

GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title

Strengthening Climate-Smart Agribusiness and Natural Resource Management for Adaptation and Resilient Livelihoods in Sudan's River Nile and Northern States (SCAN-2N)

Region	GEF Project ID
Africa	12075
Country(ies)	Type of Project
Sudan	FSP
GEF Agency(ies):	GEF Agency ID
UNIDO	250349
Executing Partner	Executing Partner Type
The High Council for Environment and Natural Resources (HCENR).	Government
GEF Focal Area (s)	Submission Date
Climate Change	9/16/2025

Project Sector (CCM Only)

Climate Change Adaptation Sector

Taxonomy

Climate Change, Focal Areas, Land Degradation, Influencing models, Stakeholders, Gender Equality, Climate Change Adaptation, United Nations Framework Convention on Climate Change, Sustainable Land Management, Land Degradation Neutrality, Demonstrate innovative approach, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Beneficiaries, Local Communities, Indigenous Peoples, Private Sector, Communications, Type of Engagement, Capacity, Knowledge and Research, Capacity Development, Innovation, Knowledge Exchange, South-South, Field Visit, Peer-to-Peer, Conference, Adaptive management, Learning, Theory of change, Indicators to measure change, Targeted Research, Gender Mainstreaming, Gender results areas, Awareness Raising, Knowledge Generation and Exchange, Access to benefits and services, Access and control over natural resources, Participation and leadership, Fragile and Conflict-Affected Situations, Conflict, Institutional and Social Fragility, Nationally Determined Contribution, Paris Agreement, Land Productivity, Land Cover and Land cover change, Food Security, Sustainable Livelihoods, Sustainable Forest, Improved Soil and Water Management Techniques, Ecosystem Approach, Community-Based Natural Resource Management, Restoration and Rehabilitation of Degraded Lands, Convene multi-stakeholder alliances, Information Dissemination, Participation, SMEs, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, Behavior change, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Workshop, Knowledge Generation, Training

Type of Trust Fund	Project Duration (Months)
LDCF	60
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
8,932,420.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)

848,580.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
9,781,000.00	3,000,000.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
200,000.00	19,000.00
PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
219,000.00	10,000,000.00
Project Tags	
CBIT: No NGI: No SGP: No Innovation: No Competitive Window: No	

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”. (max. 250 words, approximately 1/2 page)

Agro-pastoral communities in Sudan’s River Nile and Northern States face mounting livelihood insecurity and environmental degradation driven by climate change and exacerbated by systemic non-climate pressures. Increasing droughts, heat stress, erratic rainfall, and floods are reducing crop yields, degrading rangelands, and increasing livestock losses. These climate hazards interact with entrenched poverty, insecure land tenure, gender inequality, weak governance, and underdeveloped value chains — trapping households in cycles of vulnerability and resource degradation. Women and youth are disproportionately excluded from adaptation opportunities, limiting the sector's resilience and potential for inclusive green growth.

The project aims to strengthen climate-smart agribusiness and natural resource management to build resilience and secure adaptive livelihoods. Its objective is to reduce vulnerability and enhance adaptive capacity of smallholder farmers, pastoralists, women, youth, and agri-MSMEs in Sudan's dryland states. This will be achieved through four interlinked components: i) strengthening institutional frameworks, policies, and coordination for climate adaptation and ecosystem-based management; ii) restoring and sustainably managing rangelands, forests, and water resources to buffer climate shocks; iii) promoting climate-smart agribusiness, resilient value chains, and inclusive market opportunities; and iv) enhancing knowledge systems, innovation, and disaster risk management.

The project is designed to be transformative by addressing systemic barriers that limit adaptation — including under-capacitated institutions, poor access to finance, and limited extension services — while creating enabling conditions for long-term investment in resilient agribusiness. Expected benefits include restored ecosystems, reduced land degradation, strengthened value chains for crops and livestock, and improved disaster preparedness. Global environmental and adaptation benefits will be delivered through improved land, soil, and water management; reduced biodiversity loss; increased resilience of agro-pastoral households; and expanded opportunities for women and youth to engage in climate-resilient livelihoods.

Indicative Project Overview

Project Objective

To strengthen the climate resilience and adaptive capacity of vulnerable agro-pastoral communities in River Nile and Northern States through the adoption and scaling-up of Ecosystem-based Adaptation approaches and climate-resilient green agribusiness models.

Project Components

Component 1: Enabling policy, institutional strengthening & governance for EbA

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing (\$)	Co-financing (\$)
1,500,000.00	500,000.00

Outcome:

Outcome 1.1: Strengthened policy and institutional environment for climate change adaptation and EbA.

Output:

Output 1.1.1: State and local development plans integrate EbA and climate-smart agriculture measures.

Output 1.1.2: Functional multi-stakeholder adaptation committees and policy dialogue platforms established.

Output 1.1.3: Governance and regulatory mechanisms for sustainable land, water, and forest management strengthened and enforced.

Component 2: Ecosystem-based natural resource management for climate resilience

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing (\$)	Co-financing (\$)
2,901,138.00	800,000.00

Outcome:

Outcome 2.1: Enhanced ecosystem-based natural resource management to restore and safeguard ecosystems.

Output:

Output 2.1.1: Gender responsive, climate resilient water harvesting systems and watershed management interventions implemented

Output 2.1.2: Reforestation and agroforestry systems established and enhanced

Output 2.1.3: Sustainable rangeland management practices promoted, including rotational grazing and pasture restoration

Component 3: Climate smart agribusiness, livelihoods & resilient value chains.

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing (\$)	Co-financing (\$)
2,876,827.00	1,000,000.00

Outcome:

Outcome 3.1: Climate smart agribusiness and diversified, climate resilient livelihoods promoted and scaled.

Output:

Output 3.1.1: Climate-smart agri-food value chain transformation hubs established and operationalized.

Output 3.1.2: Inclusive green agribusiness value chains supported

Output 3.1.3: CSA practices demonstrated and scaled

Output 3.1.4: Access to finance and enterprise development support service provided through microfinance, climate risk insurance, and business development services

Component 4: Knowledge, innovation, learning & risk reduction for climate resilience.

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing (\$)	Co-financing (\$)
1,089,785.00	492,000.00

Outcome:

Outcome 4.1: Knowledge management, innovation, and learning on EbA enhanced.

Outcome 4.2: Disaster risk reduction and management capacity strengthened at institutional and community levels, reducing climate related losses and safeguarding livelihoods and assets.

Output:

Output 4.1.1: EbA knowledge products and decision support tools developed, translated, and widely disseminated.

Output 4.1.2: Community knowledge and scientific research integrated, and GAP mainstreamed through participatory processes

Output 4.1.3: Learning and knowledge exchange platforms established, including digital hubs, radio learning programmes, and South-South exchanges, (M&E).

Output 4.2.1: Institutional and technical capacity for Disaster Risk Management (DRM) built through targeted training and integration of DRM into local plans and budgets.

Output 4.2.2: Community based disaster risk reduction (CBDRR) action plans developed, tested, and regularly updated.

Output 4.2.3: Agro meteorological and weather risk information systems upgraded, with timely, farmer friendly forecasts disseminated via mobile and radio.

M&E

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing (\$)	Co-financing (\$)
140,380.00	8,000.00

Outcome:

5.1. Project M&E plan implemented.

Output:

5.1.1. Frequent project monitoring conducted

5.1.2. Mid-term review and terminal evaluation conducted

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1: Enabling policy, institutional strengthening & governance for EbA	1,500,000.00	500,000.00
Component 2: Ecosystem-based natural resource management for climate resilience	2,901,138.00	800,000.00
Component 3: Climate smart agribusiness, livelihoods & resilient value chains.	2,876,827.00	1,000,000.00
Component 4: Knowledge, innovation, learning & risk reduction for climate resilience.	1,089,785.00	492,000.00
M&E	140,380.00	8,000.00
Subtotal	8,508,130.00	2,800,000.00
Project Management Cost	424,290.00	200,000.00

Total Project Cost (\$)

8,932,420.00

3,000,000.00

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Project context

In Sudan, the agricultural sector is the most significant contributor to GDP, valued at 17.4 billion USD or 20.5% in 2020, which increased to 22% of GDP in 2024^[1]. Livestock accounts for half of total agricultural GDP and contributes significantly to agricultural exports. Rangelands cover much of the country's semi-arid and arid zones, including the Northern and River Nile states, where approximately 70% of the population depends on pastoralism and agriculture. ^[2] Value chains within the country's agriculture sector are poorly developed due to limited finance, poor business skills, outdated production processes, and a lack of storage, transport, market, and processing infrastructure.

Sudan's National Adaptation Plan (NAP) and Updated First Nationally Determined Contribution (NDC) identify key climate-sensitive value chains critical for resilience and inclusive growth. These include gum Arabic, sesame, groundnuts, sorghum, millet, and livestock, which are central to rural livelihoods and export potential. Forestry and fisheries also feature prominently due to their ecological and economic importance. Prioritizing these value chains enables targeted interventions that enhance climate resilience, food security, and sustainable development, aligning with GEF's strategic objectives.^[3]

The problem that the proposed project will address

Agro-pastoral communities in Sudan's River Nile, and Northern States face a growing crisis of livelihood insecurity and environmental degradation. This crisis is produced by the interaction of **climate drivers** with entrenched **non-climate social, economic, and institutional vulnerabilities**, forming a reinforcing cycle of declining productivity, deepening poverty, and reduced adaptive capacity.

At the **root level**, chronic poverty, population pressure, insecure land tenure, fragmented governance, and the marginalisation of pastoral systems create structural vulnerability. Smallholder farmers and pastoralists often lack access to finance, secure rights to land and water, and meaningful opportunities in value chains. Women and youth, who could play a transformative role in food systems, face exclusion from credit, extension services, and decision-making. Policies have historically favoured sedentary farming and neglected pastoralism, while governance institutions remain under-resourced and siloed. At the same time, inadequate

extension, research, early warning and information systems mean households cannot easily access or apply the knowledge and technologies needed for climate adaptation. This prevents the timely uptake of tested adaptation solutions and leaves hazards unmanaged, further entrenching cycles of vulnerability. The impacts of climate change exacerbate these structural weaknesses by degrading natural resources, increasing the demand for land and water through intensified droughts and floods, and reducing government capacity to respond as resources are diverted to crisis management.

These root pressures reinforce a series of **underlying causes**. Insecure livelihoods force overgrazing, deforestation, inefficient irrigation, and expansion into fragile areas, which reduce soil fertility, accelerate erosion, and shrink rangeland productivity. Value chains are underdeveloped, leaving producers reliant on raw commodity sales and unable to capture returns from processing or climate-resilient products. Market and finance constraints prevent households from investing in resilient practices and proven adaptation technologies. At the same time, the private sector plays only a minor role in providing or investing in adaptation services. Disaster risk management capacity is limited, and early warning systems are not adequately linked to local action, exposing farmers and pastoralists to recurrent climate impacts. Additionally, institutional and policy gaps allow unsustainable practices to persist and hinder the widespread adoption of resilient land, water, and pastoral management practices. The resulting degradation of natural resources also fuels increasing competition over scarce land, water, and forest resources, creating local tensions that further erode resilience. Climate variability and extremes intensify these pressures by accelerating land degradation, making fragile ecosystems unable to buffer shocks and amplifying the risks of competition and conflict.

At the **immediate level**, the combined effect of these drivers is leading to declining agricultural yields, deteriorating pasture quality, and increasing livestock losses. Households are faced with rising food insecurity and loss of income, and forced to adopt short-term coping strategies such as cutting trees for fuel, overstocking livestock, or farming marginal lands, which further degrade ecosystems. Women and youth, who are more dependent on fragile resources and excluded from formal markets, are disproportionately affected, further reducing household resilience. Climate hazards directly exacerbate these outcomes: i) increasingly severe droughts deplete water sources and reduce crop and fodder yields; ii) floods damage planted fields and infrastructure; and iii) heat stress weakens livestock health and productivity. These impacts leave households with fewer assets each season and compound the vulnerability of already strained livelihoods.

Climate drivers of the problem

Sudan has a hot, arid desert climate with year-round high temperatures, low humidity, and minimal rainfall^[4]⁴. Most of the country receives summer rains, with July to August average rainfall equaling 150 to 180 mm, while June averages 0 to 15 mm in central areas. ^[5]⁵. Average temperatures remain above 18°C throughout the year, peaking in May when northern regions exceed 45°C. From July to October, characteristically moderate conditions are experienced due to south-westerly humid winds, though the north stays extremely hot^[6]⁶.

Observed climate change

The country has seen a decline in average annual rainfall, particularly since 1991, (Figure 1) with marked reductions in southern regions e. Since 1971, dry days and rainfall intensity have increased, indicating greater variability in precipitation patterns^[7]⁷. Additionally, since 1971, there has been an increasing trend in average

annual temperature across all states (Figure 2). Minimum and maximum average temperatures have increased within the same period, while extreme heat events have intensified and been prolonged since 1971 [\[8\]⁸](#).

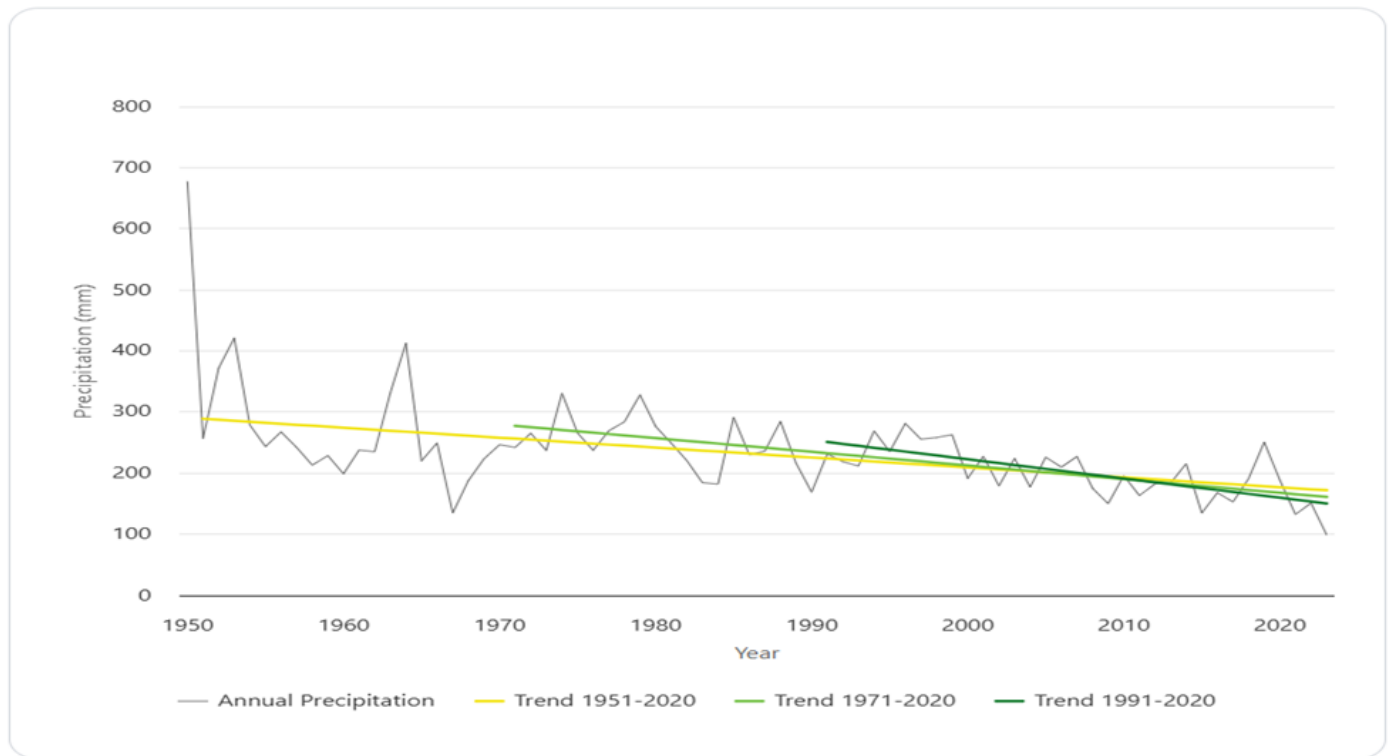


Figure 1. Trend in mean annual precipitation between 1951 and 2020 for Sudan [\[9\]⁹](#).

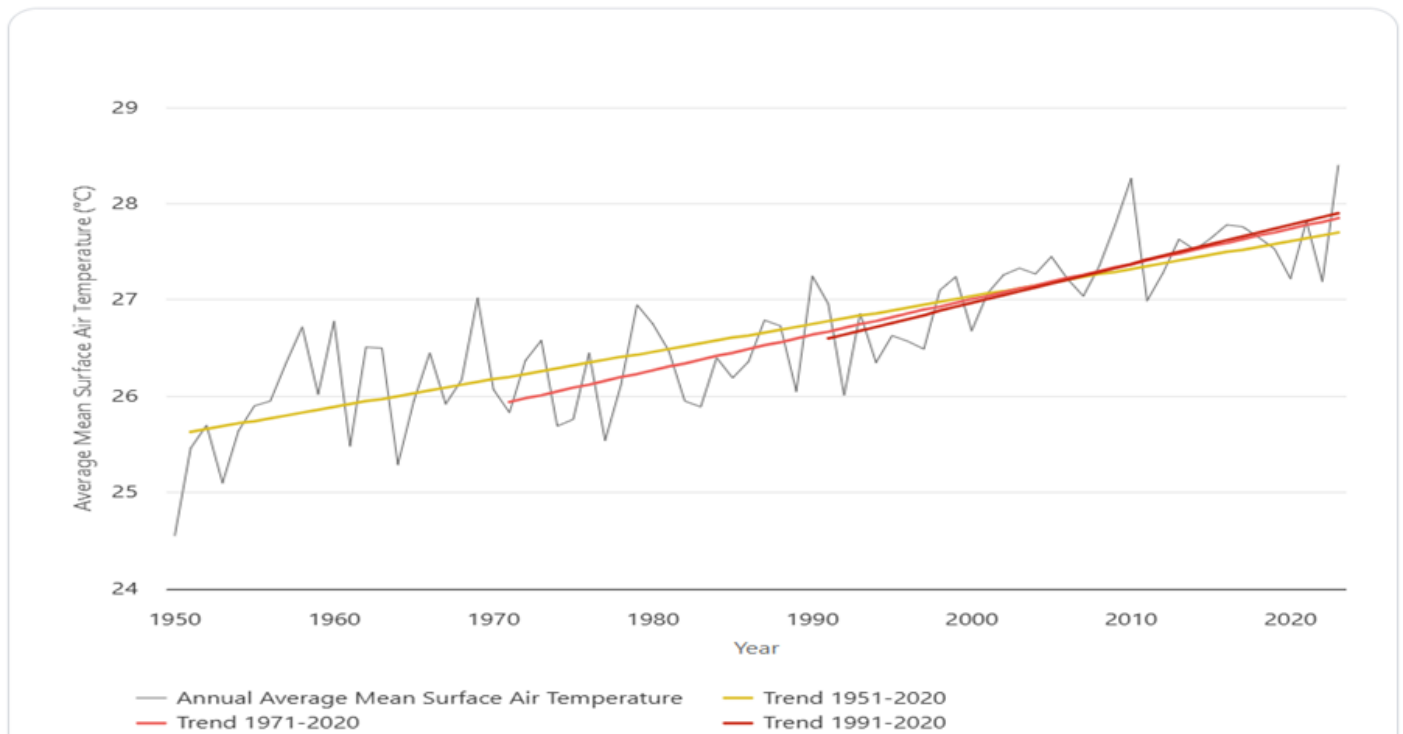


Figure 2. Trend in mean annual temperature between 1951 and 2020 for Sudan^{[10]¹⁰}.

Projected climate trends

According to CMIP6 under SSP2-4.5 (ref. period: 1995-2014), significant rainfall changes are not expected. However, under high-emission scenarios by 2060, rainfall variability and dry days will intensify nationwide, with all states likely facing greater annual variability and more intense rainfall events (Figure 3)^{[11]¹¹}. Under CMIP6 SSP2-4.5, mean annual temperatures will rise by 0.5°C by 2040 compared to 2020 (Figure 4), with extreme heat intensifying in the south and east under all scenarios^{[12]¹²}. ^{[13]¹³}. Summer warming across the country will be more pronounced than winter, with temperatures rising by up to 3.1°C in August and 2.1°C in January by 2060 under SSP5-8.5^{[14]¹⁴}.

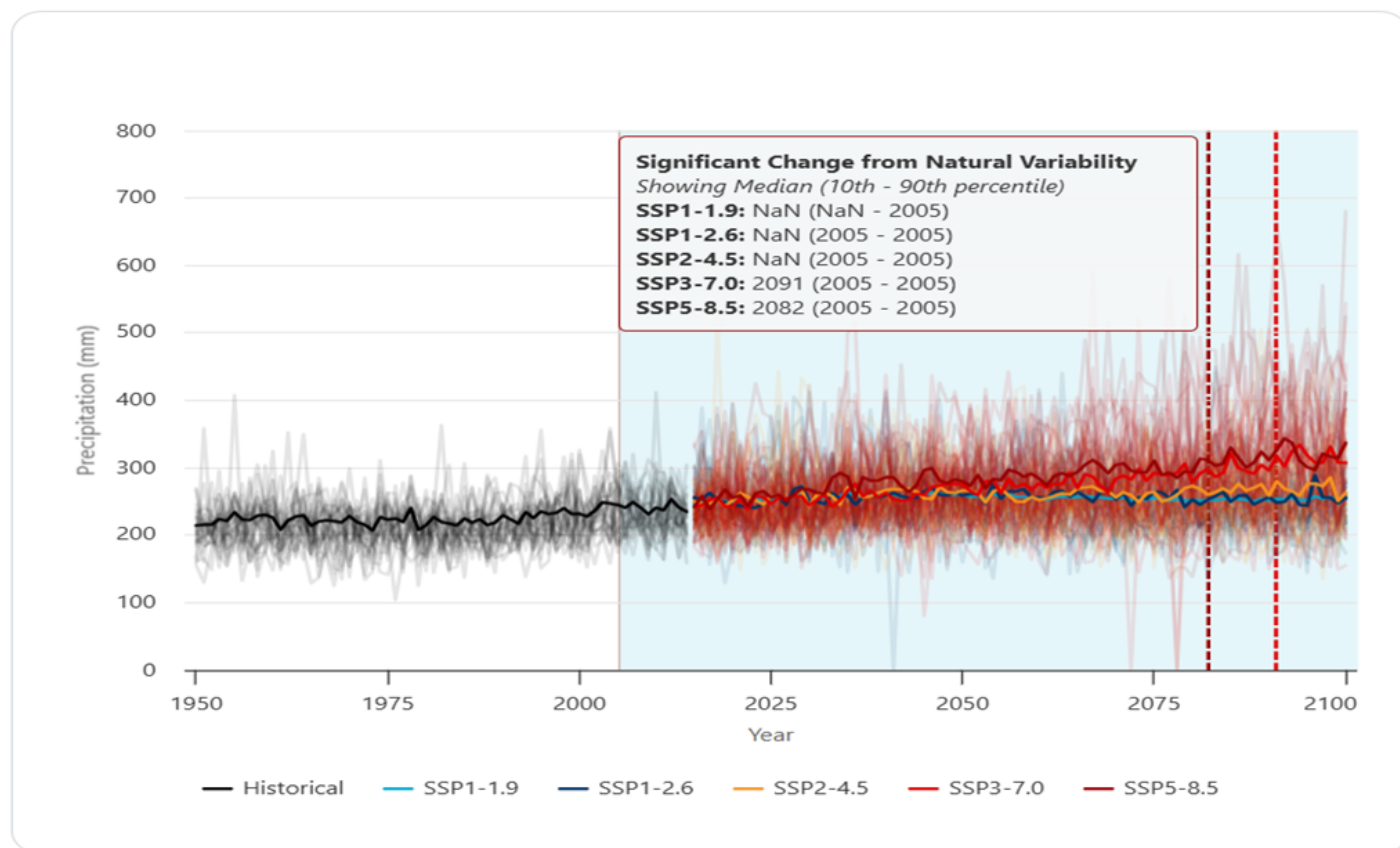


Figure 3. Projected mean annual precipitation for Sudan^{[15]¹⁵.}

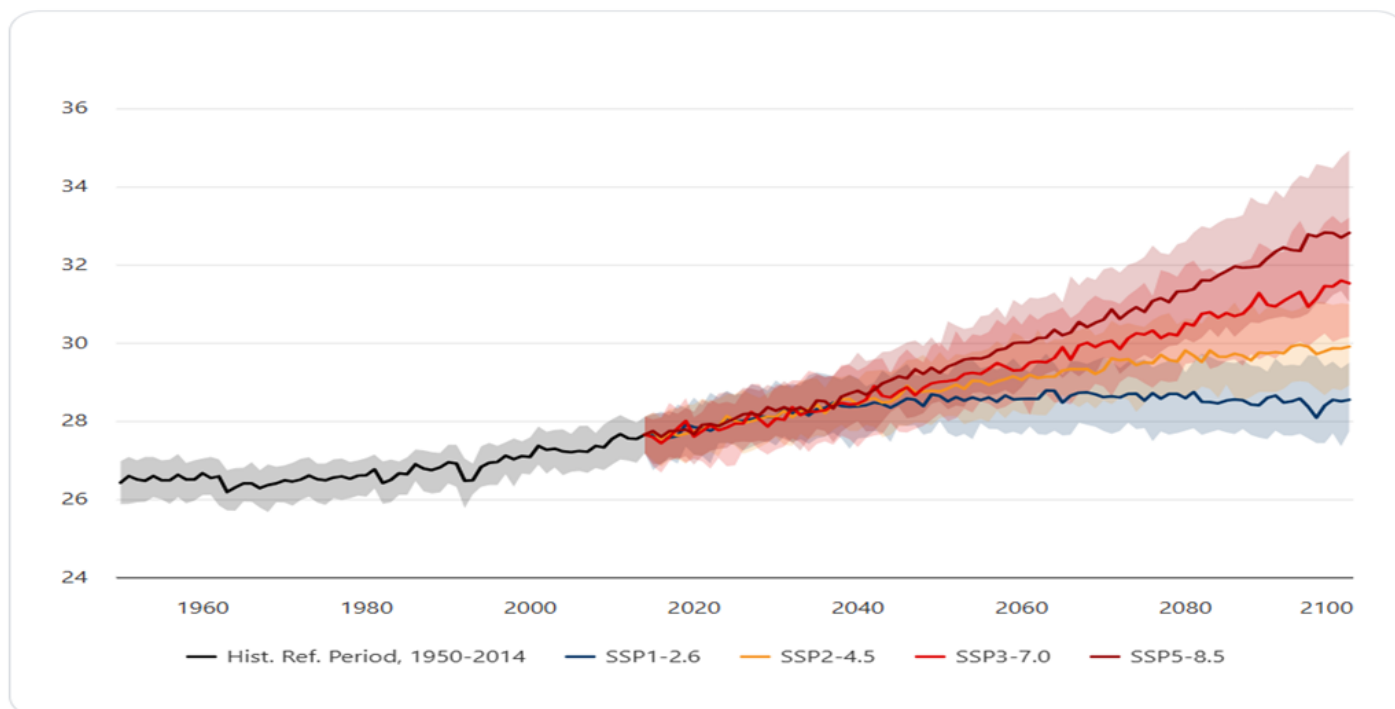


Figure 4. Projected mean annual temperature (°C) for Sudan^{[16]¹⁶}.

Observed climate change hazards and impacts

Drought, extreme heat, variable rainfall, and flooding have severely affected Sudan's agriculture and pastoral systems. By 2010, rural growing seasons had shortened by about 15% compared to the historical norm, a trend that continues to undermine food security and incomes^{[17]¹⁷}. Climate change has increased pests and diseases such as locusts, causing significant pre-harvest losses, while heat stress has reduced cattle, sheep, and goat fertility by 33%, 50%, and 31% respectively^{[18]¹⁸}. The respective average millet and sorghum production under rain-fed systems has declined by 11 and 17 kg per hectare per year^{[19]¹⁹}. Intensified droughts have raised irrigation demands, worsening water scarcity and reducing crop and livestock productivity. Moreover, climate change has accelerated land degradation and rainfall variability throughout the country, resulting in lowered rangeland productivity, increased livestock migration, and intensified competition for water and grazing, often sparking conflict between pastoralists and farmers^{[20]²⁰}. These impacts have weakened agricultural and livestock value chains by reducing production volumes, raising transport and storage risks, and limiting the consistent supply of raw materials to markets and processors. Producers, especially women and youth, have faced reduced profitability and exclusion from agribusiness opportunities^{[21]²¹}.

Projected climate change hazards and impacts

Accelerated land degradation, declining grazing availability, and intensified competition for resources driven by climate change are expected to escalate conflict in the country. Projected crop losses from rainfall variability, pests, and extreme heat will be severe: GFDL-ESM4 projections (2025–2050) under the SSP5–8.5 emissions scenario, indicate a decline in maize (up to 34%), millet (up to 57%), and sorghum (up to 53%)^{[22]²²}. Livestock productivity will decline due to scarce grazing availability, pests, diseases, water shortages, and heat stress. Water scarcity will hinder irrigation and hydroelectric power, undermining storage, processing, and value chain development, while spoilage increases. Intensified drought, heat, and erratic rainfall will increasingly disrupt planting, harvesting, biodiversity, and ecological zones, driving famine, food aid reliance, migration and imports. Additionally, extreme heat and drought will worsen wildfires and irrigation needs, while erratic rainfall will heighten flash floods, erosion, mudslides, and infrastructure damage — further reducing crop and livestock productivity^{[23]²³},^{[24]²⁴}. If unaddressed, these trends will increase the vulnerability of agribusiness and food value chains, making supply chains less reliable, raising costs for storage and processing, and reducing competitiveness in local and export markets. This will constrain opportunities for inclusive green agribusiness, limiting the ability of smallholder farmers, pastoralists, women, youth, and agri-MSMEs to access finance, markets, and stable income.

Non-climate drivers of the problem

Immediate causes

Agro-pastoral communities in River Nile, and Northern States face interlinked challenges of declining crop yields from soil erosion, fertility loss, water scarcity, and pests; reduced pasture quality and livestock losses from drought and overgrazing; and rising food insecurity, driving expansion into marginal lands and overharvesting of woodfuel. Loss of topsoil and reduced groundwater infiltration have increased runoff, worsened by poor rangeland management. Persistent conflict and unsustainable use of water and grazing resources have eroded ecosystem services and hindered rotational grazing. Limited infrastructure also constrains soil fertility, groundwater recharge, and agricultural productivity, highlighting the need for investment in water harvesting and small-scale irrigation for crops and agroforestry^{[25]²⁵}. Additionally, while the Transitional Period's constitutional charter established the Women and Gender Equality Commission to prioritise empowerment and equality, persistent gender inequality further reduces resilience and contributes to Sudan's low HDI^{[26]²⁶}. Agricultural and livestock value chains are negatively impacted by low and unstable production volumes, poor storage and processing facilities, and limited market access, which reduce profitability and discourage private-sector investment.

Underlying causes

Unsustainable natural resource use and management: With 70% of Sudan's population living in arid and semi-arid zones reliant on herding and farming, unsustainable practices have worsened land degradation and lowered climate resilience. Uncontrolled settlements and crop farming in rangelands, combined with limited land-use planning and inadequate adoption of ecosystem-based adaptation, have reduced productivity^{[27]²⁷}. Overgrazing and poor water use have also increased runoff and limited groundwater recharge. Additionally,

deforestation, inefficient irrigation, firewood collection, and expansion into marginal lands have degraded ecosystems and reduced services critical for adaptation[28]²⁸. Poor water planning at scarce points has intensified overgrazing and disrupted migratory routes, especially in the River Nile and Northern states. As a result of poor governance and rangeland mismanagement, pastoral land contracted sharply from 96.2 million hectares in 2011 to 45.2 million hectares in 2017[29]²⁹.

Limited access to adaptation technologies: High costs, limited finance, scarce seed supply, limited extension services, and cultural resistance hinder the adoption of adaptation technologies and practices such as improved varieties, zero tillage, water harvesting, and early warning systems. The availability of improved seed varieties meets only about 10% of farmers' needs, and large-scale seed production is lacking. Additionally, most small-scale farmers and pastoralists in the River Nile and Northern states lack formal credit, relying instead on local moneylenders and village traders.

Inadequate value chains and market access: Sudanese agriculture faces fragmented and inefficient markets with high transaction costs and a lack of reliable market information systems. Additionally, limited agribusiness services, poor infrastructure, underdeveloped business skills, and lack of value addition constrain value chain growth, leaving producers vulnerable to shocks and unable to secure fair returns.

Lack of private sector engagement: Few incentives and inadequate enabling conditions, such as tax policy, land rights and infrastructure, limit private sector engagement in adaptation and investment in climate-resilient value chains.

Poor disaster risk management capacity: Limited early warning systems, inadequate contingency planning, fragmented institutional roles, and absence of community-based DRM leave households exposed to floods, droughts, and storms.

Root causes

Population pressures, migration and conflict: Sudan's population reached 44.91 million in 2021, growing at about 3% annually, and is concentrated around Khartoum and the southernmost regions[30]³⁰. Conflict, famine, and unrest have shaped population distribution, while in 2022, the country hosted 1,130,000 refugees and asylum seekers[31]³¹. Population pressure, drought, and unreliable rainfall have intensified competition for pasture and water, escalating related conflicts[32]³².

Chronic poverty and poor economic growth: Sudan's economy remains fragile despite periods of improved development. While GDP rose from USD 109.27 billion in 2018 to USD 177.7 billion in 2023, growth is erratic[33]³³. The lifting of U.S. sanctions in 2017 improved integration into global markets, but South Sudan's 2013 civil war reduced cross-border oil flows, weakening revenues. Debt remains high, rising from 93.2% of GDP in 2015 to 259.65% in 2023[34]³⁴. Approximately 70% of Sudanese depend on rain-fed farming and pastoralism, yet productivity has sharply declined since 2011. Chronic poverty, marginalisation of smallholders and pastoralists, and exclusion of women and youth limit investment in sustainable practices and resilience to

climate shocks. Conflict, the COVID-19 pandemic, and unreliable rainfall have further undermined livelihoods. Persistent poverty, inequality, and food insecurity continue to hinder human development. The share of the population living on less than USD 2.15/day doubled from 30% in 2022 to 57% in 2024^{[35]³⁵}. Sudan's HDI stayed low at 0.517 from 2020 to 2022, and decreased to 0.511 in 2023, while famine worsened outcomes^{[36]³⁶}. In 2024, 24.6 million people were acutely food insecure, with 638,000 facing severe hunger.

Land tenure insecurity: Pastoral lands are primarily linked to tribal homelands, or *dar*, governed by customary communal grazing rights. The abolition of the Native Administration without replacement undermined the tribal homeland system, intensifying competition over resources as mechanised farming expanded into pastoral areas. Legal legacies have weakened communal rights and pastoral mobility, driving land degradation and conflict. The absence of formal land titles limits farmers' and pastoralists' access to credit and sustainable resource management.

Policy and institutional limitations: Pastoralism and dryland agriculture in Sudan have received limited regulatory and financial support, with inadequate enforcement of land and water governance and fragmented state coordination. Poor environmental governance and insufficient policy and institutional support have driven unsustainable resource use and reduced the resilience of pastoralists and the agriculture sector to climate change.

Knowledge and innovation gaps: Inadequate systems for generating, packaging, and sharing adaptation knowledge — along with underdeveloped agricultural research, poor extension services, and limited early warning data — have reduced farmers' and pastoralists' capacity to adapt. The failure to integrate local knowledge into research and adaptation practices further increases vulnerability.

Project objectives and justification

Without targeted intervention, climate change will continue to impact vulnerable agro-pastoral communities in River Nile, and Northern States. Recurrent droughts and floods will undermine agricultural and livestock productivity, degrade ecosystems, and reduce water availability, leaving households — especially women and youth — increasingly food insecure and reliant on unsustainable coping strategies.

According to Sudan's National Adaptation Programme of Action (NAPA)^{[37]³⁷} and the Third National Communication to the UNFCCC^{[38]³⁸}, the River Nile, and Northern States are among the most climate-sensitive zones in Sudan, with limited adaptive capacity and high dependence on natural resources. These states are highly exposed to climate risks such as rising temperatures, erratic rainfall, droughts, and seasonal flooding, which threaten agricultural productivity, water resources, and rural livelihoods. Vulnerability assessment also highlights that these state face non-climate issues including poverty, and lack of capital, though they offer significant potential for agriculture, trade, and reintegration of vulnerable populations.^{[39]³⁹} Their geographic connectivity, existing infrastructure, and institutional presence further support scalable interventions. While Sudan faces conflict, these three states are relatively stable with functional state and federal government services. This make the three states selection in line with GEF's criteria for targeting areas with high vulnerability, potential for transformational impact, and readiness for implementation. .

To interrupt this cycle of negative impacts, interventions are needed that strengthen governance systems to better coordinate adaptation, restore ecosystems to better buffer climate shocks, diversify and climate-proof rural livelihoods, and build knowledge and preparedness to manage increasing risks. Without such measures, the combination of systemic barriers identified and the worsening impacts of climate change will continue to lock communities into cycles of degradation and poverty. Targeted action is therefore necessary to create an enabling environment where households can adapt to climate stress, ecosystems can recover their functions, and resilience gains can be sustained even under worsening future conditions.

The proposed project will respond to these needs by: i) strengthening policy, institutional frameworks, and coordination for climate change adaptation and EbA; ii) restoring and sustainably managing water, rangelands, and forests to build ecosystem resilience; iii) promoting climate-smart agribusiness and resilient value chains that expand opportunities for women and youth; and iv) enhancing knowledge systems, innovation, and disaster risk management capacities. Together, these outcomes will enable agro-pastoral communities in Sudan's dryland states to reduce their vulnerability to climate change, protect and restore critical ecosystems, and secure more resilient and inclusive livelihoods.

Barriers to adaptation

Barrier 1. Inadequate institutional coordination for climate change adaptation

In Sudan, inter-ministerial coordination remains limited, with weak linkages between the ministries responsible for agriculture, livestock, rangeland, forestry, water, and finance. State–federal coordination is especially weak, and local institutions lack clarity on mandates. The HCENR was created with the mandate but is under-capacitated to coordinate and monitor integrated adaptation. Adaptation planning is still often fragmented, with poor inter-agency data sharing, limited policy coherence, and inadequate inclusion of DRM institutions and private-sector actors.

Barrier 2. Limited institutional capacity for knowledge, research, and extension towards climate resilience

National and state institutions lack the capacity to generate, package, and disseminate climate information and adaptation technologies effectively. While ARC has developed and tested improved approaches and technologies, extension systems are underfunded and poorly connected to farmers. Limited capacity for operation and maintenance of technologies, insufficient training for extension agents, and poor integration of scientific and traditional knowledge constrain institutional ability to support local adaptation and prevent the timely uptake of tested solutions.

Barrier 3. Limited awareness and mainstreaming of adaptation approaches

Ecosystem-based Adaptation (EbA), Climate-Smart Agriculture (CSA), and community-based DRM are not yet systematically integrated into Sudan's policies, development plans, or sectoral strategies. Agriculture, rangeland, and water sector plans focus mainly on production and infrastructure, with limited recognition of ecosystem services and climate risk reduction. Community awareness of climate impacts is low, and policymakers lack sufficient evidence of the effectiveness and cost-benefit of adaptation options. Few EbA or CSA interventions have been tested at scale, and there are no nationally adapted technical protocols, making it difficult to build confidence in these approaches.

Barrier 4. Insufficient financing for adaptation technologies and agribusiness

Public budgets at both national and state levels for rural development and adaptation are limited. Simultaneously, households and smallholder farmers lack savings or access to credit and insurance. As a result, investments in proven adaptation technologies remain constrained. This has limited the uptake of proven

technologies developed by the Agricultural Research Corporation (ARC) and others, and limits investment in resilient agribusiness, particularly for women and youth.

Barrier 5. Underdeveloped infrastructure and market access

Rural communities face infrastructure deficits, including poor roads, lack of storage, and inadequate processing facilities. These gaps restrict market access, reduce opportunities for value addition, and increase post-harvest losses. Underdeveloped infrastructure undermines agricultural competitiveness, reduces the profitability of sustainable production, and discourages private-sector investment in value chains, directly hindering the development of climate-resilient agribusiness.

Barrier 6. Underdeveloped disaster risk management (DRM) and early warning systems (EWS)

Sudan's national and local DRM systems remain underdeveloped. Forecasting and early warning are fragmented, with limited data sharing between agencies, limited community access to timely information, and low local capacity to act on warnings. These challenges are compounded by the lack of adequate meteorological networks, poor data protocols, and insufficient integration of DRM into local planning processes.

Future narratives and business-as-usual scenario

Narrative 1: Fragile governance and recurrent climate disasters

Sudan's governance and institutional systems remain fragmented, with limited coordination between national and state actors. As droughts and floods become more frequent and severe, this institutional fragility will undermine disaster preparedness and response. Communities will remain highly exposed, suffering repeated losses of crops, livestock, and assets. In the absence of stronger institutions and early warning systems, households will continue to be forced to fall back on unsustainable coping strategies, accelerating degradation and deepening vulnerability.

Narrative 2: Deepening poverty and economic fragility

Agro-pastoral households in River Nile, and Northern States are highly dependent on rain-fed agriculture and vulnerable to climate variability. Repeated climate shocks, along with underdeveloped markets, poor infrastructure, and rising food prices, will continue to negatively impact smallholder farmers' incomes and food security and pastoralists who face systemic barriers to land, credit, and enterprise opportunities. Without targeted support to diversify livelihoods, strengthen value chains, and expand access to finance, poverty and exclusion will deepen, leaving households more vulnerable to climate change

Narrative 3: Rising conflict over resources

Without effective management, unsustainable land and water use — including overgrazing, deforestation, and expansion into fragile areas — will intensify pressure on already degraded ecosystems. Climate change will exacerbate these pressures by reducing water availability and shrinking productive rangelands. As population growth and urban demand grows, competition for scarce natural resources will likely increase, heightening tensions between land and water users. Without interventions to restore ecosystems, promote sustainable practices, and improve natural resource governance, degradation and conflict risks will continue to escalate.

Alignment with national priorities

The project is well-aligned with Sudan's national priorities, as described in Table 1 below.

Table 1: Project alignment with national strategies and adaptation priorities.

National strategies and adaptation priorities	Overview	Alignment with the project
Updated First Nationally Determined Contributions (NDC, 2021) [40] ⁴⁰	Sudan's updated NDC reinforces its Paris Agreement commitments, emphasizing adaptation and mitigation. Adaptation focuses on vulnerable sectors and disaster-prone areas through water management, climate-smart agriculture, and protection of public health and ecosystems. Mitigation targets 2021–2030 emissions reductions via renewable energy, sustainable forestry, and improved waste and land management.	NDC priorities strongly align with the objectives that directly contribute to climate-smart agriculture, sustainable natural resource management, and resilience of vulnerable rural livelihoods, thereby advancing Sudan's national climate and development goals.
Sudan National Adaptation Plan (NAP, 2016) [41] ⁴¹	The NAP strengthens climate resilience by building institutional capacity, integrating climate risk into planning, and prioritizing adaptation in key sectors. Focus areas include drought-resistant crops, water management, sustainable rangeland and livestock practices, afforestation, soil fertility, and rural health system improvements.	The NAP's objectives and priorities align with the project, which directly advances climate-smart agriculture, sustainable natural resource use, and resilient rural livelihoods in highly vulnerable regions. Thus, the project operates according to NAP's vision at the community and landscape levels.
Sudan National Agriculture Investment Plan (SUDNAIP; 2016–2020)	SUDNAIP is a five-year framework targeting 6% annual agricultural GDP growth by funding and coordinating initiatives to boost productivity, food security, exports, and sustainable resource management, while reducing rural poverty, particularly among youth and women, and promoting balanced regional development.	These priorities align closely with the SCAN-2N project, which advances climate-smart agribusiness, improves natural resource management, and builds resilient livelihoods in vulnerable regions. Component 3 of the project, which focuses on climate-smart agriculture, livelihoods, and resilient value chains, contributes to achieving SUDNAIP's agricultural growth (production and productivity) and resilience goals.
Sudan E-Agriculture Strategy and Action Plan (2018–2022) [42] ⁴²	The Sudan E-Agriculture Strategy uses Information and Communication Technology (ICT) to transform agriculture and rural development. It enhances information access, communication, and digital tools to improve productivity, food security, and resilience while combining local knowledge and scientific research to	Component 4 uses ICT and knowledge systems, aligned with Sudan's E-Agriculture Strategy, to enhance climate resilience. It provides digital tools and information platforms to improve climate, market, and agricultural data access. The component supports farmers and communities adopting climate-smart

National strategies and adaptation priorities	Overview	Alignment with the project
	support farmers' informed decision-making.	practices, sharing knowledge, and strengthening resilient livelihoods.
Poverty Reduction Strategy (PRSP; 2021–2023) ^[43] ⁴³	The PRSP aims to reduce multidimensional poverty, promote inclusive growth, enhance social development, and strengthen governance through five pillars: macroeconomic stability, inclusive and sustainable growth, human and social development, peace and equal opportunities, and governance and institutional capacity.	The SCAN-32 project supports climate-smart agriculture, natural resource management, and community resilience in vulnerable regions, contributing to poverty reduction and sustainable development in the River Nile, and Northern states, in line with PRSP objectives.
Sudan National Forestry Policy (2006) ^[44] ⁴⁴	Sudan's National Forestry Policy promotes sustainable forest management to reduce poverty, improve livelihoods, and protect the environment. Key objectives include combating desertification, supporting reforestation, creating forestry jobs, securing land tenure, reducing wood fuel dependence, conserving biodiversity, and promoting non-timber forest products for sustainable economic opportunities.	Sudan's National Forestry Policy aligns with SCAN-2N Component 2, which promotes sustainable forestry, ecosystem resilience, biodiversity conservation, and climate-smart livelihoods, thereby supporting the policy's objectives.
Rangelands and Forages Resources Development (Rationalization) Act (2015) ^[45] ⁴⁵	The Law promotes sustainable management of Sudan's rangelands by preventing degradation, improving agency coordination, and mitigating environmental impacts. Its objectives include increasing productivity, supporting sustainable grazing and fodder production, conserving biodiversity, enhancing pastoral livelihoods, and establishing reserves and controlled grazing systems.	The law aligns with SCAN-2N Component 2 by promoting sustainable pasture and natural resource management, climate-smart agriculture, biodiversity conservation, and resilient livelihoods for communities in the River Nile, and Northern states.
Sudan Water Sector Livelihoods Transforming Strategy (SWS-LTS; 2021–2031) ^[46] ⁴⁶	SWS-LTS aims to provide equitable and sustainable water access for domestic, agricultural, and livestock use while protecting the environment. Its objectives include ensuring food security, creating employment for rural youth and women,	The SCAN-2N project's expected output on gender-responsive, climate-resilient water harvesting and watershed management aligns with SWS-LTS as it strengthens sustainable water access, reduces drought vulnerability, and

National strategies and adaptation priorities	Overview	Alignment with the project
	providing safe water, and promoting peaceful coexistence among users, aligning with SDGs 1, 6, and 8.	enhances resilience for households and vulnerable communities.

[1] <https://tradingeconomics.com/sudan/agriculture-value-added-percent-of-gdp-wb-data>.

[2] iucn.org/sites/default/files/import/downloads/sudan_country_study.pdf

[3] [Sudan National Adaptation Plan \(NAP\)](#)

[3] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[4] [Sudan - Country Overview | Climate Change Knowledge Portal](#)

[5] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[6] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[7] [Sudan - Trends & Variability \(ERA5\) | Climate Change Knowledge Portal](#)

[8] [Sudan - Trends & Variability \(ERA5\) | Climate Change Knowledge Portal](#)

[9] [Sudan - Trends & Variability \(ERA5\) | Climate Change Knowledge Portal](#)

[10] [Sudan - Trends & Variability \(ERA5\) | Climate Change Knowledge Portal](#)

[11] [Sudan - Mean Projections \(CMIP6\) | Climate Change Knowledge Portal](#)

[12] [Sudan - Mean Projections \(CMIP6\) | Climate Change Knowledge Portal](#)

[13] www4.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/Sudan%20NAP.pdf

[14] [Sudan - Mean Projections \(CMIP6\) | Climate Change Knowledge Portal](#)

[15] [Sudan - Trends & Variability \(CMIP6\) | Climate Change Knowledge Portal](#)

[16] [Sudan - Trends & Variability \(CMIP6\) | Climate Change Knowledge Portal](#)

[17] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[18] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[19] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[20] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[21] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[22] www.tropentag.de/2025/abstracts/pdf/514.pdf

[23] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[24] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[25] iucn.org/sites/default/files/import/downloads/sudan_country_study.pdf

[26] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[27] [People-centric Ecosystem-based Adaptation: A case study from Sudan](#)

[28] [Ecological Regions Of Sudan - WorldAtlas](#)

[29] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[30] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[31] [Sudan livelihoods road map \(2023-2025\) - Sudan | ReliefWeb](#)

[32] [iucn.org/sites/default/files/import/downloads/sudan_country_study.pdf](#)

[33] [Sudan GDP | Historical Chart & Data](#)

[34] [Ratio of national debt to GDP Sudan 2030| Statista](#)

[35] [SUDAN MPO](#)

[36] [Human Development Index \(HDI\) by Country 2025](#)

[37] [Sudan National Adaptation Plan \(NAP\)](#)

[38] [Sudan. National Communication \(NC\). NC 3. | UNFCCC](#)

[39] [Socio- economic mapping for River Nile and Northern states](#)

[40] [https://unfccc.int/sites/default/files/NDC/2022-10/Sudan%20Updated%20First%20NDC-12102021.pdf](#)

[41] [https://unfccc.int/sites/default/files/resource/NAP-Sudan-2016.pdf](#)

[42] [https://faolex.fao.org/docs/pdf/sud201587E.pdf](#)

[43] [https://documents1.worldbank.org/curated/en/545101625104854489/pdf/Sudan-Joint-IDA-IMF-Staff-Advisory-Note-on-the-Poverty-Reduction-Strategy-Paper-2021-2023.pdf](#)

[44] [https://cdn.climatepolicyradar.org/navigator/SDN/2019/sudan-national-forestry-policy-statement_0f1a279a68972549c8f10e5aeeb9fc22.pdf](#)

[45] [https://www.fao.org/faolex/results/details/es/c/LEX-FAOC183620/](#)

[46] [https://sudaneseconomist.com/wp-content/uploads/2022/12/Sudan-Water-Sector-Strategy-2021-2031.pdf?utm_source=chatgpt.com](#)

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

Overview of theory of change

The objective of the proposed project is to strengthen the climate resilience of vulnerable agro-pastoral communities in Sudan's River Nile, and Northern States by promoting ecosystem-based adaptation (EbA) and climate-resilient agribusiness models, thereby addressing the climate vulnerabilities and systemic barriers described in Section A. This objective will be achieved through four complementary components: i) strengthening the enabling environment for climate-resilient development through improved policies, governance, and multi-stakeholder coordination; ii) restoring and sustainably managing water, rangelands, and forests to buffer climate shocks and sustain ecosystem services; iii) promoting climate-smart agribusiness, diversified livelihoods, and resilient value chains that expand opportunities for women and youth while engaging private sector actors; and iv) enhancing knowledge

systems, innovation, and disaster risk management capacities to improve preparedness and adaptive learning at institutional and community levels.

The causal pathway for the project's results begins with training institutions and communities (Output 4.2.1), establishing adaptation committees (Output 1.1.2), demonstrating water harvesting and CSA practices (Outputs 2.1.1 and 3.1.3), piloting agribusiness hubs (Output 3.1.1), and strengthening DRM systems (Outputs 4.2.1–4.2.3). These will result in climate-resilient policies (Output 1.1.1), restored rangelands and forests (Outputs 2.1.2 and 2.1.3), inclusive value chains (Output 3.1.2), improved access to finance (Output 3.1.4), and early warning systems (Output 4.2.3). Together, these outputs will deliver final outcomes of improved institutional capacity (Outcome 1.1), healthier ecosystems (Outcome 2.1), diversified and climate-resilient livelihoods (Outcome 3.1), and strengthened disaster preparedness (Outcome 4.2).

Ultimately, these interventions will interrupt the cycle of degradation and poverty by delivering immediate and long-term adaptation benefits. These benefits include strengthening the resilience of 27,000 direct beneficiaries — including smallholder farmers, pastoral and agro-pastoral households, agri-MSMEs, and women and youth groups, with at least 40% women — and indirectly benefiting an additional 200,000 people across River Nile, and Northern States. Adaptation benefits will include improved food and water security, diversified and climate-resilient livelihoods, and reduced livelihood and disaster risks. Approximately 15,000 hectares of land will come under management for climate resilience through watershed rehabilitation, reforestation, agroforestry, and rangeland restoration, while climate resilience will be mainstreamed into 3 state and local development plans, governance frameworks, and multi-stakeholder platforms. The adaptive capacity of 800 people with at least 40% women and 30% youth trained — spanning government institutions, community groups, and private-sector actors — will be enhanced, complemented by restored ecosystem services and stronger household and institutional resilience to climate shocks. Additionally, the project will deliver Global Environmental Benefits (GEBs) such as reduced land degradation, restored biodiversity, increased carbon sequestration, and sustainable management of dryland ecosystems.

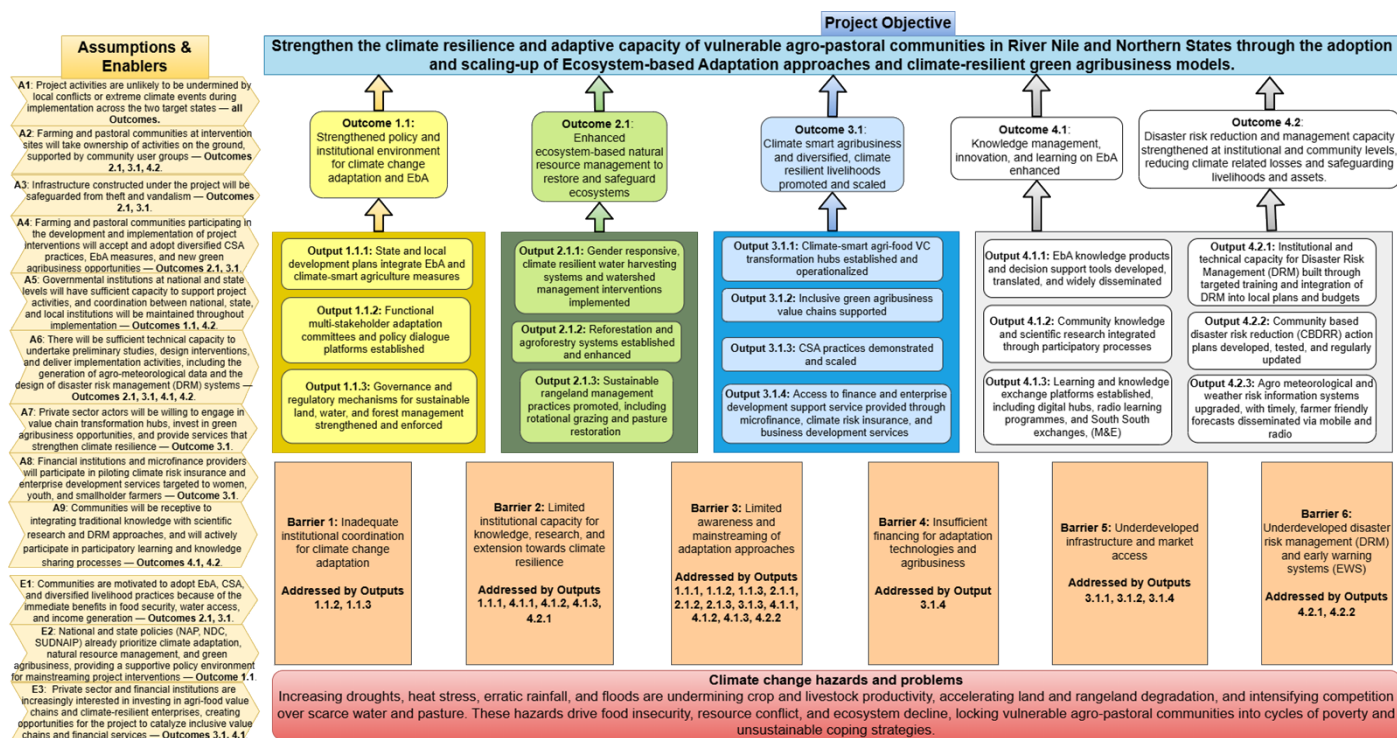


Figure 5. Project theory of change diagram.

Description of project components

Component 1: Enabling policy, institutional strengthening & governance for EbA

Outcome 1.1: Strengthened policy and institutional environment for climate change adaptation and EbA

Output 1.1.1: State and local development plans integrate EbA and climate-smart agriculture measures

This output will enable proactive management of climate risks and protection of climate-sensitive livelihoods and ecosystems by ensuring climate-smart approaches are mainstreamed into state and local development plans across the three target states, in alignment with Sudan's National Adaptation Plan (NAP), updated NDC, and other national adaptation strategies. 3 state and local plans will be reviewed and revised to include measures for EbA and CSA, supporting proactive management of climate risks and protecting climate-sensitive livelihoods and ecosystems. The integration process will also promote gender responsiveness by ensuring that women's and youth groups' priorities are reflected in planning. This output will address Barriers 2 and 3 by conducting policy and institutional gap analysis at state and local levels to identify integration barriers; developing and disseminating locally tailored guidelines and toolkits with practical, context-specific examples for mainstreaming EbA and climate-smart agriculture across key sector policies and strategies; facilitating participatory planning workshops with government stakeholders to build capacity and ensure these concepts are actively embedded in development plans; train relevant state and local institutions and planning bodies on EbA and CSA practices and planning; facilitate knowledge exchange among institutions, states, and stakeholders; and design localized EbA action plans aligned with national strategies such as NAPs, NDCs, and the Sudan Climate Change Strategy. These will contribute to enhancing the enabling environment for EbA promotion and scale out benefiting target communities in the three project states including farmers, agribusiness actors, value chain actors, women (at least 40%) and youth (at least 30%) numbering approximately 10,000. The activities under this output will be implemented in collaboration with HCENR and relevant state ministries, with technical support from UNIDO.

Output 1.1.2: Functional multi-stakeholder adaptation committees and policy dialogue platforms established

This output will foster inclusive, evidence-based decision-making that accelerates EbA implementation and improves preparedness for climate impacts by establishing 27 multi-stakeholder adaptation committees and dialogue platforms at state and at the local levels, improving coordination between government, community representatives, private sector, and civil society. GESI benefits will be promoted by reserving at least 40% of committee membership for women and youth representatives, strengthening their role in adaptation planning and governance. Engagement of the private sector in dialogue platforms will also encourage investment in climate-smart value chains and services. This output will address Barriers 1 and 3. The output will engage relevant stakeholders at national and local level to identify the adaptation stakeholder coordination issues; identify and define the role and functions of the requisite platforms including terms of reference and vertical and horizontal interaction; establish the government and management structure of the platforms; develop guidelines for multi-sectoral coordination on climate adaptation; and provide targeted training to platforms members on climate adaptation planning, stakeholder engagement, and participatory decision-making.

Output 1.1.3: Governance and regulatory mechanisms for sustainable land, water, and forest management strengthened and enforced

This output will protect critical ecosystems, reduce land degradation, and enhance community resilience to droughts, floods, and other climate hazards by strengthening and enforcing governance and regulatory mechanisms that underpin the sustainable management of land, water, and forest resources. The targeted mechanisms will include state-level land use and water regulation plans, which currently face the challenges of insufficient coordination, outdated regulations, and limited enforcement capacity. At least 4 state-level integrated natural resources (land, water, forestry) management mechanisms will be strengthened to protect critical ecosystems and reduce land degradation and enforce regulations and promote sustainable practices. Existing regulations and strategies will be reviewed and capacity building provided to state and local government institutions on regulatory enforcement on sustainable land, water, and forestry management. To ensure effective bottom-up and participatory resource management and regulatory enforcement, at least 30 community-led participatory systems will be established and strengthened. These activities will be implemented in collaboration with HCENR and relevant state ministries. This output will address Barriers 1 and 3.

Component 2: Ecosystem-based natural resource management for climate resilience

Outcome 2.1: Enhanced ecosystem-based natural resource management to restore and safeguard ecosystems

Output 2.1.1: Gender responsive, climate resilient water harvesting systems and watershed management interventions implemented

This output will increase sustainable water access and reduce drought vulnerability and water scarcity for households and vulnerable communities. Local and indigenous water harvesting techniques will be scaled out to at least 45,000 farmers and pastoralists through the construction and rehabilitation of drinking points, Hafirs, Rahads, rain water catchments among others. A rapid mapping exercise of the need for common user water harvesting systems will be conducted to appropriate site the water harvesting systems across the three target states, designed to improve sustainable access to water and reduce drought vulnerability among crop and livestock farmers. Interventions will be both climate-resilient and gender-responsive, ensuring that women — who bear the largest burden of water collection — benefit directly from reduced workloads and improved household water security. Capacity building on water harvesting systems management and governance will be provided to gender-inclusive water resource management groups. To disseminate sustainable water management practices, community awareness on sustainable and integrated water resources management campaigns will be conducted as well as leverage extension systems, community leaders, and lead farmers trained on improved and sustainable water resource management. HCENR will provide technical guidance and oversight for these activities, with UNIDO providing technical support. This output will address Barrier 3.

Output 2.1.2: Reforestation and agroforestry systems established and enhanced

This output will restore degraded lands, enhance biodiversity, improve soil fertility, and provide diversified, climate resilient income sources through the restoration of at least 6,750 hectares of degraded land and establishment and enhancement of 6,750 hectares of agroforestry systems.

Activities will prioritize drought- and heat-tolerant and economic indigenous species, alongside multipurpose fruit and fodder trees for livelihood co-benefits. Local nurseries managed by women and youth will supply seedlings, while agroforestry systems will integrate trees, crops, and livestock to improve soil, water retention, and productivity. Assisted natural regeneration and community-based approaches will ensure sustainability, reduce pressure on natural forests, and diversify household incomes. Specifically, the output will promote regeneration and agroforestry practices among at least 2,250 farmers with technical support to establish or expand agroforestry initiatives, support the establishment of seedlings nurseries to propagate and make accessible relevant economic trees and plants to local farmers, while leveraging extension systems to support and promote adoption of agroforestry practices among farmers. HCENR will oversee implementation of these activities with technical support from UNIDO. This output will address Barrier 3.

Output 2.1.3: Sustainable rangeland management practices promoted, including rotational grazing and pasture restoration

This output will improve forage availability, reduce land degradation, and enhance livestock resilience to climate shocks through promoting sustainable rangeland management practices on at least 9000 hectares, including rotational grazing, pasture reseeding, and restoration of degraded rangelands. Community rangeland user groups will be engaged in planning and monitoring, ensuring inclusive management approaches that strengthen local ownership and long-term sustainability. The output will carry out rangeland grazing routes assessment and mapping, community-led campaigns using drought-resistant grass seeds to restore degraded rangelands, establish rotational grazing schemes, supported by mobile technology for real-time pasture monitoring and livestock coordination to help reduce overgrazing and enable pasture recovery. Additionally, the output will introduce rotational grazing and replanting degraded pasturelands, support the construction of water-harvesting infrastructure like micro-catchments to enhance soil moisture and pasture quality, this will be complemented by pastoralist training on climate-smart grazing practices to promote sustainable rangeland management, fodder banks and drought-resilient forage crops. Technical implementation of these activities will be guided by HCENR with support from UNIDO. This output will address Barrier 3.

Component 3: Climate smart agribusiness, livelihoods & resilient value chains

Outcome 3.1: Climate smart agribusiness and diversified, climate resilient livelihoods promoted and scaled

Output 3.1.1: Climate-smart agri-food value chain transformation hubs established and operationalized

This output will enable sustainable provision of climate adaptation services and sustainable value addition to drive value chain actors' agriculture resilience by establishing/rehabilitating and operationalizing 3 climate-smart transformation hubs that provide services for value addition, storage, processing, and climate adaptation support to agri-food value chain actors. The aim will be to advance an income approach to climate change adaption. The MSMEs, Cooperatives, Village Savings and Loans Associations (VSLAS) will be engaged in hub management and service provision, ensuring financial sustainability and expanding opportunities for women and youth entrepreneurs. Under this output, a rapid assessment

and mapping of existing agribusiness facilities will be conducted to select suitable sites, design agri-hubs strategy, rehabilitate/establish 3 agri-hubs, design governance and management structures, equip and capacitate the facilities with the processing technologies, design the cascade plan, and train facilities management personnel. This output will address Barrier 5.

Output 3.1.2: Inclusive green agribusiness value chains supported

This output will increase market opportunities, value addition, and climate-resilient income sources for smallholders and vulnerable groups by supporting at least 3 agri-value chains to become more inclusive, climate-resilient, and market-oriented. By providing technical support and training for agri-entrepreneurs, facilitating partnerships, and improving post-harvest handling and processing, this output will increase market opportunities and incomes for smallholders, MSMEs, and vulnerable groups. Agro processors, out growers, aggregators, and export companies will be central in linking smallholders to markets, creating scalable and sustainable opportunities. The output will harness the agri-hubs (Output 3.1.1) to institutionalize efforts to continuously promote the inclusivity of marginalized groups including youth and women into strategic value chains for resilient incomes and livelihoods. This output will address Barrier 5.

Output 3.1.3: CSA practices demonstrated and scaled

This output will enable farmers and pastoralists to adopt drought-tolerant varieties, efficient water use, and soil conservation techniques that sustain yields under changing climate conditions by demonstrating and scaling CSA practices among at least 45,000 farmers and pastoralists across the three target states. Gender benefits will be realized through targeted training for women farmers, while youth engagement will be promoted through CSA technology adoption and service provision roles. This output will capture lessons from demonstrating and scaling CSA practices, producing farmer-level evidence on drought-tolerant varieties, efficient water use, and soil conservation. The activities under this output will be implemented in collaboration with HCENR, with technical support from UNIDO. This output will address Barrier 3.

Output 3.1.4: Access to finance and enterprise development support service provided through microfinance, climate risk insurance, and business development services

This output will enhance the capacity of youth and women to invest in resilient production systems by expanding access to finance and enterprise development services for at least 4,500 of women, youth, and smallholder farmers, including microfinance, climate risk insurance, and business development support. UNIDO will scale up a “bottom-up” approach which has been very successful in Kassala state to reenergise the local entrepreneurial ecosystem in target localities. Gender and youth benefits will be achieved through interventions that specifically target groups historically excluded from finance and enterprise development opportunities. The establishment of institutional entrepreneurial ecosystem in each target state based on the Kassala state successful model will ensure sustainability and scaling of these services beyond the life of the project. Microgrants and financial risk sharing mechanism will be established to derisk financial access, strengthen the Entrepreneurship Development Committee (EDC) to scale out entrepreneurship and financial literacy training to MSMEs and farmers, design and implement microinsurance in collaboration with financial institutions for improved and inclusive access to finance. This output will address Barriers 4 and 5.

Component 4: Knowledge, innovation, learning & risk reduction for climate resilience

Outcome 4.1: Knowledge management, innovation, and learning on EbA enhanced

Output 4.1.1: EbA knowledge products and decision support tools developed, translated, and widely disseminated

This output will increase local capacity to plan and implement resilience measures by producing and disseminating at least 5 knowledge products and decision-support tools tailored to Sudan's dryland contexts to reach 10,000 farmers and value chain actors. It will directly generate knowledge products and decision-support tools that synthesize evidence and make it accessible to planners, practitioners, and communities. The output will conduct information needs assessment and design accessible information, communication, and education materials to expose value chain actors to relevant information on climate adaptation and disaster risks. Radio, mobile, and digital tools will disseminate materials translated into local languages. UNIDO will provide support on EbA/CSA knowledge provision. This output will address **Barriers 2 and 3**.

Output 4.1.2: Community knowledge and scientific research integrated through participatory processes

This output will facilitate participatory processes that integrate traditional knowledge with scientific research, engaging at least 14 communities and 2 research institutions. It will integrate traditional knowledge with scientific research and tested, innovative adaptation solutions, contributing to more inclusive adaptation planning and creating participatory learning that strengthens both local ownership and scientific relevance. This output will address **Barriers 2 and 3**.

Output 4.1.3: Learning and knowledge exchange platforms established, including digital hubs, radio learning programmes, and South-South exchanges, (M&E)

This output will strengthen continuous peer learning and innovation for climate resilience by establishing 6 learning and exchange platforms (3 in each target state), including digital hubs, community radio programmes. Value chain actors and government institutions will benefit from international best practices through exposure to other countries experiences through 2 South-South exchange visits. These platforms will enable continuous knowledge exchange, ensuring that lessons and innovations are disseminated widely to facilitate scaling and replication. These activities will build on: i) existing HCENR-affiliated platforms, universities, research institutes, as well as state-level radio stations for national knowledge sharing; and ii) regional IGAD-ICPAC frameworks for the support of climate information and South-South exchanges. This output will address **Barriers 2 and 3**.

Outcome 4.2: Disaster risk reduction and management capacity strengthened at institutional and community levels, reducing climate related losses and safeguarding livelihoods and assets.

Output 4.2.1: Institutional and technical capacity for Disaster Risk Management (DRM) built through targeted training and integration of DRM into local plans and budgets

This output will improve early action against climate hazards by training at least 45 institutional staff and integrating DRM measures into 4 local development plans and budgets, ensuring that climate risks are systematically addressed. Peer learning and exchange visits, development of guidelines and toolkits on DRM will be carried out to enhance DRM capacity across the 3 target states. Training will include gender-responsive approaches. Activities under this output will be facilitated by HCENR and relevant state ministries. This output will address **Barriers 2 and 6**.

Output 4.2.2: Community based disaster risk reduction (CBDRR) action plans developed, tested, and regularly updated

This output will increase community preparedness and response to floods, droughts, and extreme weather events by supporting vulnerable communities to develop, test, and regularly update at least 14 CBDRR action plans, 7 in each of the 2 target states. Community participation will ensure that women, youth, and marginalised groups are actively involved in developing and implementing the plans. This output will document and share experiences from community-based DRM action plans, providing tested models for local preparedness that can be replicated in other areas, conduct participatory risk and vulnerability assessment, hold workshops to co-design CBDRR plans, train volunteers and leaders on DRM and preparedness, raise awareness on disaster risks and preparedness, and provide technical support to CDRR plans implementation. It will address **Barriers 3 and 6**.

Output 4.2.3: Agro meteorological and weather risk information systems upgraded, with timely, farmer friendly forecasts disseminated via mobile and radio

This output will support climate informed agricultural planning and early warning by upgrading agro-meteorological and weather information systems to provide timely, farmer-friendly forecasts through mobile services and radio. At least 45,000 households (directly at least 22,500 households in each of the 2 target states) will be reached with actionable climate information. In tandem with Outputs 4.2.1 and 4.2.2, this output will contribute to strengthening early warning systems,

community-based DRR committees, and local contingency planning, rather than large-scale infrastructure. It will build on Sudan's National DRR Strategy, HCENR initiatives, IGAD-ICPAC climate services, and UNDP/FAO resilience projects already active in target states. This output will address **Barrier 6**.

Project assumptions

1. Project activities are unlikely to be undermined by local conflicts or extreme climate events during implementation across the three target states — all Outcomes.
2. Farming and pastoral communities at intervention sites will take ownership of activities on the ground, supported by community user groups — Outcomes 2.1, 3.1, 4.2.
3. Infrastructure constructed under the project will be safeguarded from theft and vandalism — Outcomes 2.1, 3.1.
4. Farming and pastoral communities participating in the development and implementation of project interventions will accept and adopt diversified CSA practices, EbA measures, and new green agribusiness opportunities — Outcomes 2.1, 3.1.
5. Governmental institutions at national and state levels will have sufficient capacity to support project activities, and coordination between national, state, and local institutions will be maintained throughout implementation — Outcomes 1.1, 4.2.
6. There will be sufficient technical capacity to undertake preliminary studies, design interventions, and deliver implementation activities, including the generation of agro-meteorological data and the design of disaster risk management (DRM) systems — Outcomes 2.1, 3.1, 4.1, 4.2.
7. Private sector actors will be willing to engage in value chain transformation hubs, invest in green agribusiness opportunities, and provide services that strengthen climate resilience — Outcome 3.1.
8. Financial institutions and microfinance providers will participate in piloting climate risk insurance and enterprise development services targeted to women, youth, and smallholder farmers — Outcome 3.1.
9. Communities will be receptive to integrating traditional knowledge with scientific research and DRM approaches, and will actively participate in participatory learning and knowledge-sharing processes — Outcomes 4.1, 4.2.

Project enablers

1. Communities are motivated to adopt EbA, CSA, and diversified livelihood practices because of the immediate benefits in food security, water access, and income generation — Outcomes 2.1, 3.1.
2. National and state policies (NAP, NDC, SUDNAIP) already prioritize climate adaptation, natural resource management, and green agribusiness, providing a supportive policy environment for mainstreaming project interventions — Outcome 1.1.
3. Private sector and financial institutions are increasingly interested in investing in agri-food value chains and climate-resilient enterprises, creating opportunities for the project to catalyse inclusive value chains and financial services — Outcomes 3.1, 4.1.

[1] <https://www.ifad.org/en/w/projects/2000002105>

[2] <https://www.greenclimate.fund/project/fp139>

[3] <https://www.greenclimate.fund/project/sap019>

[4] <https://www.greenclimate.fund/sites/default/files/document/funding-proposal-fp183.pdf>

[5] <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099041424190014076>

[6] <https://www.thegef.org/projects-operations/projects/11000>

[7] https://www.thegef.org/sites/default/files/web-documents/10159_CCA_PIF.pdf

[8] <https://www.thegef.org/projects-operations/projects/11909>

[9] <https://projects.worldbank.org/en/projects-operations/project-detail/P161304>

[10] <https://www.unep.org/resources/factsheet/ecosystem-based-adaptation-sudan-2017-2023#:~:text=UNEP%20is%20helping%20the%20government,protecting%20and%20restoring%20healthy%20ecosystems.>

[11] https://open.unep.org/docs/gef/PIR/FY2023/5703_Sudan_PIR2023.pdf

[12] <https://erc.undp.org/evaluation/evaluations/detail/6657>

[13] https://www.unccllearn.org/wp-content/uploads/library/gef44_0.pdf

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

No

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

Coordination and Cooperation with Ongoing Initiatives and Projects.

The project envisions a multi-stakeholder, multi-institutional, and participatory implementation approach where relevant stakeholders play active role in the implementation and execution of the project. UNIDO as GEF agency will be responsible for the implementation of the project and liaise with the GEF Secretariat. UNIDO will also be responsible for all inquiries regarding the Project implementation progress, Project-level reporting, mid-term as well as terminal evaluation, and tracking final programme completion and the achievement of higher-level impacts on the global environment.

The Higher Council for Environment and Natural Resources (HCENR) in coordination with inter-ministerial government agency responsible for environmental affairs and sustainable management of natural resources and UNIDO will determine the exact extent of the co-execution support to be detailed during the PPG phase. During project preparation, HCENR, with UNIDO's technical support, will consult and engage all stakeholders to discuss and develop a robust co-execution strategy and management

structure including a detailed assessment of executing entities' capacities. UNIDO has been requested by the GEF OFP to provide execution support in some of the project components that fall within UNIDO Mandate and hinges on tools and innovative methodologies UNIDO developed and implemented in Sudan. This may involve the establishment of a country project team to coordinate execution of components assigned and act as liaison between GEF OFP and office, selected Project Executing Entities (to be assessed and concluded during project preparation), and UNIDO

- **Cooperation with Ongoing Initiatives in Sudan**

During the project implementation inception phase, UNIDO will explore and forge synergies with ongoing project in agribusiness, food security, and women empowerment being implemented in Kassala, Red Sea, and Gedaref States. Co-location and joint staffing possibilities will be explored to maximise efficiency and ensure judicious use of project resources. Such synergies with projects of other UN Agencies and development partners will be explored.

Project coordination and implementation arrangements

Project implementation will be guided by a multi-tiered coordination mechanism. At the federal level, a Project Steering Committee will be established, chaired by the Higher Council for Environment and Natural Resources (HCENR) in close coordination with the Ministry of Industry, to provide strategic oversight. At the state level, Project Technical Committees will be formed to ensure effective coordination and technical backstopping across relevant line departments. At the community level, Village Development Committees (VDCs) or Natural Resource Management (NRM) Committees will facilitate participatory planning, local ownership, and implementation of field activities. A Project Management Unit (PMU) will be established to carry out day-to-day implementation, reporting, and monitoring functions. Execution and implementation of this project will be informed and guided by the conflict sensitive-project management strategy UNIDO has developed for its technical cooperation projects in Sudan. However, during project preparation, detailed coordination and implementation arrangements will be developed in close consultation with relevant stakeholders, including federal and state government entities, the private sector, civil society, local communities, as well as farmer, youth, and women's groups.

Cooperation with ongoing initiatives and projects

The project will leverage lessons from past and ongoing initiatives across Sudan. In particular, the conflict sensitive and adaptive project management strategy and

lessons learned in implementing UNIDO project in the Sudanese political context UNIDO will inform this project intervention. Table 2 highlights relevant projects that align with and support the project's objectives.

Table 2: Ongoing and past projects/initiatives related to the project's objectives.

Project title	Donor and Lead Agency	Project overview	Projects synergies and scale up
Sustainable Natural Resources and Livelihoods Programme (SNRLP; 2019–2027)[1] 47 Status: Under implementation	Financed by IFAD, GEF/LDCF, and executed by Federal Ministry of Agriculture and Forestry	NRLP aims to enhance food security, incomes, and resilience of pastoralists, agro-pastoralists, and smallholders to increase production and scale up community governance by promoting sustainable natural resource use and technology use. The project has two components: 1) community-based natural resource management and businesses, and 2) strengthening legal, policy, and institutional frameworks for effective resource governance and climate adaptation.	SCAN-2N builds on NRLP's community-based natural resource management, climate-resilient agriculture, and livelihood interventions. It could enhance policy and institutional support, expand ecosystem restoration, strengthen climate-smart agribusiness, and improve knowledge management, scaling up interventions for resilient, sustainable livelihoods across the River Nile, and Northern regions.
FP 139: Building resilience in the face of climate change within traditional rain-fed agricultural and pastoral systems in Sudan (2020–2027)[2] 48	GCF Accredited entity: UNDP and executing entities: Higher Council for Environment and Natural Resources, and Ministry of	The project supports climate adaptation for subsistence agro-pastoralist and nomadic communities in nine Sudanese states. It promotes resilience in dryland farming and pastoral systems by strengthening food production, improving access to climate-resilient water, and building institutional and community capacities. Key outputs include	SCAN-2N builds on the GCF project by scaling food system resilience, water access, and institutional capacity gains. Its climate-smart agribusiness and value chain activities align with strengthened production systems, while investments in

Status: Under implementation	Agriculture and Natural Resources	enhanced food system resilience for 200,000 households (35% women), improved water access for people, livestock, and irrigation, and strengthened knowledge and capacities on climate resilience.	water and ecosystem management, along with enhanced capacities, enable deeper policy integration, knowledge sharing, and climate resilience innovation.
SAP 019: Gums for Adaptation and Mitigation in Sudan (GAMS): Enhancing adaptive capacity of local communities and restoring carbon sink potential of the Gum Arabic belt, expanding Africa's Great Green Wall (2020–2026) [3] 49 Status: Under implementation	GCF Accredited entity: Food and Agriculture Organisation (FAO) Executing agencies: Forest National Corporation (FNC) and FAO.	Tithe project boosts climate resilience in Kordofan by restoring gum arabic agroforestry, supporting smallholder farmers, and reducing land-use emissions. It strengthens producer associations, engages the private sector, and mobilizes finance to create sustainable value chains. It also promotes landscape-level adaptation through rangeland restoration, livestock routes, and improved policy and institutional frameworks.	The GAMS project provides a foundation for SCAN-2N by restoring gum agroforestry, building producer associations, and supporting climate-smart agribusiness. Its livestock corridors, rangelands, and water infrastructure complement SCAN-N's ecosystem-based management, while piloted co-management structures and institutional capacities offer governance models for policy integration, knowledge sharing, and innovation.
FP183: Inclusive Green Financing Initiative (IGREENFIN I): Greening Agricultural Banks & the Financial Sector to Foster Climate	GCF Accredited Entity: International Fund for Agricultural Development (IFAD) Executing entities: IFAD in partnership with	The project strengthens climate-resilient and low-emission agriculture and agroforestry across 13 African countries, including Sudan, by supporting farmers, cooperatives, and MSMEs with credit, technical assistance, and capacity building. It helps communities adapt to climate shocks, protect assets, and sustain livelihoods while promoting	SCAN-2N can build on this project to scale climate-smart agribusiness and resilient value chains, strengthen governance through capacity-building and policy support, and use regional knowledge-sharing

Resilient, Low Emission Smallholder Agriculture in the Great Green Wall (GGW) countries - Phase I (2022–2030)[4]⁵⁰ Status: Under implementation	National Executing entities	coordinated climate action. Key components include: 1) providing credit and technical support for climate-smart agriculture and agroforestry, 2) a Technical Assistance Facility addressing knowledge, policy, and capacity gaps with a focus on women and youth, and 3) a regional support program for learning, innovation, and digital technology adoption across GCF projects.	platforms to replicate best practices and expand resilience in dryland farming and pastoral systems.
World Bank Sudan Somoud - Enhancing Community Resilience Project (2024–2029)[5]⁵¹ Status: In pipeline	Funded by Sudan Transition and Recovery Support (STARS) Multi-Donor Trust Fund. Implementing agencies: UNICEF and WFP	The project seeks to improve access to basic services and strengthen food security in selected Sudanese communities by enhancing local agriculture, value chains, and community food systems. Component 1: Community-Led Basic Service Delivery (UNICEF) provides essential services, training, and operational support to improve community access to basic needs. Component 2: Improving Food Security (WFP) boosts agricultural production and resilience, protects livestock, strengthens value chains, expands community food centers and cooperatives, engages the private sector, and offers grants and capacity-building support to improve food availability and efficiency.	The project could support SCAN-2N by strengthening climate-resilient value chains, agricultural cooperatives and SMEs, and enhancing community food security. Its focus on capacity-building, community-led service delivery, and private sector engagement aligns with SCAN-2N's governance, policy, and institutional strengthening components.
GEF 7-Great Green Wall Climate Change Adaptation Regional Support Project (Approved in December 2023)[6]⁵²	GEF Implementing agencies: IFAD and Observatoire du Sahara et du Sahel (OSS)	The project strengthens climate resilience in Great Green Wall countries, including Sudan, by promoting knowledge sharing, innovation, and digital solutions. The project has three components:	SCAN-32 can build on this project using its knowledge management and lessons learned to inform governance and ecosystem-based interventions. Innovations in climate

Status: Approved for implementation		1. Knowledge Management: Sharing lessons, good practices, and policy recommendations. 2. Innovation & Digital Transformation: Promoting climate technologies, social enterprises, remote sensing, and digital finance. 2. Capacity Building & Grants: Supporting climate-smart agriculture, MSMEs, cooperatives, and private sector development.	technologies, digital finance, climate-smart agriculture, and capacity-building for farmers, cooperatives, MSMEs, and the private sector can strengthen SCAN-2N's value chains, resilience strategies, and adoption of innovative solutions across Sudan.
GEF 7- Resilience of Pastoral and Farming Communities to Climate Change in North Darfur (2022–2027)[7] 53 Status: Under implementation	GEF/LDCF Implementing agencies: FAO and Higher Council of Environment and Natural Resources (HCENR) and North Darfur State Ministry of Production and Economic Resources	The project reduces climate vulnerability for pastoral and farming communities in North Darfur by improving social protection, food security, and nutrition, while promoting sustainable land management. Component 1: Participatory land and resource planning to support climate adaptation and reduce resource-based conflicts. Component 2: Adoption of sustainable, climate-resilient practices by pastoralists and farmers. Component 3: Capturing and scaling lessons learned.	The SCAN-2N project can scale up the North Darfur project's tested approaches by institutionalizing participatory land planning, expanding climate-smart livelihoods and value chains, and mainstreaming lessons and knowledge into policies and national adaptation strategies for broader impact.
GEF8- Support to the 2026 United Nations Convention to Combat Desertification (UNCCD) National Reporting Process - Umbrella II (Approved for implementation in 2025)[8] ⁵⁴	GEF Trust Fund Implementing agency: UNDP Executing agencies: Regional/National Government and UNEP.	The project aims to build national capacity to collect data, track progress, and monitor land degradation neutrality (LDN) for Sudan's 2026 UNCCD report. It also seeks to improve communication, advocacy, and institutional coordination to advance UNCCD goals and SDG 15.3.	The umbrella project supports SCAN-32 by providing reliable data, spatial mapping, and monitoring systems for targeted interventions. Its participatory, inter-institutional processes align with SCAN-2N's governance focus.

Status: Approved for implementation			Enhanced knowledge and reporting capacities offer evidence to integrate climate resilience, sustainable agriculture, and community-driven adaptation into SCAN-2N activities.
Sudan Sustainable Natural Resources Management Project: Additional financing (SSNRMP; 2018–2022) [9] 55 Status: Completed	GEF (via IBRD) Implemented by the Ministry of Environment, Natural Resources Management and Physical Development, and the Ministry of Environment, Natural Resources and Physical Development (MoENRPD).	The project sought to increase the adoption of sustainable land and water management in targeted landscapes by: • Strengthening institutions and policies to enable Sustainable Land and Water Management (SLWM) through capacity-building and technical support. • Supporting community-based management of rangelands, forests, and biodiversity with training, investments, and services. • Ensuring effective project management, monitoring, and evaluation through technical assistance and operational support.	Component 1 could strengthen policies, institutions, and governance by building on SSNRMP's improved regulations and local capacities to integrate ecosystem-based policies. Component 2 could promote natural resource management by applying ecosystem-based techniques to improve community-level sustainable land and water management (SLWM), biodiversity conservation, and climate resilience.
Enhancing the resilience of communities living in climate change vulnerable areas of Sudan using Ecosystem-	GEF Implemented by the Higher Council on the Environment and Natural Resources (HCENR), Ministry of	The Sudan EbA project strengthened climate resilience in White Nile State by mainstreaming ecosystem-based adaptation (EbA) into policies and building institutional and community capacity. It focused on: 1) developing capacity and integrating EbA into policies and plans,	The project could build on EbA foundations by: • embedding ecosystem-based approaches in governance through

Based approaches to Adaptation (EbA; 2017–2023)^{[10]⁵⁶,^{[11]⁵⁷}} Status: Completed	Agriculture, Animal Resources, Irrigation and Forestry of the White Nile State, and United Nations Environment Programme (UNEP).	2) implementing EbA practices such as rangeland regeneration, afforestation, rainwater harvesting, and drought-tolerant farming in 43 villages, and 3) managing knowledge to capture lessons and demonstrate cost-effectiveness for wider replication across Sudan.	institutional capacities and policies • scaling restoration and resource management across states, • strengthening agribusiness and value chains with resilient crops, pasture, and livelihoods, • and expanding resilience nationwide using EbA's knowledge, evidence, and community structures.
Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change in Sudan^{[12]⁵⁸,^{[13]⁵⁹}} Status: Completed	GEF Implementing agencies: UNDP, UNEP, the Higher Council for Environment and Natural Resources (HCENR)	The project aimed to address food insecurity and build the climate resilience of small-scale farmers and pastoralists by implementing priority NAPA adaptation measures. It focused on: 1) piloting water management, rain-fed agriculture, and rangeland practices in vulnerable zones, 2) strengthening institutional and community capacities for climate risk management, and 3) enhancing knowledge management to replicate best practices. Key measures included water harvesting, heat-resistant crops, small-scale irrigation, reforestation, rangeland rehabilitation, and community-based microfinance support	The project lays a strong basis for SCAN-2N by scaling proven NAPA measures such as water harvesting, resilient crops, and rangeland rehabilitation. It enhances institutional and community capacity, aligning with SCAN-2N's governance priorities. Lessons from knowledge management and village microfinance

initiatives further advance SCAN-2N's climate-smart agribusiness and value chain objectives.

[1] <https://www.ifad.org/en/w/projects/2000002105>

[2] <https://www.greenclimate.fund/project/fp139>

[3] <https://www.greenclimate.fund/project/sap019>

[4] <https://www.greenclimate.fund/sites/default/files/document/funding-proposal-fp183.pdf>

[5] <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099041424190014076>

[6] <https://www.thegef.org/projects-operations/projects/11000>

[7] https://www.thegef.org/sites/default/files/web-documents/10159_CCA_PIF.pdf

[8] <https://www.thegef.org/projects-operations/projects/11909>

[9] <https://projects.worldbank.org/en/projects-operations/project-detail/P161304>

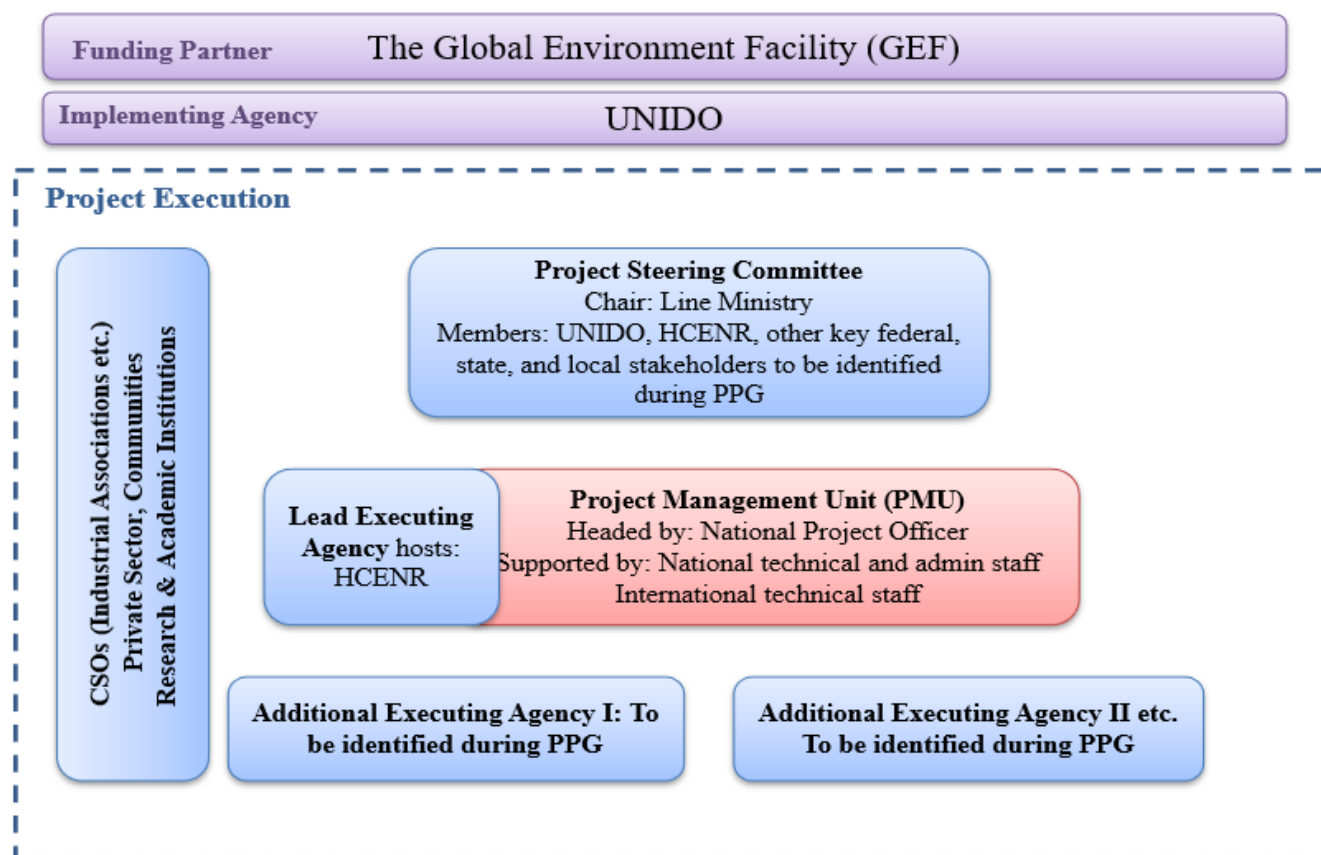
[10] <https://www.unep.org/resources/factsheet/ecosystem-based-adaptation-sudan-2017-2023#:~:text=UNEP%20is%20helping%20the%20government,protecting%20and%20restoring%20healthy%20ecosystems.>

[11] https://open.unep.org/docs/gef/PIR/FY2023/5703_Sudan_PIR2023.pdf

[12] <https://erc.undp.org/evaluation/evaluations/detail/6657>

[13] https://www.unclearn.org/wp-content/uploads/library/gef44_0.pdf

PROJECT IMPLEMENTATION AND EXECUTION STRUCTURE



Legal Context

The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Government of the Republic of Sudan and UNIDO, signed on 8 March 1988

Core Indicators

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

META INFORMATION – LDCF

LDCF true	SCCF-B (Window B) on technology transfer false	SCCF-A (Window-A) on climate Change adaptation false
Is this project LDCF SCCF challenge program? false		
This Project involves at least one small island developing State(SIDS). false		
This Project involves at least one fragile and conflict affected state. true		

This Project will provide direct adaptation benefits to the private sector.

true

This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs).

true

This project will collaborate with activities begin supported by other adaptation funds. If yes, please select below

Green Climate Fund	Adaptation Fund	Pilot Program for Climate Resilience (PPCR)
true	true	false

This Project has an urban focus.

true

This project will directly engage local communities in project design and implementation

true

This project will support South-South knowledge exchange

true

This Project covers the following sector(s)[the total should be 100%]: *

Agriculture	25.00%
Nature-based management	25.00%
Climate information services	10.00%
Coastal zone management	0.00%
Water resources management	10.00%
Disaster risk management	15.00%
Other infrastructure	15.00%
Tourism	0.00%
Health	0.00%
Other (Please specify comments)	0.00%
Total	100.00%

This Project targets the following Climate change Exacerbated/introduced challenges: *

Sea level rise	Change in mean temperature	Increased climatic variability	Natural hazards
false	true	true	false
Land degradation	Coastal and/or Coral reef degradation	Groundwater quality/quantity	
true	false	false	

CORE INDICATORS – LDCF

	Total	Male	Female	% for Women
CORE INDICATOR 1				
Total number of direct beneficiaries	27,000	16,200.00	10,800.00	40.00%
CORE INDICATOR 2				
(a) Area of land managed for climate resilience (ha)	15,000.00			
(b) Coastal and marine area managed for climate resilience (ha)	0.00			
CORE INDICATOR 3				
Number of policies/plans/ frameworks/institutions for to strengthen climate adaptation	4.00			
CORE INDICATOR 4				

Number of people trained or with awareness raised	800	480.00	320.00	40.00%
CORE INDICATOR 5				
Number of private sector enterprises engaged in climate change adaptation and resilience	300.00			

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	High	Extreme climate events (droughts, floods, heatwaves) could damage infrastructure, delay implementation, and reduce effectiveness of restoration and livelihood interventions. E.g. restoration sites could be destroyed by extreme events. Mitigation: design climate-resilient infrastructure; integrate risk-informed planning, adaptive implementation approach and M&E; strengthen DRM/EWS capacity under Component 4.
Environmental and Social	High	(i) Limited community buy-in or health/safety risks from water and agribusiness infrastructure could undermine implementation. Mitigation: continuous sensitization, participatory design, conflict-sensitive project implementation strategy, planning, and safeguards including a Gender Action Plan (GAP) and ESMP. (ii) The introduction of new resource management systems (e.g., grazing controls, water allocation, or reforestation) could exacerbate tensions between user groups (farmers, pastoralists, IDPs/returnees), particularly in fragile contexts where land and water are contested. Risks of elite capture of project benefits or exclusion of women and youth could undermine equitable outcomes. Mitigation: establish village environmental committees, designating opinion leaders as project champions, conflict-sensitive planning, participatory land/resource mapping, and inclusive governance structures (with quotas for women/youth). Transparent benefit-sharing and grievance mechanisms will be put in place. (iii) Restoration and resource management activities under Component 2 may inadvertently cause or increase tensions among local groups (with potential conflict between host and IDP communities) if access to land or water resources is perceived as unequal. Mitigation: conflict-sensitive design and implementation will ensure equitable access for all groups, including host and displaced populations, and through participatory governance mechanisms that foster transparency and inclusive dialogue.
Political and Governance	High	Volatile political context and conflicts may disrupt implementation, reduce access to project site, institutional support, or limit movements by project team to target localities Mitigation: Localization of project staff, increase remote backstopping, deploy "Do No Harm" principle to limit impacts of project activities on existing conflicts and social dynamics, align with national/state priorities, Adaptive Project Management approach, and develop strong partnership with local institutions and communities , Seek support from counterpart resources, UN agencies and UNDSS.

INNOVATION

Institutional and Policy	High	Misalignment or slow uptake of CSA/EbA into policies and plans could delay scaling. Mitigation: embed interventions into state development plans (Output 1.1.1), support multi-stakeholder committees (Output 1.1.2), and strengthen governance/regulatory mechanisms (Output 1.1.3).
Technological	Moderate	The technologies promoted by the project may not perform effectively under local conditions or may face maintenance challenges over time. Mitigation: Pilot testing prior to scale-up, capacity building for local technicians and users, and technical backstopping from the Agricultural Research Corporation (ARC), the Water Harvesting Research Institute, and state-level agricultural research stations to ensure technologies are well-adapted, properly maintained, and sustainable.
Financial and Business Model	Moderate	National financial instability, inflation, and exchange rate volatility could undermine private sector investment, microfinance, and agribusiness hubs. Increase in staff cost (due new salary scale, shortage of experts, danger pay and other allowances) Mitigation: pilot low-cost scalable models, use in-kind support where possible, and diversify private sector partnerships. establish contracts in USD with project counterparts and suppliers, when possible, optimize key skills deployment, reduce duplication of roles and enhance project efficiency of project delivery

EXECUTION

Capacity	High	Limited institutional and human resource capacity and risk of brain drain may weaken project support. Mitigation: training-of-trainers, capacity building in state/national institutions, and integration of universities and vocational institutions. Leveraging Government and UNIDO ongoing projects, targeted partnership with other UN Agencies and local partners to deploy humanitarian-development -peace nexus implementation approach for sustainable impact at scale
Fiduciary	Moderate	Risk of misuse or distrust of financial services (microfinance, insurance) and insufficiently robust procurement systems. Mitigation: work with trusted financial partners, ensure transparent systems, build financial literacy of women and youth, and apply GEF Agency fiduciary standards.
Stakeholder	High	Communities may resist new land uses, CSA practices, or financial products, while private sector actors may disengage from hubs and value chains. Mitigation: participatory planning, clear livelihood benefits, tailored engagement of community and religious leadership, women and youth, and risk-sharing models for cooperatives and private sector.
Other	High	Weather/climate information and knowledge platforms may fail due to weak telecom coverage or poor data protocols. Mitigation: use multiple dissemination channels (radio, SMS, community boards), invest in low-tech solutions, and ensure redundancy in data flows.

Overall Risk Rating	High	The overall risk rating is High, reflecting Sudan's fragile political and economic context combined with the project's complexity across three states. Key risks include extreme climate variability, localised insecurity, coordination gaps, and market/value chain uncertainties that may affect uptake of CSA, EbA, and green agribusiness. Macroeconomic instability could further challenge private-sector engagement and financial services, while structural barriers may limit participation of women and youth. Despite these factors, strong national alignment, institutional support, and built-in measures for participatory governance, capacity building, and gender inclusion reduce the likelihood of severe impacts, with comprehensive mitigation and adaptive management essential to address emerging challenges.
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C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The project is aligned with the GEF Programming Strategy on Adaptation to Climate Change for the Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF) (2022–2026). In particular, the project aligns with GEF-8 programming by supporting **Theme 1: Agriculture, food security, and health** through investments in climate-smart agriculture, resilient agribusiness value chains, and ecosystem-based adaptation to strengthen food and water security in vulnerable communities (Components 2 and 3). It also contributes to **Theme 3: Nature-based solutions** by restoring degraded rangelands, promoting sustainable forest management, and implementing watershed interventions to build the resilience of dryland ecosystems (Component 2).

The project is also aligned with **LDCF Priority Area 2: Strengthening Innovation and Private Sector Engagement** through the entry points of *advancing technology transfer, innovation, and deployment, incubating and accelerating MSMEs, and catalysing inclusive microfinance*. This is reflected in the establishment of climate-smart transformation hubs, engagement of MSMEs, piloting of climate risk insurance, and the promotion of inclusive finance models for women and youth under Component 3. It is also aligned with **LDCF Priority Area 3: Fostering Partnership for Inclusion and Whole-of-Society Approaches**, through the entry points *focusing on institutional strengthening and capacity building at all levels and building partnerships with local organizations to address social equity*. This will be achieved through participatory planning, the establishment of multi-stakeholder adaptation committees, and the integration of traditional and scientific knowledge under Components 1 and 4.

Regarding national priorities, the project is also aligned with Sudan's national adaptation and development frameworks, as detailed in Section A, Table 1. It supports implementation of Sudan's Updated NDC (2021), the National Adaptation Plan (2016), the Sudan National Agriculture Investment Plan (SUDNAIP), and sectoral strategies including the National Forestry Policy, the Rangelands and Forages Resources Act, and the Sudan Water Sector Livelihoods Transforming Strategy (2021–2031). No national policies contradict the intended outcomes of the project. Regionally, the project also contributes to Sudan's commitments under the UNFCCC,

the UNCCD, and the Kunming-Montreal Global Biodiversity Framework by reducing land degradation, restoring ecosystems, conserving biodiversity, and enhancing resilience of vulnerable communities.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: No

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

Stakeholder Consultations

<u>Stakeholder</u>	<u>Consultation Date</u>
<u>Federal Government</u>	
• Higher Council for Environment and Natural Resources	Aug. 14 2025
• Agriculture Research Corporation (ARC),	Aug. 14 2025
• Water Harvesting Research Institute	Aug. 14 2025
• Meteorological Authority (SMA)	Aug. 17 2025
• Ministries responsible for Environment, Agriculture, Livestock, Finance, Industry, and trade	Aug. 17 2025
• Central Bank of Sudan	Aug. 17 2025

• Forest National Corporation	Aug. 17 2025
-	-
River Nile States	
• Environmental Council,	Aug 19, 2025
• Forest National Corporation	Aug 19, 2025
• Pastoralists Union	Aug 19, 2025
• Farmers Union	Aug 19, 2025
• Water Corporation	Aug 20, 2025
• Agricultural Research Station	Aug 20 2025
• State Ministries responsible for Environment, Agriculture, Livestock, Finance, Industry and trade	Aug 20, 2025
Northern State	
• Environmental Council,	Aug 24, 2025
• Forest National Corporation	Aug 24, 2025
• Pastoralists Union	Aug 24, 2025
• Farmers Union	Aug 24, 2025
• Water Corporation	Aug 25, 2025
-	Aug 25, 2025
• Agricultural Research Station	
• State Ministries responsible for Environment, Agriculture, Livestock, Finance, Industry and trade	Aug 25, 2025

SUMMARY OF STAKEHOLDERS CONSULTATION FINDINGS

1 Ecosystem-Based Adaptation (EbA) and Resilience

Stakeholders support integrating EbA approaches—reforestation, watershed management, sustainable rangeland practices—as essential buffers against climate instability and drought.

- Meteorological Authority and water agencies highlight worsening seasonal unpredictability, flooding, and drought.

- Forest and research institutions advocate for restoration and participatory management.

2 Agribusiness and Climate-Resilient Value Chains

Federal and state ministries, unions, and research stations stress a need for climate-smart agribusiness transformation and value chain strengthening:

- Demands include improved access to climate-resilient seeds, innovative storage and processing, expanded market linkages, and tailored financial products.
- Technical agencies highlight data gaps on production efficiency and market bottlenecks.
- Collaboration across government, private sector, and unions is viewed as essential for value chain modernization.

3 Women's Empowerment

Consultations recognized women as critical actors in agriculture, water management, and household resilience, but identified significant barriers:

- Land tenure restrictions limited financial access, and underrepresentation in leadership persist.
- Stakeholders urge expanding women's access to training, credit, and agribusiness networks, and integrating gender-responsive monitoring.

4 Sustainable Natural Resource Management (NRM)

Resource user organizations, environmental councils, and forest/water agencies warn of escalating land degradation, deforestation, and conflicts over natural resources.

- Weak enforcement of natural resource laws and tenure disputes hinder effective management.
- Participatory mapping and stewardship models are advocated to promote sustainable, locally owned management systems.

5 Key Issues & Challenges Highlighted

- Institutional and Technical Capacity Gaps: Rural organizations and government agencies lack consistent skills, data, and institutional support to manage climate risks and drive innovation.
- Land, Water, and Resource Conflicts: Pastoralists and farmers unions reported disputes over grazing corridors, water points, and access rights, often exacerbated by unclear tenure and resource scarcity.
- Gender Inequality: Persistent cultural and legal challenges restrict women's empowerment in decision-making, land ownership, and value chain participation.
- Data and Research Limitations: Research institutions report fragmented climate and agricultural datasets, limited gender disaggregation, and gaps in evidence-based planning.
- Environmental Degradation: Deforestation, bush burning, and unsustainable agricultural practices pose critical risks to livelihoods and ecosystems.

6 Stakeholders Recommendations

- Mainstream EbA and Resilience: Integrate EbA and climate resilience into development plans for agriculture, livestock, water, and forestry at all levels.

- **Expand Capacity-Building:** Strengthen technical and institutional capacity for local organizations, including unions and women's groups, with targeted programs in climate adaptation, value chains, and financial management.
- **Promote Women's Leadership:** Implement gender-responsive policies that guarantee women's equal access to resources, decision-making, and project benefits, and strengthen women's networks in rural entrepreneurship.
- **Resolve Resource Conflicts:** Develop conflict-sensitive frameworks for land and water tenure, facilitate community-led dialogue, and pilot participatory mapping tools.
- **Modernize Value Chains:** Promote investment partnerships and co-location with existing projects to scale climate-resilient agribusinesses and sustainable resource management.
- **Enhance Data Systems:** Invest in integrated data platforms, climate risk monitoring, and participatory knowledge-sharing for improved planning and adaptive management.

7. Gender and Social Inclusion Analysis

Analysis revealed wide gaps in women's participation and inclusion, particularly in land tenure, leadership, and value chain access. Recommendations include:

- Setting gender targets for participation, training, and benefit sharing.
- Conducting periodic gender analysis and integrating findings into project monitoring.
- Engaging women's organizations in project governance and capacity-building.

8. Risk and Opportunity Assessment

Risks include climatic shocks, institutional fragmentation, resource conflicts, and gender exclusion. Opportunities are found in:

- Building on existing government and union structures for EbA and resource management.
- Harnessing enthusiasm for climate-resilient agribusiness among farmers, pastoralists, and women entrepreneurs.
- Capitalizing on research and technical capacity in ARC, water institutes, and local councils for evidence-based implementation.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
UNIDO	LDCF	Sudan	Climate Change	LDCF Country allocation	Grant	8,932,420.00	848,580.00	9,781,000.00
Total GEF Resources (\$)						8,932,420.00	848,580.00	9,781,000.00

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

200000

PPG Agency Fee (\$)

19000

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNIDO	LDCF	Sudan	Climate Change	LDCF Country allocation	Grant	200,000.00	19,000.00	219,000.00

Total PPG Amount (\$)		200,000.00	19,000.00	219,000.00
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Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
Total GEF Resources					0.00

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
CCA-1-1	LDCF	8,932,420.00	3000000
Total Project Cost		8,932,420.00	3,000,000.00

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Range and Pasture administration (local)	In-kind	Recurrent expenditures	480000
Recipient Country Government	State Ministry of Agriculture, Irrigation and Forests (local)	In-kind	Recurrent expenditures	480000
Recipient Country Government	Higher Council for Environment and Natural Resources (local)	In-kind	Recurrent expenditures	1440000
Beneficiaries	Cooperatives in Target States	In-kind	Recurrent expenditures	67000
Private Sector	SMEs	In-kind	Recurrent expenditures	533000
Total Co-financing				3,000,000.00

Describe how any "Investment Mobilized" was identified

The innovative agribusiness transformation hubs envisaged in this project will identify and demonstrate sustainable technologies and value addition opportunities to private sector actors. The identified private sector actors will be supported to adopt and invest in these technologies to scale up best technologies and practices for sustainable value addition.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

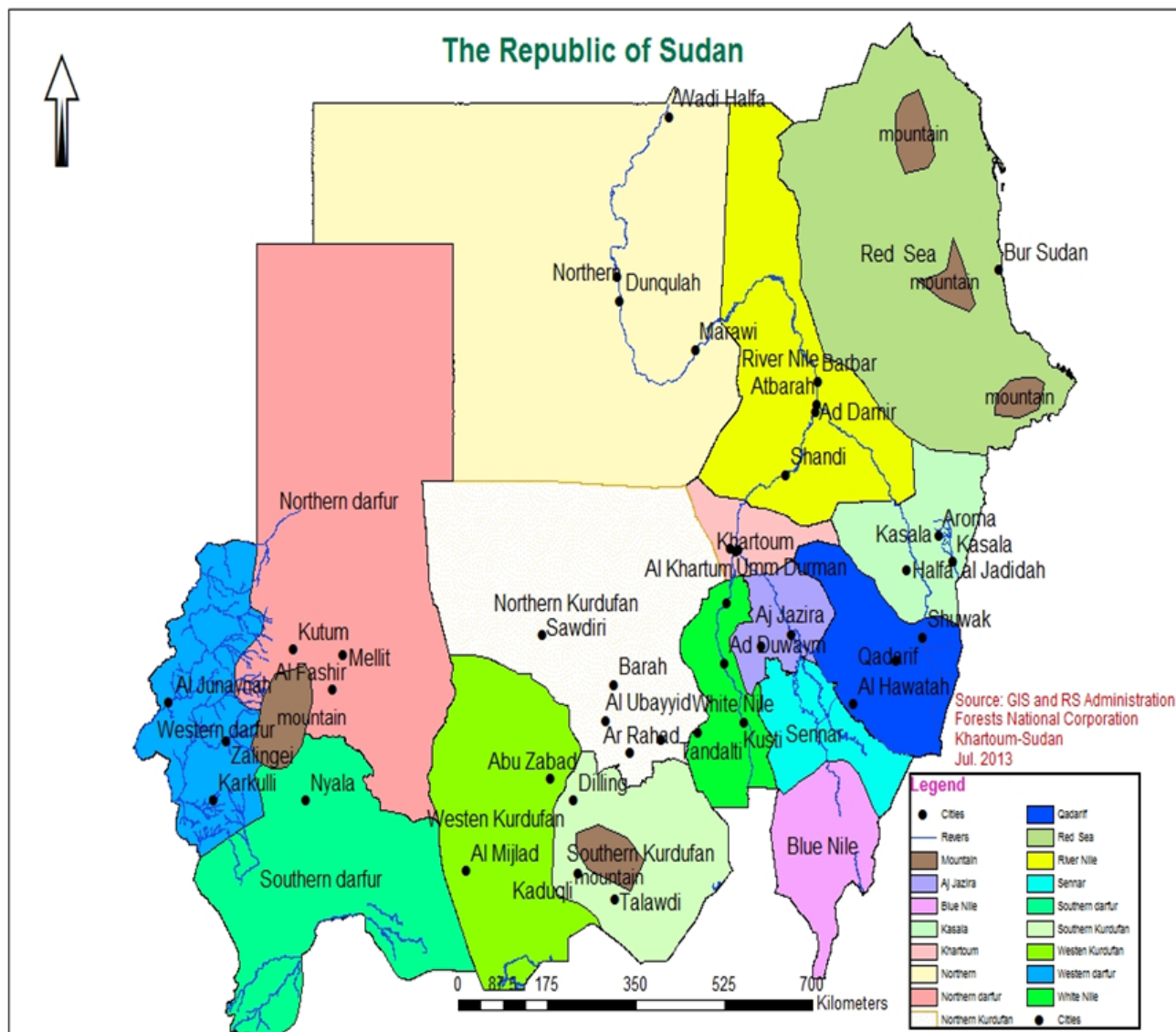
GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	UNIDO	9/13/2025	Ms. Ganna Onysko	+43 1 26026 3708	g.onysko@unido.org
Project Coordinator	UNIDO	9/13/2025	Fredrick Kongongo		f.kongongo@unido.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Dr. Mona Ali Mohammed Ahmed	Secretary General	Higher Council for Environment and Natural Resources	8/21/2025

ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

UNIDO Environmental and Social (E&S) Screening Template

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Principal Objective 2	No Contribution 0	Significant Objective 1

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing models	Transform policy and regulatory environments		
	Strengthen institutional capacity and decision-making		
	Demonstrate innovative approaches		
Stakeholders	Indigenous Peoples		
	Private Sector	SMEs	
		Individuals/Entrepreneurs	
	Beneficiaries		
	Local Communities		
	Type of Engagement	Information Dissemination	
		Participation	
	Communications	Awareness Raising	
Capacity, Knowledge and Research	Capacity Development		
	Knowledge Generation and Exchange		
	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	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
			Improved Soil and Water Management Techniques
			Drought Mitigation/Early Warning
		Land Degradation Neutrality	Land Productivity
			Land Cover and Land cover change
	Climate Change	Climate Change Adaptation	Climate Finance
			Least Developed Countries
			Disaster Risk Management
			Climate Resilience
			Climate information
			Ecosystem-based Adaptation
			Mainstreaming Adaptation
			Private Sector
			Innovation
			Community-based Adaptation
			Livelihoods
		United Nations Framework on Climate Change	Nationally Determined Contribution
	Rio Markers	Climate Change Adaptation 1	

