled with groundwater recharge structures to ensure sustainability and improve resilience of both agriculture and livestock.

The project includes improved collection, analysis and utilization of climatic, hydrologic, and agroecological data by project stakeholders. This will lead in the long term to better modelling and decision making regarding the use of resources, particularly water resources, which can have significant environmental and social benefits.

Briefly describe in the space below how the project strengthens accountability to stakeholders

UNDP will be directly implementing the project. It will have a full responsibility and accountability for the effective use of resources and the delivery of outputs. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm). UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism. The Project Steering Committee (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Steering Committee decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

The project rationale lies on a community-based and gender-sensitive approach engaging deeply with all stakeholders, from government authorities to local communities, including indigenous peoples. Component 1 in particular has been designed to reach community based and gender-sensitive climate change adaptation for agriculture and food value chains across South Sudan, on the basis of national dialogues, extensive consultations, and knowledge sharing. Many activities are linked to capacity-building of the main stakeholders : they aim at reinforcing the State capacity to address Climate change and to take responsibility in supporting the agricultural sector in South Sudan. In these trainings, issues pertaining to State accountability on human-rights based approaches in agricultural interventions, gender mainstreaming and environmental sustainability will be particularly emphasised. Output 2 particularly targets rural communities, including indigenous peoples, and will be supported by an Indigenous Peoples Plan and an FPIC protocol.

All stakeholders have been actively engaged from the project design phase so that they are empowered to engage in implementation and monitoring. This will also enable them to request accountability and raise grievances if necessary. Validation of all plans and designs by all stakeholders including community representatives, as requested by UNDP SES Policy, and availability of all key information (including SEP and GAP summaries) in languages understood by these representatives, will be done. The summary in languages understandable by all stakeholders of key documents (ProDoc, SESP, GAP, SEP, ESMF) will be made available at the local level at least 120 days before project approval, according to UNDP stakeholder engagement guidelines. These documents will also be presented and discussed during the validation and inception workshop, to be held within 60 days of project CEO endorsement. This will ensure both active participation and accountability.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
Risk Description (broken down by event, cause, impact)	***Impact and Likelihood (1-5)***	***Significance (Low, Moderate Substantial, High)***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1 **The use by the project of degraded rangelands or low-productivity agricultural**	I = 4 L = 2	Moderate	Component 2 involves establishing demonstration sites for climate smart agricultural practices, plant nurseries,	• The Environmental and Social Management Framework (ESMF) outlines all steps required in order to ensure full compliance with SES requirement during project implementation. In accordance with the ESMF one

areas for more productive land-uses and for watershed management may reduce open access pastures and fields in project areas, and hence restrict availability, quality of and access to resources or basic services, in particular to vulnerable individuals or groups. This restrictions could potentially result in economic displacement. *Human Rights* *P1, P3, P4, P5, P6* *Accountability* *P13* *Displacement and Resettlement* *5.1, 5.2, 5.3, 5.4* *Indigenous peoples* *6.1, 6.2, 6.3, 6.5, 6.6, 6.7, 6.9*			farmers and pastoral fields schools, as well as modifying land uses at the small-scale. This may, if not led through full and inclusive consultations with all groups, lead to restrictions of availability and access to resources and basic services. Economic displacement could be an indirect consequence of such restrictions (e.g. due to the loss of assets or temporary access to grazing areas due to land acquisition or access restrictions). The volatile security situations and uncertainties around the peace process require additional consideration during site selection to limit this risk. In South Sudan, development projects have in the past year entailed evictions and were identified as one of the cause of internal displacement. Although not yet a large-scale phenomenon, eviction-related displacement were observed particularly in urban areas, including in Aweil[81]. No eviction is planned in this project. In the absence of FPIC, forced evictions remain a risk (see risk 15).	environmental and social impact assessment (ESIA) and one social and environmental strategic assessment (SESA) will be carried out at project inception to assess this and all other environmental and social risks. The ESIA will be immediately followed by an ESMP including targeted management plans. The ESIA process will draw upon the ESMF to assess the associated impacts, and to inform the specific management measures outlined in the ensuing Management Plans. • Given that the project's downstream interventions (and notably the project's support to agricultural and pasture activities) are yet to be specified on the basis of selection criteria of projects, the potential direct impacts are yet to be fully assessed and can't be identified with a reasonable degree of certainty. Further screening will be needed as the projects are selected, through this SESP. The application of standard good practice such as Free Prior Informed Consent and participatory approaches when choosing project sites and discussing specific agricultural practices will be implemented. The SESP will be subject to further consultations on the field after the activities have been specified, leading to a potential update in the first six months of the project. • Baselines (Activity 1.1.2: Building baselines of climatic, socioeconomic, ecological, edaphic and topographical characteristics of the project sites to inform site prioritization) will be conducted and disclosed (with at least summary report in Arabic) and made available in an accessible location in the first six months of the project, before any field activity starts. • The SESP conclusion (list of risks, relevant standards) is integrated into the ESMF and will serve as a basis for the SESA and ESIA. The ESMF summary will be translated to Arabic and Dinka and made available and discussed with all stakeholders, including indigenous peoples and women, as they should be informed of the project risk and be able to provide input on impact, likelihood and mitigation measures. • The Indigenous Peoples Plan, together with the enclosed FPIC protocol, will be prepared during implementation and will address conflict resolutions mechanisms • The Grievance Redress Mechanism proposed in the

[81] Human Rights Council, Twenty-sixth session, Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development - Report of the Special Rapporteur on the human rights of internally displaced persons, Mission to South Sudan – June 2016

				ESMF will be subject to revisions based on the FPIC protocol. • The inception phase of the project will involve a comprehensive, field based and participatory planning exercise which involves stakeholders from the government, development agencies and communities, as stated in the ProDoc • The project will follow a human rights-based approach and contribute to reducing inequalities and improving livelihoods of poor and vulnerable people. • The project has been designed with the objective of minimizing risks related to physical and economic displacement. Additionally, during implementation these issues will be addressed in the frame of participatory assessment and planning process within and between the participating communities. Activities will only be implemented in locations, in agreement with the respective communities, and where the risks of economic displacement will be assessed through the ESIA as low or where that risk can be mitigated to a degree acceptable to the impacted communities (e.g. through a Livelihood Action Plan). • The project will deliver improved services to local communities to reduce their vulnerability to climate change, and address some of the underlying causes of vulnerability, hence reinforcing their capacities to act on the long-term.
Risk 2 **The project's support to agricultural and pasture activities could lead to adverse impact on the existing social tensions in the area – but not present in the selected localities - between land users, including Internally Displaced Persons. These tensions could also increase violent altercations which have arisen over the last years, and it may affect the repartition of benefits among beneficiaries, to the detriment of women and indigenous peoples.** *Human rights*	I = 4 L = 4	Substantial	While the project's locations were chosen carefully and are not currently areas of conflict, the security situation in South Sudan is volatile. Despite progress made by the new Government of South Sudan to create a society where respect for human rights and democratic principles is ensured, challenges remain after a legacy of prolonged civil war and severe under-development. The only recent Peace agreement, added to an inadequate legal framework, with many	• In order to avoid and manage conflicts, the Stakeholder Engagement Plan (SEP) has been designed and made available in English (as well as in Arabic and Dinka) to all stakeholders before the activities start. It specifies the need for a full disclosure of information and providing for meaningful participation of stakeholders during the planning and implementation of site-specific activities including as part of site-specific Environmental and Social screenings and assessments. • A project-level Grievance Redress Mechanism will promote awareness of the grievance mechanism which provides a means for redress of aggrieved individuals or groups. • A conflict analysis will be conducted together with the ESIA in order to detect (1) potential existing tensions and (2) existing conflict resolution mechanisms, with a

P1, P4, P5, P6, P7 *Accountability* *P13, P14* *Displacement and Resettlement* *5.2, 5.4*			international human rights instruments yet to be ratified, makes it difficult for State agents to be held accountable and impunity is endemic. Hence, if social tensions were to arise in the localities of the project, the support to agricultural and pasture activities could be a fuel for conflict, especially due to the presence of indigenous communities with poorly defined land boundaries. Aweil is located outside of the area where most violence outbreaks are currently happening. In the first half of 2020, between 7 and 15 cases of intercommunal violence were still reported in the neighboring area, including a major incident involving South Sudan People's Defence Forces in Aweil East (Northern Bahr el Ghazal)[82]. The selected sites are south of the traditional pastures of nomadic pastoralists who frequent the Aroyo catchments. However, there might be an overlap and this will need to be further checked. The IDPs said that they've been accommodated by the local chiefs and have been accorded equal rights.	particular emphasis on the livelihoods of Indigenous Peoples and Internally Displaced Peoples. • The Livelihood Action Plan will be conducted on a participatory basis, through the representative management structures set up by the project to manage interventions, both in farm lands and in pasture lands. All communities livelihoods, including nomadic pastoralists and IDPs, will be represented. • The project will set up representative management structures to manage interventions, both in farm lands and in pasture lands.
Risk 3 **The duty bearers of this project may have**	I = 4 L = 4	Substantial	Introducing new adaptation technologies in which there is no prior experience will be particularly challenging. There	• In order to reinforce the capacities of the duty-bearers to conduct the project effectively and meet their obligations, all outcomes include targeted capacity-building. These activities will be completed by specific

[82] Incidence of violence affecting civilians in South Sudan, Quaterly brief, (1) Jan-March 2020, (2) April-June 2020, Human Rights Division United Nations Mission in South Sudan

low capacities to (1) measure and manage the impact of climate change on agriculture, (2) to engage with all members of the communities in depth, and (3) to facilitate and monitor a grievance redress mechanism (GRM) *Human Rights* *P7*			are several human resources constraints at the grassroots level and among communities and their representatives which could adversely affect implementation, administration and reporting. This means that the project could suffer from a) Poor coordination of on-ground activities which may result in delays and inefficiencies in time-bound interventions (e.g. provision of improved seeds/livestock drugs ahead of the growing season); b) inadequate mobilization and awareness generation leading to low participation, particularly of women and more vulnerable groups and c) weak training and extension services leading to low adoption of adaptation technologies and practices. Administrative boundaries are being reorganized which is causing confusion on roles and jurisdictions of authorities. Because the constitution recognizes traditional authorities, this situation adds to the existing overlap in jurisdictions between government and traditional authorities. Administrative authorities also lack project management capacities as well as capacity to effectively engage with all stakeholders, which may lead to a) delays in procurement and supply of materials to project sites and beneficiaries and b) poor monitoring and reporting of both financial and physical interventions and c) the inability for local stakeholders to	capacity-building activities on Safeguards Management, Gender equity, FPIC implementation and Stakeholder Engagement, as planned respectively in the ESMF, the GAP and the SEP. • Alignment of national priorities and coordination of agricultural policy between the national and the local level will be key. The project steering committee, comprised of UNDP, the MoEF and representatives of local communities, will be in charge of ensuring this alignment. It is key that that prefectures / local authorities are empowered in safeguards management, as planned in the ESMF, to make sure policies are adequately applied. • UNDP will appoint a full time project management team comprising of professionals with expertise in administrative, social as well as technical aspects of the project. This will include a project manager, but UNDP CO will also recruit a part-time (at least 30%) Gender expert to support the PMU. Thematic experts will provide technical inputs and support the project management unit in building capacities of agencies and individuals tasked with project implementation. The support of consultants working on monitoring and evaluation and safeguards will be needed, but the CO will prioritize the integration of competencies within the PMU and/or at the CO level in order to ensure continuous quality of support. Project staff, particularly at the Payam and Boma levels will be supported on a continual basis through training and refresher courses, and hand-holding during the initial part of the project. • These measures will ensure that technical staff and implementing partners are well equipped to effectively and efficiently discharge their duties and that project management and administration are handled professionally and meet both GEF and UNDP standards and requirements

			channel any demand or grievances through State authorities. This last point is of particular concern in light of the OHCHR conclusions that "the Government has demonstrated a lack of tolerance for political opposition and the press, frequently restricting the freedoms of expression and the press and subjecting those who hold contrary political views to harassment, arbitrary arrest and detention"[83]. The lack of available capacities and experts in environmental and social impacts at the national level may also threaten the implementation of safeguards activities which would need recruiting consultants.	
Risk 4 **As women are traditionally excluded from decision-making processes, they could be excluded from the support planned for farmers and farmers organizations as well as in the national and regional institutions. This could inadvertently reproduce existing discriminations, including in the design of agriculture and natural resources management policies, and even gender-based violence against women in project implementation.** *Gender Equality and Women's Empowerment* *P8, P10, P11*	I = 4 L = 4	Substantial	The society of South Sudan is a patriarchal one that keeps strict gender norms and rigid gender roles. Disputes on marriage, property, and inheritance are often judged according to customary laws at the expense of women's rights. Harmonization of customary laws with statutory ones is a major issue. Women's low status and child marriages cause the high Maternal Mortality Rate in South Sudan, which is one of the highest in the world. Moreover, a lack of medical personnel and facilities, and gender-based discrimination limit women's access to medical treatment.	• Gender aspects are integrated in all outcomes of the project document and supported by the Gender analysis and action plan. The gender analysis develops a comprehensive situational analysis or increase the project's understanding of gender issues and challenges in the three targeted areas. It enables the project to better understand the levels of participation and involvement of women and men in agriculture and in community-decision-making as well as different experiences of specific development challenges bore by subsets of the women groups. It also enables the project to better take into account women's priorities, restraints and motivations when designing and supporting alternative livelihoods, as well as to identify opportunities for greater equality and empowerment for women throughout project implementation. • All activities have been designed to be gender-sensitive, supported by gender-disaggregated indicators. The project has been designed with particular attention to establishing mechanisms to reduce the risk that existing discriminations against women are inadvertently reproduced in project

83

			Literacy rates of South Sudan are extremely low. The male literacy rate in 2010 was 40% and the female literacy rate was 16%. Although improvements are being made, the progress is slow. The enrolment rates for primary and secondary schools are also low. The enrolment rates for girls are lower than those for boys at all grades. Accounting for 60.2% of agricultural labour, women play an important role , but their access to productive assets is limited. Because of their low literacy and the lack of female agricultural extension workers, women have limited opportunities for technical extension. Customary laws that do not recognize women's rights to land ownership and inheritance make it hard for them to access productive assets and knowledge[84]. This situation contributes to women's poorer access to financial services, information and communications. Women may find themselves excluded from design, implementation and access to opportunities and resources created by the project. This includes information and training that enables access to adaptation technologies delivered by the project. At the national level, women's political participation and economic participation are	implementation. • Output 1.1 (Integration of climate change adaptation strategies in agriculture and natural resources management policies) will be supported by the recruitment of a national gender consultant in charge of developing site specific and national social and environmental safeguards, and in particular to look at Principle 2. • Consultations held during PPG included women's group and a needs assessment focusing on the vulnerability and climate adaptation needs of women was conducted to inform the formulation of adaptation and disaster risk reduction plans. The meeting with NGBS Women Association, in particular, led the consultants to listen to many different women's groups and was the occasion to gather insights on the challenges met by them. Clear recommendations were made such as the implementation of flood control measures (channels and dykes), included in the project. All PPG reports, including proper documentation, pictures and proof of consent are stored and available on demand. • Gender responsive and inclusive community mobilization and capacity building activities will precede all interventions, according to the SEP. • Please add a point on GBV.

[84] Country Gender Profile Republic of South Sudan, Final Report, JICA, March 2017

			relatively strong. Women account for 29% of the National Assembly members. Nonetheless, their decision-making-power is still limited. The transitional constitution of the republic of South Sudan, 211 indicates that all levels of government shall: (a) promote women participation in public life and their representation in the legislative and executive organs by at **least twenty-five per cent** as an affirmative action to redress imbalances created by history, customs, and traditions; (b) enact laws to combat harmful customs and traditions which undermine the dignity and status of women; and (c) provide maternity and child care and medical care for pregnant and lactating women. This however not strictly followed by the various administrations. The majority of women are engaged in vulnerable employment or engaged in unpaid work. The interventions by the project will seek to improve the benefits to all stakeholders and promote participation of local communities. However, if the quality of women's participation is not ensured from the very first steps of the project, the activities might reproduce existing discriminations and benefit less to women or to certain categories of women (internally displaced, widows and unmarried women, or	

			women from Dinga / Jurchol communities). This may deny women the opportunity to participate equally in membership and leadership roles in committees and user groups formed under the project, leading to a) the lack of reflection of inputs from women and vulnerable groups may not be adequately reflected during design and planning stages. b) a less active role of women and vulnerable groups as members or take leadership roles in user groups and committees created for project implementation; c) Monitoring, reporting and evaluation of project activities which may fail to accommodate the view and perspective of women and vulnerable groups. Gender-based violence is a serious issue in South Sudan. Women and children are targeted for sexual assaults and abduction during cattle raiding as well other armed conflicts. Sexual violence has been used as a weapon of war to humiliate, terrorize and tear apart the social fabric of families and communities, to forcibly displace civilians, and to inflict individual and collective trauma. Gender-based discrimination and a continued lack of criminal accountability at both the superior and direct perpetrator levels has fueled this violence, contributing to its normalization in society and further underpinning gender inequality.	

			The project needs to ensure that such violence is not reproduced within the project.	
Risk 5 **Even though the project aims at making agricultural practices more sustainable by improving their adaptation to climate change, the support to the development of agribusinesses triggered by the project could cause increased development in the area and potential demographic pressure, leading to degradation of the natural habitats, including to the neighboring Chelkou and Ashana game Reserve** *Biodiversity Conservation and Sustainable Natural Resource Management* *1.1, 1.2, 1.3, 1.6, 1.7, 1.8, 1.10, 1.11* *Pollution Prevention and Resource Efficiency* *8.1, 8.2, 8.6*	I = 3 L = 2	Moderate	The project targets 75,000 people from agricultural and pastoral communities and bring 15,000 ha of land under improved practices. Because of the objectives of more adapted and increased agricultural production as well as its support to small agribusinesses, it is likely to impact local development, trigger more small infrastructure construction, and potentially attract neighboring communities and / or internally displaced persons. The support planned by the project to an agribusiness policy at national level (Output 1.2.3) with a view of developing a strong and dynamic market-driven private agribusiness sector and a long-term agribusiness approach with a climate-friendly consideration could lead to more economic dynamism and in turn to environmental degradations in the area. Aroyo falls inside the Chelkou Game Reserve and is about 33 km south of Ashana. Wardit is about 6km and Akuem is about 10 km from the Chelkou Game Reserve. The Ashana game reserve (IUCN category: III), a savannah woodland habitat of 900 square kilometers known for its populations of elephants (Vulnerable)[85] and	• The climate adaptation approach underpinning the project's design is meant to ensure the sustainability of this system and of the whole landscape, taking into account broader environmental and social constraints. • Stakeholder consultations will be key to determine local techniques and practices and informed by local planning and landscape management approaches. This is meant to ensure sustainable use of resources and avoid adverse impacts on ecosystems and people's livelihoods. • As part of the ESIA/ESMP, a Biodiversity Action Plan will be prepared during implementation looking particularly at biodiversity hotpots and at sites connected through water streams to the project area. • A SESA will be developed to address Output 1.2.3 as defined in the ESMF • The project will work to strengthen institutional capacities to ensure effective and efficient management of agriculture in regard to climate change, including the mitigation of potential adverse impacts to habitats. • Environmental, Social and Technical Assessments, including a cost-benefit analysis of options, will be undertaken for the targeted sites will detail viable options, including UNIDO's work on soil and water conservation structures. Risks will be examined in the course of these targeted assessments, which will analyze adverse impacts on habitats, ecosystems and services. They will identify socially acceptable and environmentally suitable solutions to be supported by the project. Environmental assessment of those alternatives will be included in these assessment, included appropriate measures of avoidance and if not possible of mitigation, if soils and materials are to move through water streams. • The sites of intervention themselves do not constitute areas considered critical habitat. All potential activities will be carried out in accordance with applicable management plan, and with conditions of approval for the activity as set out by the regulatory authorities. • Farmers and project extension staff will be trained in soil erosion control, afforestation and soil stabilization methods

[85] https://www.iucnredlist.org/species/12392/3339343

			Giant Eland (Vulnerable)[86]. The Chelkou Game Reserve has an area of 5,500 square kilometres. The savannah woodland habitat features key species of Elephant, giant eland, and buffalo. Project consequences in the long term, because of the implementation of best practices for climate-smart farmland management, could hence impact a protected area and a critical habitat to protected species, but also the landscape itself. The consumption of raw materials, energy, and/or water may be substantial in this semi-arid climate.	prior to any on-ground implementation. • Environmentally harmful practices such as the use of pesticides will be carefully managed through a Pest Management Plan and a Biodiversity Management Plan to guide the Integration of adaptation measures in relevant value chains support policy frameworks. UNDP seeks to avoid use of pesticides in supported activities. Integrated Pest Management (IPM) and Integrated Vector Management (IVM) approaches are to be utilized that entail coordinated use of pest and environmental information along with available pest/vector control methods, including cultural practices, biological, genetic and, as a last resort, chemical means to prevent unacceptable levels of pest damage. If after having considered such approaches recourse to pesticide use is deemed necessary in the legal agricultural framework, UNDP will advise, through capacity-building activities, safe, effective and environmentally sound pest management in accordance with the WHO/FAO International Code of Conduct on Pesticide Management[87] for the safe labelling, packaging, handling, storage, application and disposal of pesticides. Hazards of pesticide use are to be carefully considered and the least toxic pesticides selected that are known to be effective, have minimal effects on non-target species and the environment, and minimize risks associated with development of resistance in pests and vectors.
Risk 6 **The afforestation activities, if not well designed, could potentially lead to an inadvertent introduction of invasive alien species** *Biodiversity Conservation and Sustainable Natural Resource Management* *1.1, 1.2, 1.3, 1.6, 1.7, 1.8, 1.12*	I = 3 L = 2	Moderate	The project plans not only assisted natural regeneration of forests but also afforestation activities (Output 3.1), mainly through creation of woodlots and energy plantations with fast growing fuel and timber species, and through planting along and on structures for soil and water conservation and harvesting for strength and protection. Project activities envisage afforestation measures and measures to diversify sources of food, fodder, forage, fuel and timber through	• Afforestation with native multi-use species in the catchments will be prioritized • Protection and re-forestation of existing forest areas, as well as assisted natural regeneration will be prioritized where possible. • The exact scale of afforestation and forest protection measures as well as the list of species to be used needs to be further detailed, leading to a potential revision (to Low or to Substantial) of this risk. • Prior to afforestation activities being implemented, a full consultation and assessment will be conducted to develop afforestation plans for each of the focal landscapes in line with international best practice and consideration of the local context. Plans will recommend the use of integrated activities that promote the use of

[86] https://www.iucnredlist.org/species/44172/50197518

[87] FAO/WHO, The International Code of Conduct on Pesticide Management (2014)

			planting appropriate species of trees and shrubs. The temptation to use fast growing, low maintenance exotic species, along with suitable native species could arise to provide fodder, fuel and timber as an adaptation measure. These species could however prove to be invasive. Moreover, invasive species could also come through inadvertent transfer on contaminated equipment or use of contaminated plant material or seeds. Output 2.1 mentions the use "improved seeds" which may lead to the introduction of genetically modified organisms, with the risk of introducing invasive species. While afforestation activities will be across 5,000 ha (activity 3.2.2 and 3.3.2), the project does not intend to introduce exotic species. However, the risk is present because similar projects in the area often use exotics like eucalyptus and teak (introduced in the colonial times).	indigenous tree species and through sustainable and environmentally friendly means. • Overall, these activities will result in reduced de-forestation and conservation of existing forest species. Recommended fast growing species for fodder and fuel will largely be limited to homesteads and village boundaries and the risk could become low if no invasive species will be utilized or introduced and if such activity remains at a small-scale. • The Biodiversity Action Plan will specifically mention the list of native species to be exclusively used by the project
Risk 7 **Accidental release of products or waste from agricultural production units, uncontrolled use of herbicides and chemical fertilizers which can contaminate soils and surface water could happen during project implementation if used without proper protocols.**	I = 2 L = 2	Low		As the project is overall Substantial risk, this risk will be assessed in the course of the ESIA and management measures will be included in the ESMP as needed.

Pollution Prevention and Resource Efficiency *8.1, 8.2, 8.4, 8.5* *Standard 3: Community Health, Safety and Security* *3.4*				
Risk 8 **The Project envisages the construction of small-scale check-dams and other small soil and water conservation structures, including water storage, spreading structures and drainage, which could lead to alteration of soils, flows and impound water** *Pollution Prevention and Resource Efficiency* *8.1, 8.2* *Biodiversity Conservation and Sustainable Natural Resource Management* *1.1, 1.2, 1.3, 1.6, 1.7, 1.8, 1.10, 1.11* *Standard 4: Cultural Heritage* *4.2*	I = 3 L = 2	Moderate	The project plans "improved ground water recharge and soil moisture retention through community based soil and water conservation measures in micro-watersheds" (Output 3.2), which include construction work and use of locally available materials. Small scale irrigation and construction of shallow bore-wells, as well as most outputs under Outcome 3 involve movement of soil and materials which could potentially discharge sediment into water bodies and streams, hence potentially modifying the landscape beyond the mere project area. The scale of those activities is however limited to smallholder farmers from the target area, which also limits the risk of groundwater resources depletion. If activities are implemented poorly, or in case of a contingency, such water works could lead to adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification).	• These projects are not yet selected and will need further safeguards assessments. The SESP will be used to screen all construction activities once identified. Technical and feasibility studies will be conducted for each activity. • The community based watershed committee will coordinate the construction of water harvesting/extraction structures. Project staff including site engineers will design, document and report on the activities. • The community based watershed committee will coordinate these activities which will be documented and reported on by project staff. On the ground soil and water conservation and afforestation measures, and institution of community based management structures which implement and enforce management measures will contribute to protect the areas from over-exploitation. • All soil and water conservation measures, constructions of ponds and water harvesting structures will be done by professional engineers after a comprehensive site survey. Safety measures, including measures to minimize pollution and waste will be integral to the design and implementation of these activities. Local materials will be used for soil and water conservation structures. All earth-works will be completed well in advance of rainy seasons to prevent any erosion or sedimentation of water bodies. Soil stabilization with vegetation and geo-textiles will be done to further reduce post-construction erosion. • Most watershed interventions will be located on unmanaged and degraded lands and water courses which otherwise cause erosion and flooding. Water impoundments will be small in size and designed with optimally placed surplus weirs/overflow channels so that the obstruction is temporary and does not significantly alter the stream hydrology. • UNDP will appoint a site supervisor who will oversee and

				direct construction and field activities including use of safe work practices, safe handling and disposal of waste, and other common construction issues and practices, storage and use of fuels and other hazardous material
Risk 9 **Climate change, which manifests itself mainly through more violent storms during the rainy season, has generated major shifts in the seasonal calendar, increased heat waves, perturbations in agricultural practices and among the fish populations, and has affected storage capacities – this can increase conflicts and social tensions, and lead to the loss of benefits among farmers' organizations.** *Climate Change and Disaster Risks* *2.1, 2.2*	I = 4 L = 4	Substantial	The project site is among the most climate vulnerable regions of South Sudan. River flood due to extreme rains, water scarcity, extreme heat all rank as high risk. This means that (1) potentially damaging and life-threatening river floods are expected to occur at least once in the next 10 years, with a high confidence in an increase in intense precipitation (which could cause causing rapid stream flow, breaching dykes and checkdams); (2) droughts are expected to occur on average every 5 years, with a medium confidence in decreasing dryness; (4) exposure to extreme heat, resulting in heat stress, is expected to occur at least once in the next five years. According to the most recent assessment report of the Intergovernmental panel on Climate Change (IPCC, 2013), continued emissions of greenhouse gases will cause further warming, and it is virtually certain that there will be more frequent hot temperature extremes over most land areas during the next fifty years. Warming will not be regionally uniform. In the area you have selected, the temperature increase in the next fifty years will be slightly lower than the worldwide average, but	• The project aims to provide adequate support to the agrarian sector in order to better adapt it to climate change and modified agricultural conditions. The project objectives are specifically to build climate resilience to agriculture among rural communities. While extreme events are likely to negatively impact project activities, by and large, the activities will be resilient to climate change impacts. • Capacity enhancement of State entities and natural resources users will be supported and monitored to ensure that communities' livelihoods are better adapted to climate change. • Alternative livelihood activities are designed to be climate-smart; promotion of innovating agro-pastoral techniques is emphasized. • River flood, water scarcity, extreme heat and wildfires and hazards management systems will be part of the capacity-building and knowledge sharing activities, which are central to the first and second components of the project • Trainings to farmer organizations will take into account the whole chain of production in order to ensure that a better adaptation of cultures corresponds to appropriate storage facilities: Activity 1.2.2 particularly targets training materials for farmers to engage in a new and different kind of climate friendly value chain technologies and practices and protocols. • Project planning decisions, project design, and must take into account the level of river flood hazard**.** • Construction methods will also, in their technical studies, integrate climate hazards. • Knowledge sharing at global, regional, national, county and community levels will allow to identify prototypes of early warning systems (EWS) that may exist in the project area. Flood early warning systems for instance are designed to provide communities with advanced warning of an imminent flood event based on weather forecasts, rainfall and upstream water levels, and can be used to trigger deployment of portable flood defenses or evacuation to mitigate impacts of a flood. • A clear reporting of impacts of activities in terms of

			still significant. This will impact not only agricultural practices in the field, but also storage capacities. Rural communities disproportionately face climate risks such as increases in temperature and more erratic rainfall, often experienced as more frequent and extreme weather events such as storms, floods, and droughts. Because these communities are more exposed and sensitive to such impacts and generally have lower capacity to adapt, they are more vulnerable to climate change. Their vulnerability makes them less resilient to the impacts of climate change.	changes in yields and livelihood indicators of beneficiaries will be done by the project extension team in consultations with the beneficiaries. • Supporting the inclusion of communities in planning and implementing adaptation actions, as planned in the SEP and in the ProDoc activities, will enable them to become more ready to adapt to climate change. • The project directly addresses water scarcity/drought management measures to alleviate risk, including water storage facilities and better watershed management. • The project directly addresses heat management measures in Outcome 2 by introducing more resilient practices: crop diversification, multi-cropping, crop-livestock and agro-forestry systems will be introduced along with best practices for soil and moisture conservation, farm based production of compost, nutrient/fertility management and micro-irrigation. Appropriate varieties of small ruminants and poultry will be introduced along with income diversification options as adaptation measures.
Risk 10 **The project might generate an increase of GHG emissions at the local level due to the expected increased agricultural production, on the short-term and especially on the long-term** *Climate Change and Disaster Risks 2.4*	I = 2 L = 1	Low		As the project is overall Substantial risk, this risk will be assessed in the course of the ESIA and management measures will be included in the ESMP as needed.
Risk 11 **Aweil region's volatile security situation and general low level of labor safety standards, including UNDSS lists the security level of the Aweil regions as Moderate, may pose a risk for occupational health and safety with regard to any physical works (such as during**	I = 3 L = 3	Moderate	Some of the infrastructures planned in the project for water storage and drainage control may involve machinery and products potentially harmful to workers if used incorrectly. Construction work, though small-scale, may hence have impacts on the health and safety of community workers though	• UNDP will follow a procurement process that requires from contractors a site-specific environmental, health, and safety management plans and procedures. They will be part of the technical and feasibility studies. • The construction impacts on the human environment will be managed through a Health and Safety Plan or workers and for populations • The risk of work-related accidents of local workers will also be taken into account in the Health and Safety Plan which will set the standard for the technical and

construction, transporting materials). Project activities could lead to work-related accidents involving local workers during the construction of water storage and drainage control *Community Health, Safety and Security* *3.1, 3.3, 3.10* *Labour and Working Conditions* *7.1, 7,6*			potential work-related incidents, as well as on the population themselves who live and work around these future constructions. Volatile security situation may also pose threats to the workers while on duty for the project. In addition, the failure of structures such as dykes or dams may cause flooding and damage to lands and pose risk to livestock and people. The risk of drowning of livestock and people, particularly children, in ponds and water harvesting structures, needs to be taken into account. It is to be noted that contractors and NGOs/CBOs will normally have guards/watchmen on project sites especially during installations or construction for safety of project items, however, ones fitted/installed, there will be no need for the guards/watchmen, besides, community-based management committees and relevant local government departments will oversee the project assets. NGOS/UN compounds have armed guards in place.	feasibility studies. • Further, the project will designate, within the community, competent individuals to carry out construction monitoring work. • The project has been developed in a security sensitive way, including selection of safe areas as project sites and adequate responses to changing security situation. To ensure security, the project will work through local NGOs/CBOs, who have experience in project implementation. • Activity 3.1.2 includes an EIA by engineers during design of structures.
Risk 12 **Most of the agricultural sector in the project area is informal and fails to comply with national and international labor standards. Hence there is a risk of violation of workers' rights within the cooperatives and small agribusinesses supported by the project, linked to forced labor and in**	I = 4 L = 4	Substantial	Forced labor has been reported in the agricultural sector in South Sudan. Child labor is a particularly concerning issue in South Sudan. 45.6% of children are considered to be engaged in a form of labour, and 60% of these	• Inspections of all activities are expected to be carried out by Ministry of the Agriculture and local authorities. In order to ensure the protection of children and all workers against forced labour and other worst forms of labour in agriculture, it is expected to step up inspections of those activities. • The project will work closely with few farmers organizations and agribusinesses within this project, and responsible parties will ensure that these organizations

particular to child labor. *Labour and Working Conditions* *7.1, 7.3, 7.4, 7.6*			children are involved in the agricultural sector[88]. While these ratios of children engaged in formal labor are large, even more children likely work in the informal sector. Child labour activities in the project area includes farming, planting and harvesting crops, but also cattle herding, an activity determined as hazardous and, as such, relevant to Article 3(d) of ILO C. 182. The national law states that the minimum age for work is 14, but rises to 18 for hazardous work. Children may also be employed (particularly girls) in collection of water/fuel etc.	comply with all national and international labour standards. • Training to farmers organizations and agribusinesses on adapted practices will recall these standards and monitoring of working conditions and especially child labor will be diligently followed as planned in the ProDoc. • Written labour management procedures will be established[89] that set out the conditions in which project workers will be employed or engaged and managed, in accordance with the requirements herein and applicable labour laws, rules and regulations. The procedures will be appropriate to the size, locations and workforce of project activities, and the most protective international and /or national standards will apply. • These procedures will particularly address child labour: a minimum age for employment shall be specified in connection with the project activities, as determined by national law for applicable parties subject to national law and consistent with the ILO Convention No. 138.[90] A child under the age of 18 may not perform hazardous work, as stated in South Sudan national law. In addition, a child under the age of 18 may not, in connection with project activities, perform work that is likely to interfere with his/her compulsory education or be harmful to his/her physical, mental, spiritual, moral or social development. • Where cases of child labour are identified, immediate steps shall be taken by applicable parties to correct and remedy them, including the rehabilitation and social integration of the child where necessary.
Risk 13 **The project may act as a disease vector : small scale water storage may have potential to provide breeding areas for mosquitos which represent a nuisance and increase the prevalence of Malaria or other**	I = 4 L = 4	Substantial	The creation of water works supported by the project to adapt agricultural practices to increased droughts in the two areas may be sources of proliferation of vectors of waterborne diseases (cholera, bilharzia, guinea worms,	• Because this risk can't be avoided, mitigation measures will implemented to tackle the adverse effects. The following measures will be taken before the start of operation of the developed site, especially before the rainy season which constitutes a peak of transmission (April to October). Because the risk cannot be entirely avoided, UNDP will ensure that the project minimizes the potential for community exposure to diseases that could result from or

[88] *Data from 2011, published by UNESCO Institute for Statistics, 2020*.

[89] Labour management procedures include relevant human resources policies and policies and procedures for the engagement of contractors.

[90] To be consistent with the ILO Minimum Age Convention, 1973 (No. 138), the applicable minimum age will not be less than the age of completion of compulsory schooling and, in principle, not less than 15 years.

significant mosquito borne diseases, while travels of staff and consultants into the area may increase the risk of COVID-19 spread. *Community Health, Safety and Security 3.4*			malaria, etc.) which can harm beneficiaries. The lack of medical facilities and the dilapidated condition of existing facilities, the lack of training for medical personnel, the low number of medical personnel per capita and the excessive burden health-care expenditure represents for low-income households, all lead to believe that an increase in water-borne diseases would lead to a considerable health and sanitation issue at the local level. The project relies on continuous and intensive stakeholder engagement and use of participatory methods and engagement in order to transfer climate adaptation technologies and techniques. It is therefore necessary that measures are put in place to mitigate the risk of transmission to both project staff and stakeholders. The PMU staff, as well as national and possibly international consultants, are expected to travel to the area regularly for support and monitoring. Given the current global COVID-19 pandemic and the low level of medical facilities and healthcare in the region, they could facilitate the spread of COVID-19 into the area, with considerable consequences.	be exacerbated by programming activities, including water-related and vector-borne diseases. As endemic diseases exist in the project area (e.g. malaria), the PMU will explores cost-effective ways to improve environmental conditions that could minimize the incidence of such diseases. Mitigation measures will be integrated within the Health and Safety Plan. • These measures will favor the prevention of risks and impacts and taken into consideration the differentiated exposure to and higher sensitivity of vulnerable groups. • The Health and Safety Plan will cover COVID-19 prevention measures, as already defined in the ProDoc (section on risks). These measures include (1) A system of delegation of responsibilities to decentralize decision making and action wherever feasible; (3) Local coordination of activities - from the UNDP field office at Aweil and implemented by local extension and line department staff to minimize movement; (4) Adherence to all government directives, such as lock downs and mandatory quarantine as well as restrictions on travel, organization of events or sizes of meetings and workshops, (5) additional precautions to ensure that stakeholders and beneficiaries are not exposed to and that project activities do not in any way, allow spreading of the virus to rural areas; (6) Avoidance of international travel wherever possible; (7) The use of online tools such for video conferencing, project management and collaboration. (8) a strong emphasis on the use of mobile ICT to minimize face to face interactions and facilitate online interactions and transfer of data, information and instructions; (9)The training of trainers approach will effectively transfer capacities to local institutions; (10) Mandated safety protocols and best practices such as use of masks, gloves, sanitizers and maintaining social distancing; (11) Protective equipment ; (12) If and when possible, vaccination of project staff and consultants
Risk 14 **The project could adversely impact**	I = 3 L = 3	Moderate	These traditions remain in use to develop guidelines for watershed based interventions in climate-smart agriculture, and	• Preservation of traditional knowledge will happen through the study and encouragement of existing climate smart practices. Activities 1.1.3, 1.3.3, 1.4.1 and 1.4.2 include specific measures to identify potential sites and document

traditional indigenous knowledge by (1) sharing it in a way that is not culturally appropriate ; (2) triggering its loss through the introduction of climate smart agriculture technologies and new practices *Cultural Heritage* *4.3, 4.5* *Indigenous peoples* *6.1, 6.2, 6.3, 6.5, 6.7, 6.9*			the project will prioritize the valorization of traditional indigenous knowledge, practices and existing strategies for coping with climate related stress within communities. However, this knowledge could be shared in a way that is not culturally appropriate, betrayed and wrongly interpreted by PMU and stakeholders external to the communities. Moreover, where deemed appropriate, climate smart practices, more resilient crops and other forms of knowledge will be introduced by the project. This may lead, in the mid-term, to a progressive abandonment of traditional forms of agriculture and hence to a loss of traditional knowledge among the younger generations.	traditional and indigenous knowledge, with consultations to be conducted separately for women and vulnerable groups; to acknowledge and build on indigenous and traditional knowledge on pests, diseases, nutrient management, land/nursery preparation, soil and water conservation and appropriate implements and inputs for both the advisory packages and the trainings. • Where possible, agricultural knowledge will be studied and preserved through the partnership with local research centres. • The Indigenous Peoples Plan will plan adequate measures to (1) avoid the loss of indigenous agricultural knowledge: (2) define culturally appropriate ways of sharing indigenous knowledge. • FPIC will be applied when necessary.
Risk 15 **There is a risk that indigenous peoples, vulnerable or vulnerable groups, might not be involved during the implementation of the project including investments in local adaptation measures for resilient agriculture and implementation of local-level economic activities, and therefore not engaged in, supportive of, or benefitting from project activities.** *Cultural Heritage* *4.3, 4.1, 4.5, 4.4* *Displacement and Resettlement* *5.2, 5.4*	I = 4 L = 3	Substantial	South Sudan is a culturally diverse country where traditional governance systems and customary practices continue to influence local decisions, particularly in rural areas. Under the constitution of The Republic of South Sudan 2011, the constitution states in its part two the 'Bill of Rights' which are numerous and under section 33 specifically states (the right of Ethnic and Cultural Community) that "Ethnic and cultural communities shall have the right to freely enjoy and develop their particular cultures. Members of such communities shall have the	• As outlined in the ESMF, Responsible parties will make sure that the project activities strengthen national laws and local regulations in line with the respect of UNDP standard and internationally recognized indigenous peoples rights. Specific measures pertaining to the respect of indigenous peoples rights to land, food, services, and participation in project which affect their lands will be enclosed within the Indigenous Peoples Plan, to be developed on a participatory basis. • Separate culturally appropriate consultations have been and will continue to be held in the early phase of the project with indigenous communities on project sites, with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned. All consultations have been appropriately documented and remain available upon request. The FPIC protocol will be further detailed in the Indigenous Peoples Plan. • Training and material support provided to farmers

Indigenous peoples *6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9*			right to practice their beliefs, use their languages, observe their religions and raise their children within the context of their respective cultures and customs in accordance with this Constitution and the law". The project area is mainly inhabited by the Dinka people and the Luo (formerly / commonly known as Jurchol. The change of name is at the heart of an on-going advocacy campaign and has been subject to disputes with Dinka groups[91]l). Dinka (who usually call themselves Muonyjang in the project area, and Jieng in other areas) are the largest single southern Nilotic group. They are mostly christian and animist cattle herders living in northern Bahr al Ghazal and areas south and west of the White Nile (with a very small minority of muslim dinka people). They represent approximately 4 million people, 36% of the population of South Sudan[92], including 2 million people in the province of Bahr el-Ghazal. They are divided into a very large number of tribes, the main ones being the Agar, Aliab, Bor, Malual and Rek tribe[93]s. All of them share a	organizations and women's groups will be based on inter-community dialogue, ensuring that all local and indigenous communities participate equitably (meaning ensuring transation to Arabic, dinka and dho-luo). In that sense, the project represents an opportunity exists to support forums to increase peaceful dialogue and encourage agreement. • Participation of all communities and farmers in the farmer organizations will be encouraged in a culturally sensitive way. PMU will encourage the participation of a sufficient number of indigenous participants (no single representation) and primarily promote sustainable traditional and customary use practices and prohibit involuntary restrictions on land and resource use. • The project will ensure that communities are able to represent themselves through their own organizations, not via proxy groups made up of people from other interest groups. • Farmers organizations are expected to establish transparent and accountable mechanisms for the equitable distribution of local benefits. • A Stakeholder Engagement Plan has been developed as part of the project design to articulate participation mechanisms and processes. It will inform mitigation and management measures for risks associated with the presence of different ethnic groups in the targeted landscape during project implementation. The breadth and detail of participatory mechanisms and processes are scaled to the Project's potential social and environmental risks and impacts and particular circumstances. • A summary of the SEP, IPP and FPIC protocol will be translated in appropriate languages (Arabic and Dinka – it is to be noted that translation in Dho-Luo is very difficult to find. The project will thus need to work with members of the community who understand Arabic and/or Dinka) and made available to all stakeholders, including indigenous peoples. They have been designed on the basis of consultations and will be subject to further consultations on the field leading to a potential revision in the first six

[91] Lao are being wrongfully referred to as "Jurchol", a Dinka phrase that has controversial and disputable meanings. Jur is someone or group of individuals who don't speak Dinka language, while Chol is a black color which clearly implies that Luo people when called Jur Chol in Dinka means a 'Black Stranger'. This interpretation and change of name is currently subject to disputes between community-based advocacy groups - https://thessherald.com/2020/08/17/luo-people-commonly-known-as-jurchol-to-change-their-identity-to-luo/

[92] https://www.cia.gov/library/publications/the-world-factbook/geos/od.html

[93] https://www.universalis.fr/encyclopedie/dinka/

			common Dinka (Thongmuonyjang) language, and some community members also speak Arabic. Luo tribe is one of the earlier inhabitants of Western Bahr el Ghazal State. They are a small community less than 70 000 individuals, spread in Wau, Tonj, and Aweil. They commonly known for their forest agriculture knowledge, and mainly conduct sedentary agricultural activity[94]. Their language is Dho-Luo, but some of them do speak Dinka and Arabic. While some of them are Christian, indigenous beliefs remain strong. Though Luo and Dinka peoples are not experiencing conflict in the project area, careful follow-up of pastoralists / agriculturalists tensions or of politically and economically triggered intercommunity conflict should be done by the PMU throughout the project. Within these indigenous communities, women and vulnerable groups within these communities such as elderly, people with disabilities, may not find adequate representation in traditional and customary institutions and may be excluded during consultations. This presents the following risks:	months of the project. • The project will engage the services of gender and social engagement expert to conduct a comprehensive assessment of social risks for each project site and to develop a clear set of guidelines that ensure women and vulnerable groups are identified and provided opportunities to participate in decision making in the project. Community engagements during the formulation of the concept. • The PPG phase involved discussions with representatives of the Ministry of Gender, Child and Social Welfare at national, state and payam level. Representatives of vulnerable groups, women community members and gender and community experts will be sought out during consultations to assess the nature and scale of the challenges and incorporate these into project design. • Vulnerable groups will be supported to develop leadership skills and facilitated to hold positions in committees and user groups created. Mobilisation and awareness generation activities are integrated with all the project components. • Project staff will be trained in FPIC, participatory approaches and empowered to integrate the needs of vulnerable groups in project planning. • Careful follow-up of pastoralists/agriculturalists or of politically and economically triggered intercommunity conflict should be done by the PMU throughout the project. The Grievance Redress Mechanism should also consider integrating existing conflict resolution mechanisms such as traditional community justice[95]. Further, the complaint and grievance mechanism established by UNDP and the project executing agency(ies) will allow individuals to bring up claims, when they cannot resolve at the level of CBOs. • The project will ensure that local communities including indigenous peoples, women and landless youths are involved in the assessments, negotiations and dialogue regarding land classification, use and planning and are empowered to eventually influence allocation decisions. They will be empowered to influence allocation decisions and will receive benefits from the restoration and provision

[94] http://www.gurtong.net/Peoples/PeoplesProfiles/JurcholLuo/tabid/199/Default.aspx

[95] Existing resources can be used such as https://sites.google.com/site/gardensfordamascus/case-studies-conflict-resolution/traditional-conflict-resolution-in-southern-sudan or Traditional Mechanisms of Conflict Resolution in Southern Sudan, by Dr. Samson S. Wassara, Berghof Institute for Peace, March 2007

			(1) The most vulnerable groups may not be adequately consulted during planning, design and implementation of activities, (2) These groups may not have sufficient representation or influence to ensure equitable sharing of benefits, (3) Project activities may be misdirected to benefit politically and socially dominant groups. This risk is particularly present in light of Outcome 2 which will affect tenure rights at the local level, as land uses will change as a result of the design of various learning crops. The project could cause alterations to landscapes and natural features with cultural significance, as those have not yet been identified. In addition, as project activities will be located in communal lands, politically and socially dominant groups could seize this opportunity to direct the benefits of the project towards themselves, reproducing existing discriminations against minorities and/or vulnerable groups. An appropriate FPIC protocol is still to be designed so that culturally appropriate consultations can be carried out, consent can be achieved on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned. In the absence of FPIC, forced evictions remain a risk (see risk 1).	of income-generating activities on communal lands. • Identification of exact activities sites will be done in consultation of national and state government agencies and their line departments up to the Payam (group of Bomas).Local leaders (Chiefs) at the Boma (group of villages) and village levels will be consulted and their approval obtained before initiating any project activities. Communities will retain control over the planning and design of on-ground activities and will be provided access to project management staff.

	QUESTION 4: What is the overall project risk categorization?				
	Low Risk	☐			
	Moderate Risk	☐			
	Substantial Risk	X	Required assessments: ESIA and SESA Required management measures: ESMF, ESMP with stakeholder engagement plan, indigenous people's plan including Free Prior and Informed Consent (FPIC) protocol, Gender Action Plan including Gender analysis, Grievance Redress Mechanism, Livelihood Action Plan, Health and Security Plan, Biodiversity Action Plan Note: Although all project activities have been screened in this SESP (in line with SES requirements), the activities under UNIDO (joint GEF Agency) will be managed by UNIDO in accordance with that Agency's safeguards policy (as noted in the ESMF).		
	High Risk	☐			
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)				
	Question only required for Moderate, Substantial and High Risk projects				
	Is assessment required? (check if "yes")	X			***Status? (completed, planned)***
	if yes, indicate overall type and status		X	Targeted assessment(s)	Completed during PPG: stakeholder analylsis, gender analysis
			X	ESIA (Environmental and Social Impact Assessment)	Planned during implementation
			X	SESA (Strategic Environmental and Social Assessment)	Planned during implementation
	Are management plans required? (check if "yes)	X			
	If yes, indicate overall type		X	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	PPG stage: GAP: completed SEP: completed Implementation stage (in ESMP): IPP: planned HSP: planned

					BAP: planned LAP: planned
			X	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	Planned
			X	ESMF (Environmental and Social Management Framework)	Completed during PPG
	Based on identified <u>risks</u>, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind				
	Human Rights	X			
	Gender Equality and Women's Empowerment	X			
	Accountability	X			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	X			
	2. Climate Change and Disaster Risks	X			
	3. Community Health, Safety and Security	X			
	4. Cultural Heritage	X			
	5. Displacement and Resettlement	X			
	6. Indigenous Peoples	X			
	7. Labour and Working Conditions	X			
	8. Pollution Prevention and Resource Efficiency	X			

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	***Date***	***Description***
QA Assessor		UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.		
Overarching Principle: Leave No One Behind **Human Rights**		**Answer (Yes/No)**
P.1	Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	**Yes**
P.2	Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	**Yes**
P.3	Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	**Yes**
Would the project potentially involve or lead to:		
P.4	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of vulnerable groups?	**Yes**
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or vulnerable or excluded individuals or groups, including persons with disabilities? [96]	**Yes**
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to vulnerable individuals or groups, including persons with disabilities?	**Yes**
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	**Yes**
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	**Yes**
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	*No*

[96] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	**Yes**
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	**Yes**
P.12	exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc*.	**Yes**
Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular vulnerable groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	**Yes**
P.14	grievances or objections from potentially affected stakeholders?	**Yes**
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	No
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		
1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	**Yes**
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	**Yes**
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	**Yes**

1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	No
1.5	exacerbation of illegal wildlife trade?	No
1.6	introduction of invasive alien species?	**Yes**
1.7	adverse impacts on soils?	**Yes**
1.8	harvesting of natural forests, plantation development, or reforestation?	**Yes**
1. 9	significant agricultural production?	No
1. 10	animal husbandry or harvesting of fish populations or other aquatic species?	**Yes**
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	**Yes**
1.12	handling or utilization of genetically modified organisms/living modified organisms?[97]	**Yes**
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[98]	No
1.14	adverse transboundary or global environmental concerns?	No
Standard 2: Climate Change and Disaster Risks		
Would the potentially involve or lead to:		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	**Yes**
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change? *For example, through increased precipitation, drought, temperature, salinity, extreme events*	**Yes**
2.3	direct or indirect increases in vulnerability to climate change impacts or disasters now or in the future (also known as maladaptive practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	No
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	**Yes**
Standard 3: Community Health, Safety and Security		

[97] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.
[98] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

Would the potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	**Yes**
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	No
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	**Yes**
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	**Yes**
3.4	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	**Yes**
3.8	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	**Yes**
3.9	influx of project workers to project areas?	No
3.10	engagement of security personnel to protect facilities and property or to support project activities?	**Yes**
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	**Yes**
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	**Yes**
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	**Yes**
4.4	alterations to landscapes and natural features with cultural significance?	**Yes**
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	**Yes**
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally	**Yes**

	recognizable claims to land)?	
5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	**Yes**
5.3	risk of forced evictions?[99]	No
5.4	impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	**Yes**
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	**Yes**
6.2	activities located on lands and territories claimed by indigenous peoples?	**Yes**
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk*	**Yes**
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	**Yes**
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	**Yes**
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	**Yes**
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	**Yes**
6.8	risks to the physical and cultural survival of indigenous peoples?	No

[99] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	**Yes**
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		
7.1	working conditions that do not meet national labour laws and international commitments?	**Yes**
7.2	working conditions that may deny freedom of association and collective bargaining?	No
7.3	use of child labour?	**Yes**
7.4	use of forced labour?	**Yes**
7.5	discriminatory working conditions and/or lack of equal opportunity?	No
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	**Yes**
Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	**Yes**
8.2	the generation of waste (both hazardous and non-hazardous)?	**Yes**
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	No
8.4	the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	**Yes**
8.5	the application of pesticides that may have a negative effect on the environment or human health?	**Yes**
8.6	significant consumption of raw materials, energy, and/or water?	**Yes**

Annex 7: UNDP Risk Register

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
1.	Political instability and security could result in conflict and displacement and delay or suspend project activities	Operational, Political	Political or security complications in project sites may constrain or delay the implementation of activities and could impact private sector involvement by affecting markets and value chains. Likelihood =3, Impact = 3: Moderate	Security risks and accessibility were considered during the selection of sites and those with security challenges and poor accessibility were avoided. However, there have been instances of violence between nomadic pastoral groups and residents in the Aroyo catchments. There are also isolated instances of violence in the project area which can jeopardize implementation or cause delays. The state of Northern Bahr el Gazal houses a large population IDPs as well as refugees from other regions. These communities have been allowed to settle by the resident communities and have been given access to land and natural resources. In most cases these rights are allocated through traditional authorities. Conflict and consequent displacement are unlikely to affect the entire project as its sites are located in secure and conflict free regions of South Sudan. Furthermore , this project is being implemented via regional government agencies and departments and its field activities will be coordinated out of premises of the UNDP field office and offices of county administrator which are secure and safe locations. Project staff, including any consultants or supporting staff from partner agencies will conform to agreed government protocols on safety. The county, will be the official channel to provide security related information to the project teams and project activities will only be initiated and conducted in those sites which are deemed secure. Additionally, the extent of this risk will be reassessed at project inception, and will continue to be monitored. Any severe implications that will affect project implementation in specific locations will be considered by the Steering Committee and communicated accordingly. The project will be part of the existing UNDP peace building efforts, particularly in the Aroyo catchments where clashes between nomadic pastorals and local communities are known to occur, typically during the return of the nomadic pastorals. Peace-building efforts of reconciliation committees will be heightened during this period. The project will also ensure its activities involve nomadic communities present in the project catchments. The Northern Bahr el Ghazal State was selected for this project as it experiences fewer incidents of violence than other regions. On the other hand, as a border state, it has a high population of refugees and falls in the migrant pathway of nomadic pastoralists.	WVSS Aweil field office and country office.
2.	Limited capacities may prevent duty bearers from discharging their duties and responsibilities	Operational	Extended periods of insecurity and recent administrative realignments in government departments have led to low staffing and poor levels of capacity and training among staff. The duty bearers of this project, government ministries and local	In order to reinforce the capacities of the duty-bearers to conduct the project effectively and meet their obligations, all outcomes include targeted capacity-building. WVSS will appoint a full time project management team comprising of professionals with expertise in administrative, social as well as technical aspects of the project. A team comprised of highly trained and motivated professionals with expertise in both the administrative, social as well as technical aspects of implementing climate resilience and adaptation projects will be assembled for this project. This will include a full time project manager.	WVSS Aweil field office and country office.

			authorities and CBOs, have low capacities to: i) measure and manage the impact of climate change on agriculture; ii) engage with all members of the communities in depth, and iii) facilitate and monitor a grievance redress mechanism. This could result in administrative delays and could also affect the quality and quantity of outputs. Likelihood=4, Impact=4: Substantial.	Technical experts in agriculture, animal husbandry, veterinary sciences, forestry and NRM will be engaged for designing, overseeing and analyzing results of surveys, for preparing training materials and for training project staff in relevant technologies and techniques. Safeguards specialists, including gender, environmental and social safeguards and stakeholder engagement will be engaged to lead the socioeconomic assessments and designing the framework for continual and participatory monitoring of safeguards. These experts will be drawn from national, regional and international agencies with the clear mandate of transferring capacities to local institutions, including CBOs as a key part of the project's strategy for sustainability. Training and skill up gradation will be conducted throughout the project's life cycle and will be coupled with close oversight by experts from the field and by PMU staff. These measures will ensure that technical project staff are well equipped to effectively and efficiently discharge their duties and that project management and administration are handled professionally and meet both GEF and UNDP standards and requirements	
4.	Gender exclusion	Social	As women are traditionally excluded from decision-making processes, they could be excluded from the support planned for farmers and farmers organizations as well as in the national and regional institutions. This could inadvertently reproduce existing discriminations, including in the design of agriculture and natural resources management policies, and even gender-based violence against women in project implementation. Likelihood=4, Impact=4: Substantial	Gender concerns are integrated all outcomes of the project document and supported by the Gender analysis and action plan. The gender analysis develops a comprehensive situational analysis. It enables the project to better understand the levels of participation and involvement of women and men in agriculture and in community-decision-making as well as different experiences of specific development challenges bear by subsets of the women groups. It also enables the project to better take into account women's priorities, restraints and motivations when designing and supporting alternative livelihoods, as well as to identify opportunities for greater equality and empowerment for women throughout project implementation. All activities have been designed to be gender-sensitive, supported by gender-disaggregated indicators. The project has been designed with particular attention to establishing mechanisms to reduce the risk that existing discriminations against women are inadvertently reproduced in project implementation. Output 1.1 (Integration of climate change adaptation strategies in agriculture and natural resources management policies) will be supported by the recruitment of a national gender consultant in charge of developing site specific social and environmental safeguards, and in particular to look at Principle 2. Consultations held during PPG included women's group and a needs assessment focusing on the vulnerability and climate adaptation needs of women was conducted to inform the formulation of adaptation and disaster risk reduction plans. The meeting with NGB State Women Association, in particular, led the consultants to listen to many different women's groups and was the occasion to gather insights on the challenges met by them. Clear recommendations were made such as the implementation of flood control measures (channels and dykes), included in the project. All reports, including proper documentation, pictures and proof of consent are stored and available on demand. Gender responsive and inclusive community mobilization and capacity building activities will precede all interventions, according to the SEP.	WVSS Aweil field office and country office.

5.	Climate change impacts	Environmental	Climate change, which manifests itself mainly through more violent storms during the rainy season, has generated major shifts in the seasonal calendar, increased heat waves, perturbations in agriculture and among pastoral groups. It has affected water retention and storage in ponds and wetlands affecting those engaged in fishing. Rapid stream-flow during extreme rain events could potentially damage the soil and water conservation and water harvesting structures proposed. Excessive temperatures and prolonged drought conditions can affect the survival of saplings and success of the various planting/seeding interventions proposed. Likelihood=4, Impact=4: Substantial	This project focuses on the transfer of capacities, social infrastructure and community assets to equip communities to adapt to and mitigate the effects of climate change. It will specifically to build climate resilience among farmers, pastoralists, those engaged in fishing and the collection of timber and non-timber forest produce. While extreme events are likely to negatively impact project activities, by and large, the activities will be resilient to climate change impacts. Capacity enhancement of State entities and natural resources users will be supported and monitored to ensure that communities' livelihoods are better adapted to climate change. Alternative livelihood activities are designed to be climate-smart; promotion of innovating agro-pastoral techniques is emphasized. Flood, water scarcity and drought management systems will be part of the capacity-building and knowledge sharing activities. Component 1 of the project focuses on institutional capacity building, the second on supporting farming communities and agro-pastoral groups while the third on catchment restoration which will provide long term climate resilience for all communities and particularly for pastoral groups. The design of structures will be based on best practices and will incorporate current climate scenarios and return periods for floods to ensure structural integrity of all construction during extreme events. All nursery raising and planting activities will be undertaken based on the most recent available forecasts. Nurseries will only be established near water points to ensure sapling can be protected and maintained during prolonged dry periods and high levels of heat. Best practices in nursery raising and the use of hardy varieties of saplings will ensure high survival of plants both in the nursery and after planting. Soil and water conservation measures will go hand in hand with afforestation and planting sites in micro-watersheds will be selected based on soil quality and moisture availability for optimal survival.	WVSS Aweil field office and country office.

Annex 8: Overview of Project Staff and Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting		
Project Manager Rate: 6,000 p.m.	60 months over 5 years	The Project Manager (PM) will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. Duties and Responsibilities • Manage the overall conduct of the project. • Plan the activities of the project and monitor progress against the approved workplan. • Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work. • Monitor events as determined in the project monitoring plan, and update the plan as required. • Provide support for completion of assessments required by UNDP, spot checks and audits. • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports. • Monitor progress, watch for plan deviations and make course corrections when needed within project Steering committee-agreed tolerances to achieve results. • Ensure that changes are controlled, and problems addressed. • Perform regular progress reporting to the Project Steering Committee as agreed with the committee, including measures to address challenges and opportunities. • Prepare and submit financial reports to UNDP on a quarterly basis. • Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Steering Committee for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log; • Capture lessons learned during project implementation. • Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required. • Prepare the inception report no later than one month after the inception workshop. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Prepare the GEF PIR; • Assess major and minor amendments to the project within the parameters set by UNDP-GEF; • Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; • Monitor and track progress against the GEF Core indicators. • Support the Mid-term review and Terminal Evaluation process. • Add technical tasks as necessary
Sr. Finance Officer Rate: 3,840 p.m.	60 months over 5 years	Duties and Responsibilities • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager; • Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoE financial rules and procedures; • Validate and certify FACE forms before submission to UNDP; • Provide necessary financial information as and when required for project management decisions; • Provide necessary financial information during project audit(s); • Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues; • Consolidate financial progress reports submitted by the responsible parties for implementation of project activities; Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.
Finance Assistant Rate: 1,920 p.m.	60 months over 5 years	Duties and Responsibilities • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager; • Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoE financial rules and procedures; • Validate and certify FACE forms before submission to UNDP; • Provide necessary financial information as and when required for project management decisions; • Provide necessary financial information during project audit(s);

Consultant	Time Input	Tasks, Inputs and Outputs
		• Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues; • Consolidate financial progress reports submitted by the responsible parties for implementation of project activities; Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.
Project Site Officer Rate: 1,920 p.m.	60 months over 5 years	The Project Site Officer will be responsible for the management of the project and its activities at Aweil and project sites, including liaison with the national PMU for mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. Duties and Responsibilities • Manage the overall conduct of the project at Aweil and sites. • Plan the activities of the project and monitor progress against the approved workplan. • Execute activities by managing personnel, goods and services, training and low-value grants, including overseeing all contractors' work. • Monitor events as determined in the project monitoring plan, and update the plan as required. • Provide support for completion of assessments required by UNDP, spot checks and audits. • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports from the site. • Monitor progress, watch for plan deviations and make course corrections in consultation with the national PMU when needed within project Steering Committee-agreed tolerances to achieve results. • Ensure that changes are controlled and problems addressed. • Perform regular progress reporting to the national PMU, including measures to address challenges and opportunities. • Support the national PMU in preparation and submission financial on a quarterly basis. • Support the national PMU in the management and monitoring of project risks – including social and environmental risks - initially identified; update the status of these risks by maintaining the project risks log; • Capture lessons learned during project implementation. • Support the national PMU in revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Support the national PMU in preparation of the GEF PIR; • Support the national PMU in monitoring implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; • Support the national PMU in monitoring and tracking progress against the GEF Core indicators. • Support the Mid-term review and Terminal Evaluation process.
International / Regional and global contracting		
Chief Technical Advisor Rate: 650/-day	150 days each year over 5 years	The Chief Technical Adviser (CTA) will be responsible for providing overall technical backstopping and management support to the Project. His/her responsibilities will include: • Collating GIS and remote sensing data from national sources such as the NBS, from multilateral partners and from public sources such as USGS, FAO SWALIM, ESA, ISRC and other regional and global facilities. (S)he will use tools such as the Google Earth Engine to develop trend maps and extract statistics on climatic and bio-physical datasets. • Coordinate field surveys, including mapping of biophysical characteristics including i) soil samples from agricultural fields ; ii) ground control points for cropping patterns; iii) identify potential sites for water harvesting and small scale irrigation; iv) sites needing flood and erosion control structures; v) map resource use by communities including water, fuel, grazing grounds, NTFP and cattle camps; vi) identify potential sites for soil and water conservation; vii) identify potential sites for assisted natural regeneration; viii) Identify suitable native species for uses such as timber, fuel, forage, fruit, fodder and shade. • Analyze field data to develop site specific maps and data to design and guide project activities across its components including: i) soil type; ii) agricultural potential; iii) seasonal cropping pattern; iv) erodibility maps; v) disaster (flood/drough) risk maps, vi) vegetation types. • Generate updated GIS datasets on the project sites and micro-watersheds which includes administrative boundaries and demographic data from available sources. • Prepare a protocol for the use of these datasets for monitoring project impacts on biophysical parameters, for example indices to track changes in biomass productivity, flood control and vegetative cover. • Train field staff in participatory field methods and the use of mobile ICT tools such as ODK to collect soil samples, identifying and surveying sites prone to flooding and erosion and sites with potential for soil and water conservation, assisted natural regeneration, water harvesting and small scale irrigation, collecting samples for soils, ground control points for LULC mapping and site identification. • Document traditional and indigenous knowledge. • Prepare site and farmer specific resource maps and data on livelihood strategies based on seasonal calendars including i) cropping and agricultural practices; ii) NR extraction (including water & fuel); iii) coping strategies. Conducted separately

Consultant	Time Input	Tasks, Inputs and Outputs
		for women and vulnerable groups.
International social and environmental safeguards expert Rate: 650/day	160 spread over 5 years with 40 days during year 1, 2 and 5 and 20 days in year 3 and 4.	*Duties and Responsibilities* • *Develop the project ESIA/ESMP based on the ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;* • *Develop implementation of all safeguard related plans;* • *Set up systems to ensure social and environmental grievances are managed effectively and transparently;* • *Review the ESMP in year 3, and update and revise corresponding risk log; mitigation/management plans as necessary;* • *Set up a monitoring framework to ensure full disclosure with concerned stakeholders;* • *Set up a monitoring framework to ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation;* • *Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project;* • *Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;* • *Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;* • *Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;* • *Oversee/develop/coordinate the implementation of the stakeholder engagement plan;* • *Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results;* • *Facilitate mid-term and terminal evaluations of the project; including management responses;* • *Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products;* • *Support project site M&E and learning missions;* • *Monitor progress in development/implementation of the project ESMP ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;* • *Oversee/develop/coordinate implementation of all social safeguard related plans;*

Consultant	Time Input	Tasks, Inputs and Outputs
		• *Ensure social grievances are managed effectively and transparently;* • *Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary;* • *Ensure full disclosure with concerned stakeholders;* • *Ensure social risks are identified, avoided, mitigated and managed throughout project implementation;* • *Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project* • *Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.* • *Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;* • *Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;* • *Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;* • *Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results;* • *Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products;* • *Support project site M&E and learning missions;* • *Monitor progress in development/implementation of the project ESMP ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;* • *Oversee/develop/coordinate implementation of environmental safeguard related plans;* • *Ensure environmental grievances are managed effectively and transparently;* • *Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary;* • *Ensure full disclosure with concerned stakeholders;* • *Ensure environmental risks are identified, avoided, mitigated and managed throughout project implementation;* • *Ensure reporting, monitoring and evaluation fully address the safeguard issues of the project* • *• Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.*

Consultant	Time Input	Tasks, Inputs and Outputs
International gender and community engagement expert Rate: 650/day	45 days in year 1	*Duties and Responsibilities* • *Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled;* • *Together with local experts (consultants), design and use gender-responsive, quantitative and spatially explicit indicators to monitor and measure the impact of project activities;* • *Monitor progress in implementation of the Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled;* • *Oversee/develop/coordinate implementation of all gender-related work;* • *Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;* • *Work with the Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender issues of the project;*
For Technical Assistance		
Outcome 1		
International / Regional and global contracting		
Local / National contracting		
Agribusiness, livestock value chains and NTFP value chains Rate $ 300/day	55 days across 5 years	For Output 1.1: • Detailed information on site specific appropriate livelihood and income diversification options for i) diversification in crops and animal husbandry, including small ruminants; ii) processing and storage of agricultural products for value enhancement and security, iii) processing and sales of NTFP including honey and gum Arabic. • Illustrated training manual and technical guidelines for end users and technical guidelines for trainers in English. • Training manuals and technical guidelines translated into Arabic , Dinka and Luo and podcasts prepared in both languages. For Output 1.4: The consultant will engage with other relevant consultants to prepare a detailed and illustrated, gender responsive and site specific extension and advisory packages for agro-pastoral communities comprising instructions and field guides including, acknowledging and building on indigenous and traditional knowledge on pests, diseases, nutrient management, land/nursery preparation, soil and water conservation and appropriate implements and inputs for : i) crop and vegetable farming; ii) livestock and animal husbandry; iii) pond fisheries and aquaculture and iv) agroforestry. The consultant will conduct training of extension workers twice a year involving both classroom and hands-on sessions for delivery of support to communities on income and livelihood diversification including: i) diversification in crops and animal husbandry, including small ruminants; ii) processing and storage of agricultural products for value enhancement and security, iii) processing and sales of NTFP including honey and gum Arabic.

Consultant	Time Input	Tasks, Inputs and Outputs
Climate change policy in agriculture and NRM Rate $ 300/day	20 days in Year 1	For Output 1.1: The consultant will prepare a report with comprehensive review of relevant policies and plans highlighting gaps and providing specific recommendations on gender responsive climate mainstreaming. The consultant will engage with policy makers in a workshop and document its proceedings in a report that will include: i) Proceedings of workshop highlighting policy recommendations for gender-responsive climate mainstreaming; ii) Policy brief.
Communication specialist Rate: 300/day	20 days in year 1	For Output 1.3: Reorganizing materials and modules for training and policy briefs for dissemination using social media channels and web pages.
Translator Rate $ 300/day	40 days in year 1	For Output 1.3: The communication specialist will translate training packages from English to Dinka, Luo and Arabic. This includes reports and written materials, as well as English, Dinka and Arabic recordings and audio-visual versions of extension packages produced. The consultant will also re-format the extension packages to fit web pages, social media channels and print.
Specialist in climate information and early warning planning	20 days in year 1 and 3	*Output 1.1: Local expert in use of climate information for early warnings and advisories to support decisions among farming and pastoral communities. Expert will provide training to extension services in Aweil to ensure available climate data and forecasts are effectively used for on-ground decision making.*
Participatory GIS, community based WSD Rate $ 300/day	25 days across 5 years	For Output 1.4: The consultant will provide training to extension workers and line departments covering i) Participatory planning and surveying for catchment restoration. ii) Soil and water conservation methods; iii) Agro-forestry including nursery raising; iv) rangeland restoration and management.. Representation of women among trainees encouraged and ensured where possible.
Statistics and demographics with GIS knowledge Rate $ 300/day	20 days in year 1	For Output 1.1: The consultant will work with the GIS and RS consultants focusing on collation of digital dataset including statistical tables and GIS files with clear attribution and an annotated bibliography of all references developed by trawling available sources such as NBS, AFIS as well as reports and publications, including grey literature.
Climate smart agriculture: agronomy and agroforestry Rate $ 300/day	25 days across 5 years	For Output 1.4: The consultant will engage with other relevant consultants to prepare a detailed and illustrated, gender responsive and site specific extension and advisory packages for agro-pastoral communities comprising instructions and field guides including, acknowledging and building on indigenous and traditional knowledge on pests, diseases, nutrient management, land/nursery preparation, soil and water conservation and appropriate implements and inputs for : i) crop and vegetable farming; ii) livestock and animal husbandry; iii) pond fisheries and aquaculture and iv) agroforestry. The consultant will conduct training of trainers and refresher courses for extension workers on climate smart agricultural practices relevant to local contexts, seasonal calendars, building on traditional knowledge and practices covering i) Soil fertility and nutrient management; ii) Tillage and moisture management; iii) Use of disease resistant, fast maturing and high yielding varieties; iv) Multi-cropping and agro-forestry; v) Integrated/mixed farming with small ruminants, poultry and livestock; vi) Conservation agriculture and gardening.
Climate smart	25 days	For Output 1.4: The consultant will engage with other relevant consultants to prepare a detailed and illustrated, gender

Consultant	Time Input	Tasks, Inputs and Outputs
agriculture: livestock and rangeland Rate $ 300/day	across 5 years	responsive and site specific extension and advisory packages for agro-pastoral communities comprising instructions and field guides including, acknowledging and building on indigenous and traditional knowledge on pests, diseases, nutrient management, land/nursery preparation, soil and water conservation and appropriate implements and inputs for : i) crop and vegetable farming; ii) livestock and animal husbandry; iii) pond fisheries and aquaculture and iv) agroforestry. The consultant will conduct training of trainers and refresher courses for running pastoral field schools and extension support to livestock owners and pastorals held twice a year for involving both classroom and hands-on sessions on livestock disease surveillance and animal-health care. Representation of women and vulnerable groups among trainees encouraged and ensured where possible so that extension services are more easily accessed by women and these groups. Specific attention paid to building on and properly documenting and acknowledging traditional practices and knowledge.
Community Development Specialist Rate $ 300/day	25 days across 5 years	For Output 1.4: The consultant will engage with other relevant consultants to prepare a detailed and illustrated, gender responsive and site specific extension and advisory packages for agro-pastoral communities comprising instructions and field guides including, acknowledging and building on indigenous and traditional knowledge on pests, diseases, nutrient management, land/nursery preparation, soil and water conservation and appropriate implements and inputs for : i) crop and vegetable farming; ii) livestock and animal husbandry; iii) pond fisheries and aquaculture and iv) agroforestry. The consultant will conduct training of community development agents in mobilising and forming gender equitable and responsive community based groups and committees including : i) farmer and pastoral groups; ii) micro-credit and self help groups; iii) user groups for water points, small scale irrigation, fish ponds and livestock fattening facilities; iv) organising micro-watershed development and catchment restoration teams.
Outcome 2:		
International / Regional and global contracting		
Local / National contracting		
M&E specialist (one or more) with experience in participatory mobile ICT assisted data gathering Rate $ 300/day	140 days across 5 years	*For Outputs 2.2 and 2.4: The consultant will design a mobile ICT based monitoring framework to track progress and impact of on-ground interventions and crop conditions which utilises Android smartphone based utilities such as ODK which combine geo-tagged and time stamped survey forms with photographs, audio recordings and GPS coordinates.* (S)he will train project staff and extension services in collecting this data on smartphones for aggregation and sending via the mobile network to the site and/or national PMU for analysis. *The consultant will develop easy to measure, gender responsive quantitative indicators which are suitable for participatory monitoring of community involvement and progress and impact of activities. Printed records maintained by CBO focal points will be designed for integration with the smartphone based survey forms operated by project staff. Indicators will include:* i) Those for measuring impacts of awareness generation, participation and representation of women and vulnerable groups in

Consultant	Time Input	Tasks, Inputs and Outputs
		CBOs and in training. *ii) Number of and impact of interventions including (gender-disaggregated) numbers of direct beneficiaries.* *iii) Improvement in yields and productivity from income/livelihood diversification, farming and livestock.* iv) Indicators of crop condition (pest damage, water stress) and soil moisture. v) livestock disease surveillance; vi) crop and vegetable farming and vii) rangeland and forest management applications; viii) social and environmental safeguards and gender tracking tools; and ix) analysis and reporting of data from monitoring of indicators. *The consultant will undertake annual training of staff, CBO focal points and volunteers in M&E activities.* The consultant will report the findings of the M&E to the PMU and Aweil office. This includes monitoring of indicators for gender and social and environmental safeguards and for stakeholder engagements as defined in the relevant safeguard, gender and stakeholder engagement documents.
Outcome 3:		
Local / National contracting		
Two agricultural/civil engineers with experience in bore wells, small drinking water and irrigation structures using local materials where possible Rate $ 300/day	30 days in year 1	Output 3.1: The engineers will undertake and provide technical support to the CTA and to communities and projects staff during the first year in the following: Prepare a technical report containing design and drawings of water points and pumping systems with detailed estimates for cost, labour and material estimates for each of the proposed interventions. EIA to be included in technical report where applicable. Operation and maintenance plan along with estimates of related costs will be built into the technical report. Interventions include: i) water points for shallow bore wells, including existing points to be deepened or expanded; ii) water points in existing hafirs to facilitate water collection and/or prevent contamination by livestock; iii) pumping and water distribution systems on community lands for suitable water points. All water extraction sites will need to be paired with existing water harvesting structures or those proposed to be built as part of the project. Prepare technical drawings with detailed estimates for cost, labour and material estimates for each of the proposed interventions proposed for soil and water conservation. Environmental impact assessment to be done as part of technical report where applicable. Prepare technical drawings with detailed estimates for cost, labour and material estimates for each of the following interventions: i) restoring channels and drains including stabilisation of slopes; ii) water harvesting for people, animals, irrigation; iii) water spreading structures such as dykes; iv) ponds to be de-silted, deepened or strengthened. Include and O&M plan as part of the design, along with estimates for recurrent costs and operation and sourcing of relevant

Consultant	Time Input	Tasks, Inputs and Outputs
		materials and parts.

Annex 9: Stakeholder Engagement Plan

Annex 10: Environmental Social Management Framework (ESMF) and other SES frameworks/plans if required

Annex 11: Gender Analysis and Gender Action Plan

Annex 12: Procurement Plan

Annex 13: GEF focal area specific annexes: Feasibility Study

Annex 14: Additional agreements:

such as cost sharing agreements, project cooperation agreements signed with NGOs (where the NGO is designated as the "executing entity"), letters of financial commitments etc..

Annex 15: GEF Core indicators

Annex 16: GEF 7 Taxonomy

Level 1	Level 2	Level 3	Level 4
☐ **Influencing models**			
	☐ **Transform policy and regulatory environments**		
	☒ **Strengthen institutional capacity and decision-making**		
	☐ **Convene multi-stakeholder alliances**		
	☒ **Demonstrate innovative approaches**		
	☐ **Deploy innovative financial instruments**		
☒ **Stakeholders**			
	☒ **Indigenous Peoples**		
	☒ **Private Sector**		
		☐ Capital providers	
		☐ Financial intermediaries and market facilitators	
		☐ Large corporations	
		☒ SMEs	
		☒ Individuals/Entrepreneurs	
		☐ Non-Grant Pilot	

		☐ Project Reflow	
	☐ **Beneficiaries**		
	☒ **Local Communities**		
	☒ **Civil Society**		
		☒ Community Based Organization	
		☐ Non-Governmental Organization	
		☐ Academia	
		☐ Trade Unions and Workers Unions	
	☒ **Type of Engagement**		
		☒ Information Dissemination	
		☐ Partnership	
		☐ Consultation	
		☒ Participation	
	☒ **Communications**		
		☒ Awareness Raising	
		☐ Education	
		☐ Public Campaigns	
		☒ Behavior Change	
☒ **Capacity, Knowledge and Research**			
	☐ **Enabling Activities**		
	☒ **Capacity Development**		
	☐ **Knowledge Generation and Exchange**		
	☐ **Targeted Research**		
	☐ **Learning**		
		☐ Theory of Change	
		☐ Adaptive Management	
		☐ Indicators to Measure Change	
	☐ **Innovation**		
	☐ **Knowledge and Learning**		
		☐ Knowledge Management	
		☐ Innovation	
		☐ Capacity Development	
		☐ Learning	
	☐ **Stakeholder Engagement Plan**		
☐ **Gender Equality**			

	☒ **Gender Mainstreaming**		
		☒ Beneficiaries	
		☒ Women groups	
		☒ Sex-disaggregated indicators	
		☒ Gender-sensitive indicators	
	☒ **Gender results areas**		
		☐ Access and control over natural resources	
		☒ Participation and leadership	
		☒ Access to benefits and services	
		☒ Capacity development	
		☒ Awareness raising	
		☐ Knowledge generation	
☐ **Focal Areas/Theme**			
	☐ **Integrated Programs**		
		☐ Commodity Supply Chains (Good Growth Partnership)	
			☐ Sustainable Commodities Production
			☐ Deforestation-free Sourcing
			☐ Financial Screening Tools
			☐ High Conservation Value Forests
			☐ High Carbon Stocks Forests
			☐ Soybean Supply Chain
			☐ Oil Palm Supply Chain
			☐ Beef Supply Chain
			☐ Smallholder Farmers
			☐ Adaptive Management
		☐ Food Security in Sub-Sahara Africa	
			☐ Resilience (climate and shocks)
			☐ Sustainable Production Systems
			☐ Agroecosystems
			☐ Land and Soil Health
			☐ Diversified Farming
			☐ Integrated Land and Water Management
			☐ Smallholder Farming
			☐ Small and Medium Enterprises
			☐ Crop Genetic Diversity

			☐ Food Value Chains
			☐ Gender Dimensions
			☐ Multi-stakeholder Platforms
		☐ Food Systems, Land Use and Restoration	
			☐ Sustainable Food Systems
			☐ Landscape Restoration
			☐ Sustainable Commodity Production
			☐ Comprehensive Land Use Planning
			☐ Integrated Landscapes
			☐ Food Value Chains
			☐ Deforestation-free Sourcing
			☐ Smallholder Farmers
		☐ Sustainable Cities	
			☐ Integrated urban planning
			☐ Urban sustainability framework
			☐ Transport and Mobility
			☐ Buildings
			☐ Municipal waste management
			☐ Green space
			☐ Urban Biodiversity
			☐ Urban Food Systems
			☐ Energy efficiency
			☐ Municipal Financing
			☐ Global Platform for Sustainable Cities
			☐ Urban Resilience
	☐ **Biodiversity**		
		☐ Protected Areas and Landscapes	
			☐ Terrestrial Protected Areas
			☐ Coastal and Marine Protected Areas
			☐ Productive Landscapes
			☐ Productive Seascapes
			☐ Community Based Natural Resource Management
		☐ Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)

			☐ Forestry (Including HCVF and REDD+)
			☐ Tourism
			☐ Agriculture & agrobiodiversity
			☐ Fisheries
			☐ Infrastructure
			☐ Certification (National Standards)
			☐ Certification (International Standards)
		☐ Species	
			☐ Illegal Wildlife Trade
			☐ Threatened Species
			☐ Wildlife for Sustainable Development
			☐ Crop Wild Relatives
			☐ Plant Genetic Resources
			☐ Animal Genetic Resources
			☐ Livestock Wild Relatives
			☐ Invasive Alien Species (IAS)
		☐ Biomes	
			☐ Mangroves
			☐ Coral Reefs
			☐ Sea Grasses
			☐ Wetlands
			☐ Rivers
			☐ Lakes
			☐ Tropical Rain Forests
			☐ Tropical Dry Forests
			☐ Temperate Forests
			☐ Grasslands
			☐ Paramo
			☐ Desert
		☐ Financial and Accounting	
			☐ Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting
			☐ Conservation Trust Funds
			☐ Conservation Finance

		☐ Supplementary Protocol to the CBD	
			☐ Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐ **Forests**		
		☐ Forest and Landscape Restoration	
			☐ REDD/REDD+
		☐ Forest	
			☐ Amazon
			☐ Congo
			☐ Drylands
	☐ **Land Degradation**		
		☐ Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐ Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	

			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☐ **Chemicals and Waste**		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	

		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	
			☐ Hazardous Waste Management
			☐ Industrial Waste
			☐ e-Waste
		☐ Emissions	
		☐ Disposal	
		☐ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☐ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☐ Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☒ **Climate Change**		
		☒ **Climate Change Adaptation**	
			☐ Climate Finance
			☒ Least Developed Countries
			☐ Small Island Developing States
			☐ Disaster Risk Management
			☐ Sea-level rise
			☐ Climate Resilience
			☐ Climate information
			☒ Ecosystem-based Adaptation
			☐ Adaptation Tech Transfer
			☐ National Adaptation Programme of Action

			☐ National Adaptation Plan
			☐ Mainstreaming Adaptation
			☐ Private Sector
			☐ Innovation
			☐ Complementarity
			☒ Community-based Adaptation
			☒ Livelihoods
		☐ **Climate Change Mitigation**	
			☐ Agriculture, Forestry, and other Land Use
			☐ Energy Efficiency
			☐ Sustainable Urban Systems and Transport
			☐ Technology Transfer
			☐ Renewable Energy
			☐ Financing
			☐ Enabling Activities
		☐ **Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐ Endogenous technology
			☐ Technology Needs Assessment
			☐ Adaptation Tech Transfer
		☐ **United Nations Framework on Climate Change**	☐ Nationally Determined Contribution
	☒ **Rio Markers**		
		☐ Paris Agreement	
		☐ Sustainable Development Goals	
		☐ Climate Change Mitigation 0	
		☐ Climate Change Mitigation 1	
		☐ Climate Change Mitigation 2	
		☐ Climate Change Adaptation 0	
		☐ Climate Change Adaptation 1	
		☒ Climate Change Adaptation 2	

16. Partners Capacity Assessment Tool and HACT assessment (Please refer to the HACT policies for guidance on applicability and financial thresholds -
17. UNDP Project Quality Assurance Report (to be completed in UNDP online corporate planning system)