



Landscape Approach to Riverine Forest Restoration, Biodiversity Conservation and Livelihood Improvement

Part I: Project Information

GEF ID

10162

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT **No**

NGI **No**

Project Title

Landscape Approach to Riverine Forest Restoration, Biodiversity Conservation and Livelihood Improvement

Countries

Sudan

Agency(ies)

FAO

Other Executing Partner(s)

National Forestry Corporation, Ministry of Agriculture and Forestry

Executing Partner Type

Government

GEF Focal Area

Biodiversity

Taxonomy

Influencing models, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Demonstrate innovative approaches, Transform policy and regulatory environments, Deploy innovative financial instruments, Focal Areas, Climate Change, Climate Change Adaptation, Livelihoods, Climate Change Mitigation, Energy Efficiency, Renewable Energy, Agriculture, Forestry, and Other Land Use, Forest, Forest and Landscape Restoration, REDD - REDD+, Biodiversity, Biomes, Wetlands, Rivers, Financial and Accounting, Natural Capital Assessment and Accounting, Mainstreaming, Fisheries, Agriculture and agrobiodiversity, Forestry - Including HCVF and REDD+, Land Degradation, Sustainable Land Management, Restoration and Rehabilitation of Degraded Lands, Improved Soil and Water Management Techniques, Sustainable Livelihoods, Ecosystem Approach, Integrated and Cross-sectoral approach, Community-Based Natural Resource Management, Sustainable Forest, Sustainable Agriculture, Income Generating Activities, Sustainable Pasture Management, Stakeholders, Beneficiaries, Communications, Awareness Raising, Behavior change, Education, Private Sector, Individuals/Entrepreneurs, SMEs, Civil Society, Trade Unions and Workers Unions, Non-Governmental Organization, Academia, Community Based Organization, Local Communities, Type of Engagement, Information Dissemination, Participation, Partnership, Consultation, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Capacity Development, Access to benefits and services, Access and control over natural resources, Knowledge Generation and Exchange, Participation and leadership, Capacity, Knowledge and Research, Learning, Theory of change, Indicators to measure change, Adaptive management, Knowledge Generation, Training, Knowledge Exchange, Innovation, Targeted Research

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Submission Date

6/15/2021

Expected Implementation Start

1/1/2022

Expected Completion Date

12/31/2024

Duration

36In Months

Agency Fee(\$)

246,024.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	Mainstream biodiversity across sectors as well as landscapes and seascapes	GET	2,589,726.00	14,699,100.00
Total Project Cost(\$)			2,589,726.00	14,699,100.00

B. Project description summary

Project Objective

Project Objective: Restore and maintain critical ecosystem services of globally significant riverine forest landscapes along the River Nile in Sudan. 50,878 ha of riverine forest ecosystems managed to benefit biodiversity and maintain productive value. 20,000 private agriculturalists, livestock herders, and forest users (10,000 female/10,000 male) reporting stable or improved standard of living resulting from BD conservation mainstreaming

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing (\$)	Confirmed Co-Financing(\$)
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing (\$)	Confirmed Co-Financing (\$)
Component 1: Integrated and participatory riverine forest landscape management planning	Technical Assistance	<p>Outcome 1: Spatial management and planning to assess, prioritize and mainstream conservation and sustainable production practices</p> <p><u>Indicators:</u></p> <p>33 Forest Reserves implementing revised management plans and regularly monitoring associated biodiversity conservation targets.</p> <p>20,000 hectares of riverine ecosystems included within Community Action Plans designed to support pro-biodiversity conservation commercial practices.</p> <p>50,878 hectares of riverine ecosystems managed</p>	<p>1.1 Ecological, social and economic assessment and mapping of riverine forest ecosystems</p> <p>1.2 Forest Reserve management plans updated</p> <p>1.3 Riverine ecosystem conservation spatial plans designed and implemented</p> <p><i>The project will support the creation and launch of integrated spatial plans that identify and prioritize actions required to maintain and restore riverine forests across 50,000+ hectares of riverine habitat.</i></p> <p><i>The project</i></p>	GET	808,333.00	3,000,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing (\$)	Confirmed Co-Financing(\$)
Component 2: Demonstration of riverine forest biodiversity conservation practices	Investment	<p>Outcome 2: Productive practices in riverine forest ecosystems demonstrate biodiversity conservation</p> <p><u>Indicators:</u></p> <p>Hectares of riverine ecosystems inside and outside of Forest Reserves with native species forest cover, including <i>Acacia nilotica</i></p> <p>Forest Reserves: TBD</p> <p>Outside FRs: TBD</p> <p>Target Increase: 10%</p> <p>33 Forest Reserves adopting pro-biodiversity conservation practices and</p>	<p>2.1 FNC biodiversity conservation training program established</p> <p>2.2 Riverine ecosystem farmers, herders, and forest users training program established</p> <p>2.3 Riverine ecosystem conservation and restoration demonstration program operationalized</p> <p><i>The project will support the design and implementation of training programs to support both the FNC and agriculturalists in the target sites to identify and adopt improved management practices.</i></p>	GET	983,239.00	10,399,100.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing (\$)	Confirmed Co-Financing(\$)
Outcome 3 Informed decision-making and sustained impact	Technical Assistance	<p>Outcome 3 Informed decision-making results in riverine ecosystem planning, financing, management, and practice that mainstream pro-biodiversity conservation and amplifies results.</p> <p><u>Indicators:</u></p> <p>33 Forest Reserves with rigorous riverine ecosystem monitoring assessing biodiversity conservation effectiveness.</p> <p>50,878 hectares of riverine ecosystems monitored annually reflecting increased and/or stable levels of native forest cover.</p> <p>1,000</p>	<p>3.1 Ecosystem-based riverine monitoring and knowledge management program</p> <p>3.2 Improved institutional frameworks sustain and amplify project impacts</p> <p><i>The project will support the design and implementation of comprehensive programming that drives informed decision-making.</i></p> <p><i>This will be focused upon provisioning FNC with monitoring capacity and linking to decision-making frameworks.</i></p> <p><i>Amplification and</i></p>	GET	674,834.00	500,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing (\$)	Confirmed Co-Financing(\$)
Sub Total (\$)					2,466,406.00	13,899,100.00
Project Management Cost (PMC)						
GET			123,320.00		800,000.00	
Sub Total(\$)			123,320.00		800,000.00	
Total Project Cost(\$)			2,589,726.00		14,699,100.00	

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Forests National Corporation (ACACIA- (Arabic Gum Value Chain in Sudan) Support SSGASS Phase two)	Grant	Investment mobilized	2,000,000.00
Recipient Country Government	Forests National Corporation (FNC budget over 2022-2025 dedicated to the riverine forest reserves)	In-kind	Recurrent expenditures	4,500,000.00
Recipient Country Government	Forests National Corporation	In-kind	Recurrent expenditures	400,000.00
GEF Agency	FAO (GCF GUMS Project)	Grant	Investment mobilized	5,599,100.00
GEF Agency	FAO (BRIDGES project)	Grant	Investment mobilized	1,500,000.00
GEF Agency	FAO (TCP Projects)	Grant	Investment mobilized	300,000.00
GEF Agency	FAO	In-kind	Recurrent expenditures	200,000.00
Civil Society Organization	Sudanese Environment Conservation Society (SECS)	In-kind	Recurrent expenditures	200,000.00
Total Co-Financing(\$)				14,699,100.00

Describe how any "Investment Mobilized" was identified

2,000,000 EU Funded ACACIA- (Arabic Gum Value Chain in Sudan) Support SSGASS Phase two
 Reforestation and rehabilitation of degraded forests and rangeland in Sennar and Blue Nile States (where a high number of riverine forests reserves exist), as well as the neighbouring states of Gadaref (shared borders with kahrtoom and Gezira States) and North Kordofan (Shared borders with Khartoum and Northern States). Relevant interventions include the rehabilitation of degraded open forest and rangelands through the provision and planting of pasture seeds; the protection of planted areas; the rehabilitation and establishment of community gum Arabic farms/woodlots on communal village land (seed collection and treatment, nurseries establishment, seedling production and planting); and the management of ?livestock

routes? to prevent and manage conflicts between farmers and herders. 5,599,100 GCF funded GUMS project Restoration of gum agroforestry systems in neighboring Kordofan States (shared borders between North Kordofan, Khartoum and Northern States). Relevant interventions include the restoration of agroforestry systems with gum arabic trees, capacity building to 500 smallholder gum arabic producer associations, mobilization of private finance, and the establishment of gum quality standards to strengthen livelihoods of smallholders while increasing climate resilience. 1,500,000 Turkey/EU-funded BRIDGES project in support of AFRICA'S GREAT GREEN WALL Relevant interventions under the BRIDGES project, to combat land degradation and desertification through the sustainable management of natural resources and restoration of degraded forests and landscapes in Sudan. 300,000 TCP Projects over the period 2022-2024

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)
FAO	GET	Sudan	Biodiversity	BD STAR Allocation	2,589,726	246,024
Total Grant Resources(\$)					2,589,726.00	246,024.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)PPG Required **false****PPG Amount (\$)**

150,000

PPG Agency Fee (\$)

14,250

Agency	Trust Fund	Country	Focal Area	Programmin g of Funds	Amount(\$)	Fee(\$)
FAO	GET	Sudan	Biodiversity	BD STAR Allocation	150,000	14,250
Total Project Costs(\$)					150,000.00	14,250.00

Please provide justification

A number of baseline assessments, some of which will be expensive because of the topic and location, will be carried out in a short period of time. This will require a larger than normal PPG team and additional resources. These assessments will include: prioritization of SEEA-AFF accounts (and therefore a thorough assessment of the existing data availability and gaps), gender analysis, baseline surveys at household level, social and environmental impact assessment and development of risk mitigation plan (working in and around forest reserves, the project is categorized medium risk according to FAO Environmental and Social Safeguards framework), data and information collection for land-use planning exercise (with CollectEarth-Open Foris training and use), and micro-assessment of operational capacity of FNC as suggested execution partner of the project.

Core Indicators

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
50878.00	50878.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
50,878.00	50,878.00		

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	10,000	10,000		
Male	10,000	10,000		
Total	20000	20000	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

A household survey was conducted during the PPG.

Part II. Project Justification

1a. Project Description

1.a Project Description

A. Context

1. Sudan is the third largest country in Africa and covers approximately 1, 886,068 km². The nation shares borders with seven countries: Egypt, Libya, Eritrea, Ethiopia, Central Africa Republic, Chad and South Sudan. The country's ecological zones are diverse with desert, semi-desert, low rainfall woodland savannah, high rainfall woodland savannah and special areas such as mountains and riverine ecosystems. Sudan has a human population of approximately 41.5 million and one of the highest growth rates amongst Sub-Saharan Africa (FAOSTAT (2020). Poverty is high despite rising per capita income. Over 46 % of the population live below the poverty line (World Bank, 2019).

2. Agriculture is very important to the Sudanese economy and is the main source of livelihood for Sudan's rural inhabitants. Nearly 65% of the population live in rural areas. Agriculture provides 90% of the national food requirements and constitutes 80% of non-oil exports. Sudan has an estimated 74 million hectares of cultivable land with only 25 percent currently under cultivation (FAO, 2015).

3. Rainfed agriculture covers by far the largest area in Sudan. Crops grown in the rainfed sector include sorghum, millet, sesame, sunflower and groundnuts. Rainfed agriculture is characterized by small farm sizes, labour-intensive techniques using hand tools, low input levels and poor yields. Irrigated agriculture is becoming more prevalent, particularly near the Nile River. Sudan has the largest irrigated area in sub-Saharan Africa and the second largest in the whole of Africa. Increasing irrigated agriculture is central to development policies.[1]¹

4. The River Nile bisects the Sudan from South to North. The Blue and White Nile unite at Khartoum. The Nile and its tributaries shape the lives of much of Sudan's rural population. The Nile basin has the country's highest demographic pressure. The river's banks and plains are the focus of much of the country's agriculture and livestock economy.

5. Forests cover approximately 18.4 million ha or 10 percent of the Sudan (FAO FRA 2020). The estimated annual rate of deforestation is approximately 174,140 ha (FAO, 2020). Some of the country's best remaining forests are found along the banks of the Nile and its tributaries. Riverine forests are characterized by multiple coexisting land uses. These forests and associated wetlands provide habitat for a host of flora, fauna, and aquatic species. These forests provide critical ecosystem services including protection against wind and water erosion and water pollution. They also provide social and economic benefits, including the provision of

NTFPs, fuelwood, building materials, and fodder. Seventy percent of the total population of Sudan is rural and nomadic and considered as forest-dependent for livelihood, wood energy and on round timber for buildings (FNC, 2020).

6. The management of riverine forests is complex and driven by traditional land use regimes. Three types of forest tenure exist in Sudan: private, government and community lands. Local communities usually have traditional ownership rights to river banks (gerif). The banks are seasonally cultivated after receding floods. Increasingly, these riparian areas are permanently occupied by horticultural farms producing *e.g.* bananas, citrus and mangoes. Forests are generally found along the seasonal wetlands beyond the banks (*mayaa*). The riverine uplands (*karrab*) often host mixed forest-shrublands species such as *Acacia seyal*, *Balanites aegyptiaca*, *Faidherbia albida*, and *Ziziphus spina-christi*.

7. Sunt or *Acacia nilotica* is a primary indicator species of riverine forest health. Sunt trees rely upon wetlands and seasonal flooding for its survival. Sunt is an important species in terms of fuelwood, fodder, building materials, honey and a host of medicinal uses. These forests are also critical for biodiversity and ecosystem functionality. These trees are located in the seasonal wetlands (*mayaa*).

8. There are no traditional protected areas covering the Nile's riverine forests. In the early 1930's, a series of Forest Reserves were established across the Sudan. These Forest Reserves were primarily emplaced to conserve Sunt groves along the Nile recognizing the tree species economic and social importance. Forest Reserves (FRs) are managed by the Forest National Corporation of Sudan. Nearly 70 percent of forests in Sudan are state-owned (FAO, 2020). As a parastatal, FNC manages FRs for both commercial and conservation purposes and maintains a number of forest nurseries. Sunt is one of the main sources of sawn timber and fuel wood in the country.

9. Unfortunately, rigorous data regarding that full status of Sudan's riverine forest systems and associated biodiversity is scant. This issue needs to be addressed through the project's interventions. During the PPG phase, a B-INTACT analysis was conducted. The analysis did indicate that the project will have a significant positive impact on biodiversity, increasing the Mean Species Abundance (MSA) index of 20 per cent in a 3-year time period. Other major improvements will concern the land-use change with MSA (LU) estimated to move from 0.7 to 0.85 with the project.

10. Fish species supported by the Nile include Nile perch (*Lates niloticus*), the Nile boliti fish (*Tilapia nilotica*), the barbel (*Barbus barbus*) and several species of cat fish, the elephant snout fish, tiger fish, water leopard and common eel. Although data is deficient, many of these species rely upon riverine forests and associated wetlands.

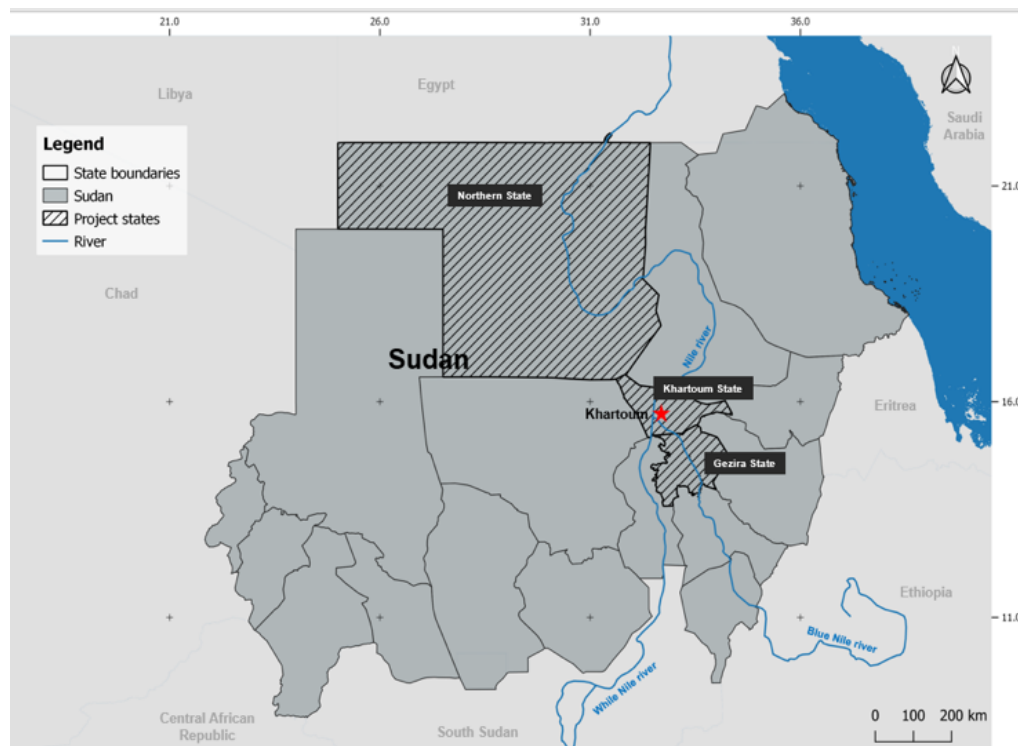
11. Reptiles of the Nile basin include the soft-shelled turtle, three species of monitor lizard, and some 30 species of snakes, of which more than half are venomous. The hippopotamus, once common throughout the Nile system, is now found only in the riverine ecosystem. Hence, the riverine integrity is extremely important for the survival of these species.^[2] In addition to being highly sensitive to environmental changes, the riverine zone is a key factor in the maintenance of the basin's resilience.

12. Bird species are highly reliant upon riverine forests and associated wetlands. Sudan is situated along a primary migration route for Europe and western Asia fly ways.[3]³ According to Birdlife International, the Gezira Key Biodiversity Area hosts large congregations of bird species including the Demoiselle Crane (*Anthropoides virgo*) and White-winged Tern (*Chlidonias leucopterus*) with as many as 20,000 water birds occur during the winter season.

13. Additional flora species rely upon the Nile River and associated wetlands. This includes *Acacia seyal* (talh), *Acacia siberana* (kok), *Faidherbia albida* (haraz), and *Tamarix orientalis* (tarfa). On the *karrab* side *Acacia nilotica* gives way to less moisture demanding species which may occur pure or in mixture, these species are *Acacia seyal*, gregarious species, *Balanites aegyptiaca* (higlg), *Acacia melifera* (kitir), and the gregarious colonizer of recently clear land *Acacia orfota* (laot). Other acacia, like the gum arabic tree *Acacia senegal* (hashab), occur in the southern part of the tract, where rainfall is higher in the *karrab* areas.

B. Description of Target Landscapes

14. The project will target contiguous riverine forest landscapes located in Gezira, Khartoum and Northern State. The target landscapes are along both the main Nile and Blue Nile.



15. The project will target a total of 50,878 ha of riverine landscapes. The project will target 33 individual Forest Reserves covering 5,878 ha. Taking an ecosystem-based approach, the project will include approximately 45,000 ha of surrounding 'mixed use' riverine landscapes composed of forests, wetlands, agriculture, and rangeland.

16. The sites were selected based upon inputs from the Government of Sudan with recognition given to factors such as biodiversity importance and the willingness of local communities, private sector and key stakeholders to improve riverine forest conservation. Selection criteria included diversity of land uses, the level of threats and environmental challenges faced, and demographic and socio-economic aspects such as poverty levels and livelihoods associated with riverine forest ecosystems. The targeted landscapes encompass over 200 villages with a total population exceeding 20,000 persons. These rural inhabitants depend upon ecosystem services provided riverine landscapes and associated forests.

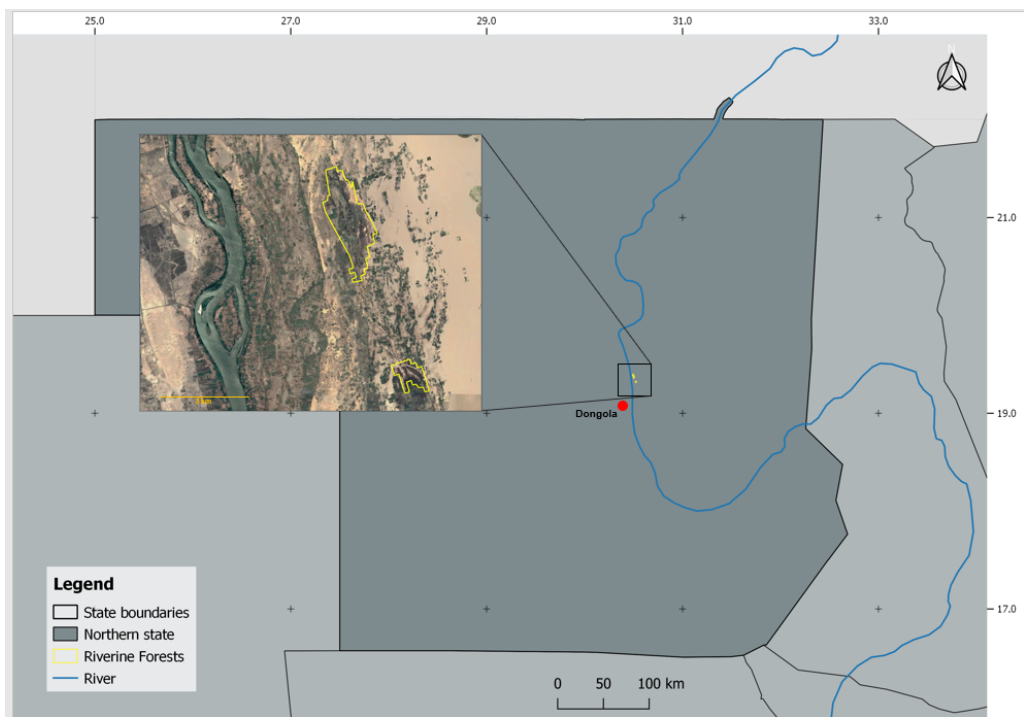
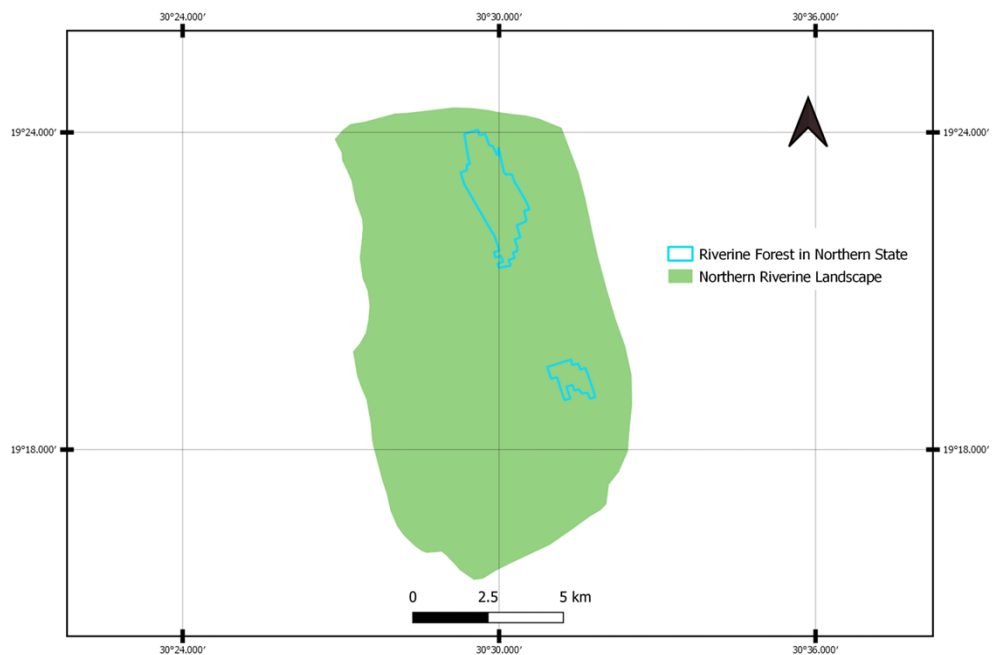
States	Target Riverine Landscapes	Area (Ha)	Riverine Forest Reserves	Forest Reserve Area (Ha)	Demonstration Sites covered	Area (Ha)
Gezira	Rufaa	10,609	6	5,045	El Sinaït Rufaa	146
	Wad Madani	28,958	15		El Kab	336
					Koki	369
					Gofa	176
	Haj Abdallah	22,594	9		Suntubar	153
Khartoum	Khartoum	503	1	503	Sunut	194
Northern	Kodroka	12,101	2	637	Kodroka	521
Totals		74,767	33	5,878	7	1,899

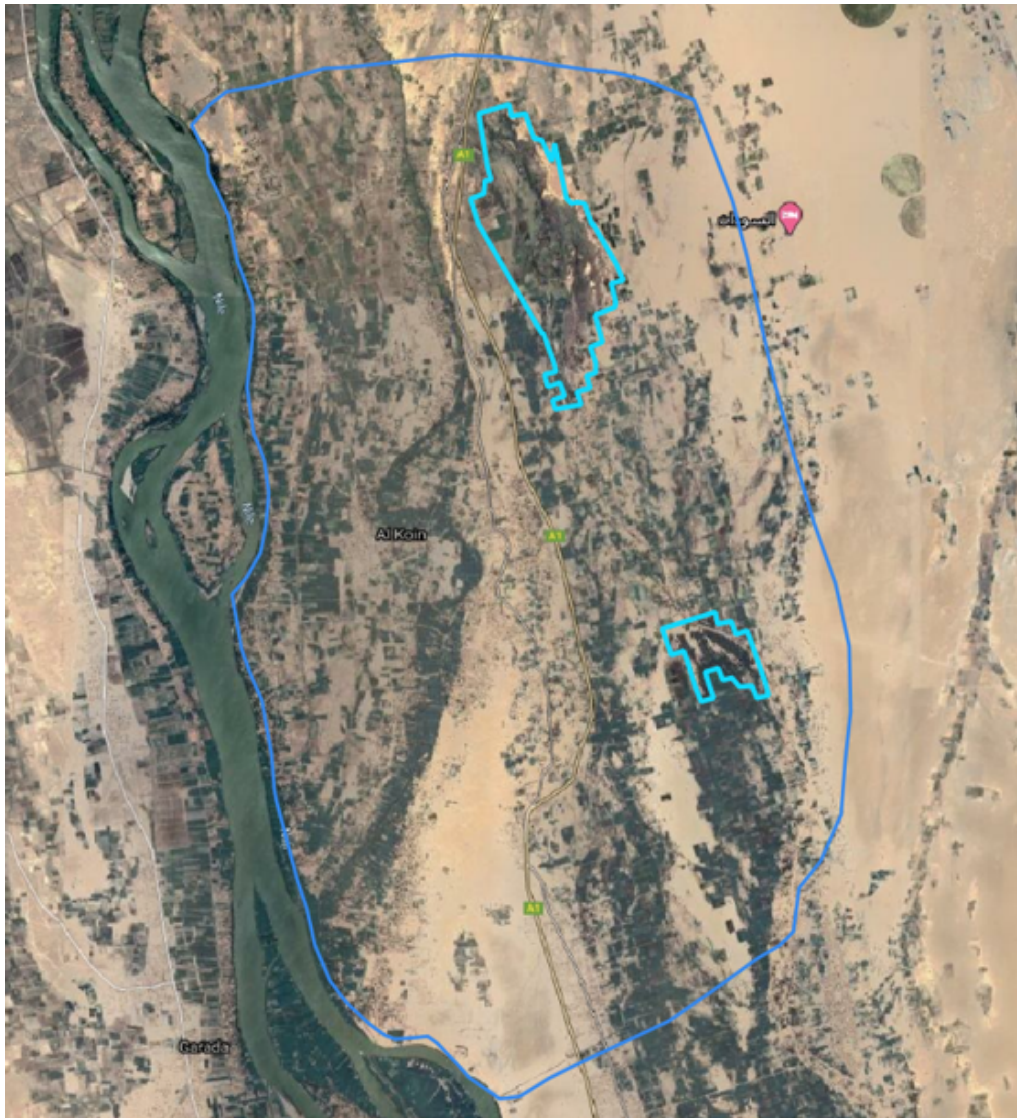
Northern State

17. Northern State is located in the desert zone on the borders with Egypt and Libya. The state covers 348,765 km². The total population is estimated at about 833,743 (2006 data). The region is characterized by low rainfall, extreme temperatures, and sparse vegetation. The capital city, Dongola, lies on the west bank of the Nile River about 448 km from Khartoum. Old Dongola is listed as a Sudanese Heritage site based on the UNESCO 1972 Convention. Dongola operates as an agricultural hub for farmers and livestock producers located in the countryside producing cotton, wheat, sugarcane and vegetables. Other main cities in the Northern State

include Wadi Halfa and Marawi. The State's local economy depends upon both irrigated and rainfed agriculture.

18. Northern State includes two Forest Reserves: Kudroka established in 1953 and Birkat El Molook established 1971. According to FNC officials, the Kudroka Forest Reserve has only 483 ha of standing forests remaining. Approximately 5 ha of highly valued *Acacia nilotica* occur within the reserve. Approximately 300 ha are covered with *Acacia seyal* and 6 ha covered with *Eucalyptus/Prosopis spp.* Over 40 ha are bare land. No detailed information is available for the Birkat El Molook Forest Reserve.





Northern Riverine Landscape

19. Northern State includes two Forest Reserves: Kudroka established in 1953 and Birkat El Molook established 1971. According to FNC officials, the Kudroka Forest Reserve has only 483 ha of standing forests remaining. Approximately 5 ha of highly valued *Acacia nilotica* occur within the reserve. Approximately 300 ha are covered with *Acacia seyal* and 6 ha covered with *Eucalyptus/Prosopis spp.* Over 40 ha are bare land. No detailed information is available for the Birkat El Molook Forest Reserve.

20. Forest monitoring both within Forest Reserves is not regular and reliable data is scarce. Within reserves, FNC conducts inventories, surveys and geospatial data analysis of stocks, soil, topography, and water assessments to inform a number of interventions such as lowering highlands, barriers removals, rehabilitation and opening of new canals for water spreading, as well as opening roads and inspection lines inside the forest reserves. With regards to forest restoration interventions, the FNC provides extension services and material such flexible hoses and pipes for complementary irrigation using already established wells.

21. Information regarding forest density and volume are only occasionally collected. There is no rigorous forest inventory or management plans. As noted, during the PPG, satellite imagery was used to identify riverine forest stands. Examples are included within the Project Document's map section. However, there is a need to both update and ground-truth this information.

22. Conservation efforts outside of Forest Reserve boundaries is extremely limited. The Ministry of production and economic resources supports the formulation of State land use maps, provides trainings, supports the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products. Other important stakeholders playing key roles are the Agriculture Research Corporation, through its State-level research center, the University of Dongola, through its Faculty of Agriculture, and the University of Khartoum, through its faculty of Forestry. CSOs need to be supported to become more effective.

23. Biodiversity conservation is not meaningfully mainstreamed at any level. Data on biodiversity is extremely limited. The decline in riverine forests is intuitively driving habitat loss impacting a wide variety of globally significant riverine forest ecosystems and associated wildlife species.

24. All stakeholders report and remote sensing data confirms that forest areas are shrinking and particularly *Acacia nilotica* is being lost at a rapid pace. The drivers of forest loss are unsustainable consumption, grazing, agricultural encroachment, changed water use patterns (irrigation), climate change, and population increase.

25. Forests are harvested both within and outside of Forest Reserve boundaries as a source of fuelwood and building materials. Nearly 90% of household energy comes from fuelwood. Electricity is scarce and unstable. Supplies of gas are limited. NTFPs such as fruits and medicinal plants are collected. Forests are used for beekeeping and grazing.

26. An increasing number of climate induced events were observed in the riverine landscapes, such as frequent and severe flashfloods over the last 10 years causing the destruction of crops, houses and properties. Ponds are also affected by the relatively shorter hydroperiods in the shallow depressions called *Mayaas*, which hold flood waters for several months. Water is becoming increasingly scarce, affecting household income, agricultural and livestock productivity.

27. The construction of Marawi dam together with climate change have had a significant impact on the region's riverine forests. The Nile River has changed course overtime creating an additional challenge to maintain the Kudroka forest reserve by flood irrigation. In the last eight years, floodwaters were reportedly not sufficient and water stress caused forest dieback and tree mortality. Agriculture and grazing quickly fill in areas where trees are lost.

28. Field investigations conducted during the PPG phase estimate that 4,077 people population live in the vicinity of the Forest Reserves. There are approximately 830 households located in 3 neighboring villages, out of which about 66% are below the poverty line with another estimated 70% being food stressed. Most households were engaged in farming, livestock and seasonal fishing. Most people are located within the riverine landscape. The Nile provides water for human, animal and agricultural purposes, including irrigation.

29. Livestock production appears to be shrinking due to a number of challenges including fodder shortages, lack of veterinary services, weak capacity of the extension services, land tenure issues, conflicts, behavioral changes, as well as increasingly scarce water resources and rangelands due to anthropic pressures and climate change.

30. Stakeholders report that agriculture is expanding and reportedly driving forest and rangeland degradation. Increased pressures are resulting in decreased soil fertility and lower productivity rates. Farmsteads tend to be small with an average of 2 ha of land utilized by each household. Crops include highly water dependent cotton and banana. Farmers are facing issues related to, and market price fluctuation of agricultural products. Farmers have reasonable technical skills. However, they lack adaptive capacity. Farmers do not have access to innovations required to maintain and mainstream conservation of riverine forests. This is particularly important as a climate change resilience strategy.

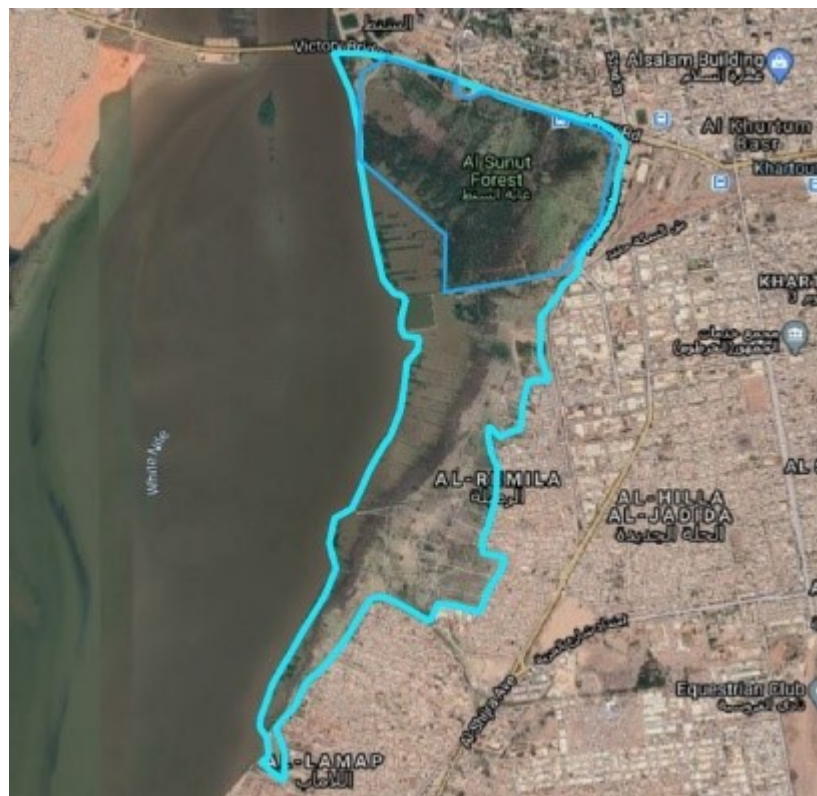
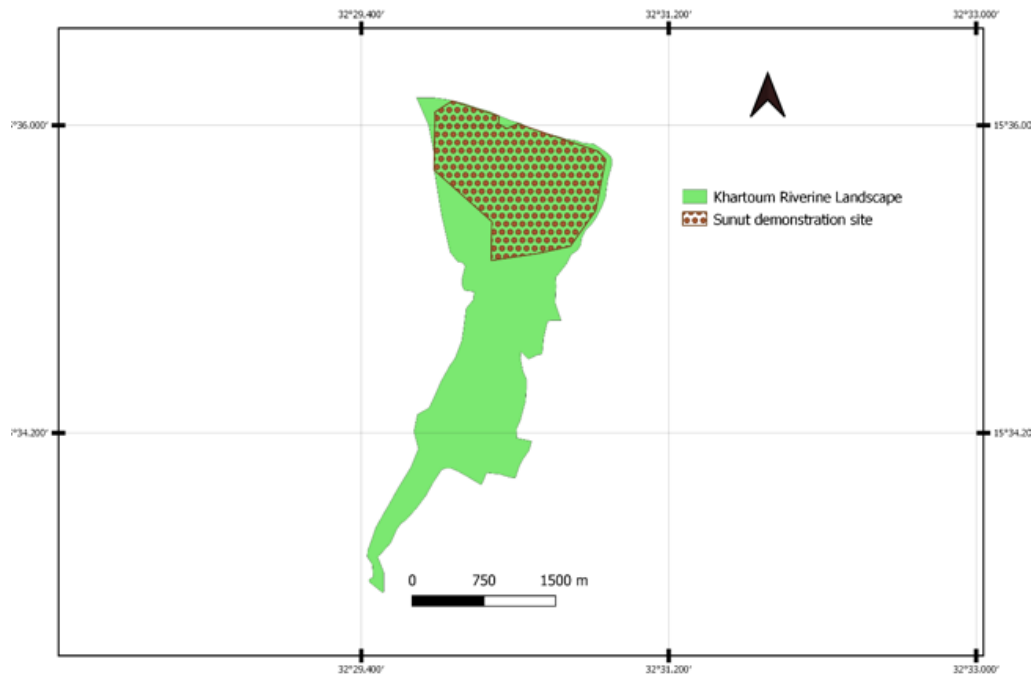
31. Data remains scarce regarding the fishing sector and associated biodiversity values. However, local stakeholders indicated that fisheries depend upon wetlands and associated riverine forests especially for spawning purposes. Numerous local families are engaged in seasonal fishing. Capture methods generally rely upon traditional oar-powered papyrus rafts and poled dugout canoes. The target species include *Gymnarchus sp.*, *Heterotis spp.*, *Hydrocynus spp.*, *Clarias spp.*, *Lates niloticus*, and *Tilapia spp.*

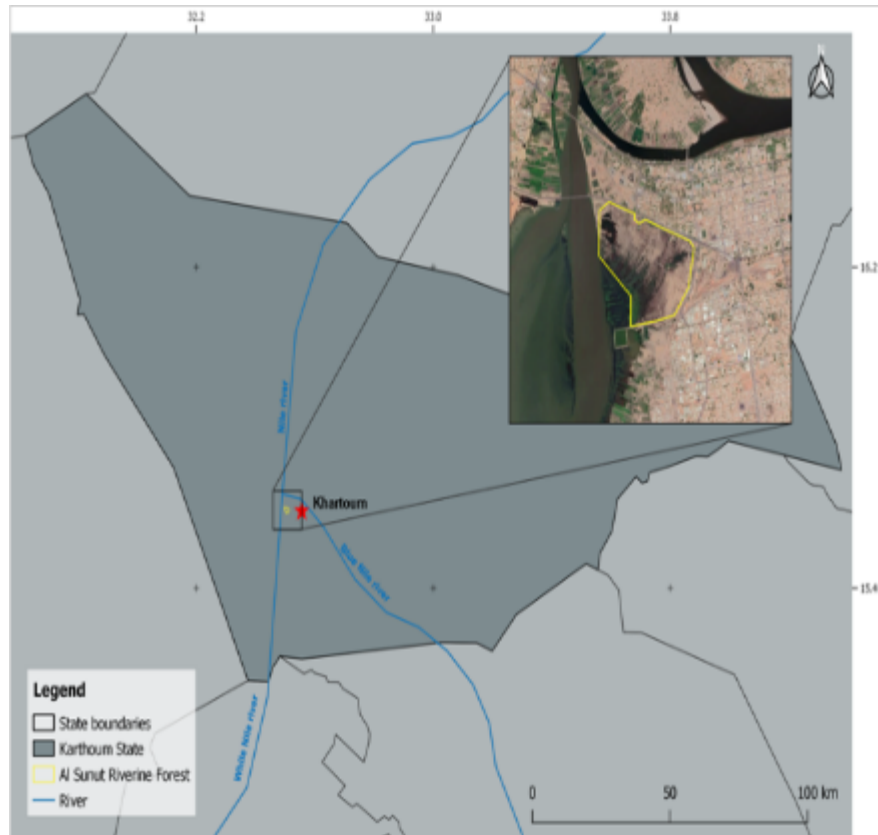
32. The participation of local communities in forest management remains inadequate. Attempts by the FNC to promote the rehabilitation of the Kudroka forest through community participation has had negligible results. Government support and extension services have limited funding, equipment and training.

33. Women play significant roles in wood collection, animal care, weeding, and in crop cultivation and harvesting especially as producers of fennel, *Foeniculum vulgare*. Rural women are facing the triple burden of productive, reproductive and community work, and have to cross long distances between their houses and farmlands. Women's active participation to previous projects showed promising results. Women groups are well organized at village level, are represented at about 40% in local bodies and run women owned small scale enterprises to generate alternative income and provide services such cultivation of vegetables, home nurseries, wood lots nearby the village water source, handcraft making, energy saving and community-based tourism projects.

Khartoum State

34. The smallest state by geographic area (22,142 km²), Khartoum State is the most populous with over 5.2 million inhabitants. Most of the population live in urban areas. The Capital Khartoum receives between 110 and 200 mm of rainfall on average during the rainy season, from July to September, the rest of the year being fairly dry. Dust storms are regular, with significant riverbank erosion and flooding due to river flow fluctuations[4]⁴.





Sunut Forest Riverine Landscape in Khartoum State

35. Nested at the confluence of the White Nile and the Blue Nile, the Sunut riverine Forest Reserve was established in the 1930s with an initial area of approximately 242 hectares. In the 1940s, the wood from the forest fueled Nile steamers. This is the only riverine Forest Reserve in Khartoum State. The area is quite small 194 ha. However, the location of the forest makes it very important in terms of ecosystem services. Pollution in Khartoum was found to be a significant public health issue^{[5]⁵[6]⁶}, including in the water supply wells^{[7]⁷}, that affect water quality of the River Nile^{[8]⁸}. A state of emergency was declared on August 2020 in the aftermath of severe flooding which affected all localities in Khartoum, with the River Nile reaching 17.43 meters, its highest level in 100 years^{[9]⁹}. The forest helps to mitigate these impacts.

36. The forest and associated wetlands are very important for both resident and migratory bird species. Again, biodiversity data is highly deficient. Despite its importance as a sanctuary for migratory birds, little is known about the fauna and flora of the Sunut Forest Reserve, especially during the flood period. The current Forest Reserve management plan was developed in 1998, nearly thirty years ago. Although some discussions have occurred regarding

designation of this location as a Ramsar site, little progress has been made. Unfortunately, biodiversity conservation is not adequately mainstreamed within the management plan and/or management actions.

37. The forest is one of the few recreational outlets for Khartoum city. Since the 1960s, it attracted secondary school and university students, with an average of 3000-3800 students annually visit the forest for diverse research objectives.

38. Human impact on the forest is mostly related to firewood cutting and collection with some grazing. Groups of refugees and street sellers were also relocated near the Forest Reserve. The Sunut forest lost approximately 6 hectares for the construction of Alfetahab Bridge and 14 hectares for an electricity project. Another area of 46 hectares was rented for 30 years with an additional 38 hectares planned for real estate projects, both of which were canceled following the recent political transition. In compensation for forestland that was taken for one of the projects, about 40 hectares were added to the forest. However, such land remains occupied by farmers who were cultivating it for agricultural purposes with no intention leave without compensation. About 1,913 trees were found to be affected by the dieback disease.

39. Management of the Forest Reserve is extremely limited. There should be eight forest guards deployed, but only one is working. There is an urgent need to build capacity to innovatively mainstream biodiversity conservation to improve management of this highly unique and visible riverine forest area. This is a very high priority for the Sudanese Government. This includes working to manage the impacts of unsustainable tourism and illegal fuelwood collection. The objective would be to shift management so that biodiversity conservation becomes prioritized along with building opportunities for greater biodiversity awareness and understanding. While the Sunut Forest has an ecotourism potential, it lacks necessary services for visitors. There is also a very critical need to generate land use planning for this forest reserve that assesses conservation constraints and establishes priorities for conserving and rehabilitating the riverine forest. Again, these efforts are critical to maintain the ecosystem services provided by the forest particularly flood mitigation for Khartoum. More effective biodiversity conservation would likely lay the groundwork for Ramsar designation, further promoting the importance of conserving this Forest Reserve.

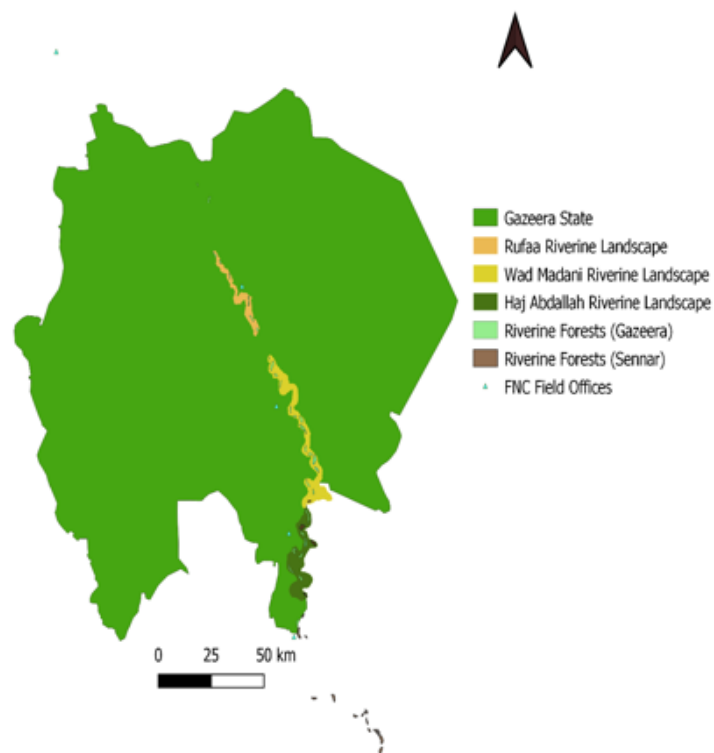
Gezira State

40. The State of Gezira is between the Blue Nile and the White Nile in central Sudan south-east of the capital Khartoum. The total area is approximately 26,000 km² with a population of 2,796,330. The capital, Wad Madani, rests on the west bank of the Blue Nile approximately 136 km from Khartoum. Rainfall is variable and ranges between 420 mm in the south and 250 mm in the north on a yearly basis. Rainfall, together with the Nile River and groundwater are the main water resources of the state. Due to its arid climate, rainfall and evapotranspiration yield a negative annual water balance. Gezira has both riverine and upland forests. Total forest cover is estimated to be 179,940 hectares[10]¹⁰.

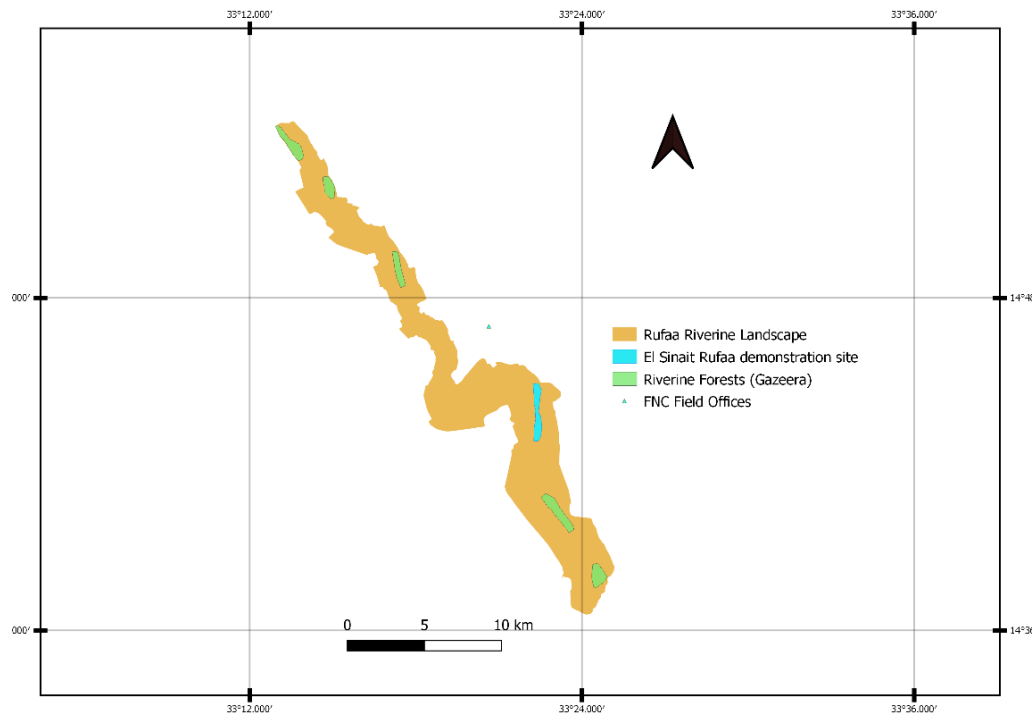
41. Gezira is known for its irrigation project called 'Gezira Scheme', one of the largest in the world. The irrigation scheme commenced in the 1920s and covers approximately 2.2 million acres primarily for cotton production. Large tracts of riverine forests were removed to accommodate the irrigation scheme. To help mitigate the scarcity of wood and NTFPs supplies resulting from clearing forests, irrigated forests belonging to Farmers' Unions were established.

This is an example of the agreements between the FNC and the communities living inside and in the vicinity of forest reserves, as highlighted above with regards to the socio-economic roles assigned to community forests. The contractual arrangements regulating this form of partnership between FNC and communities are documented during forest reservation setting thus the agreed-upon community rights[11]¹¹.

42. There are 30 riverine Forest Reserves. In total, these reserves cover 5,045 ha. The target riverine landscapes in Gezira State consists of three areas each associated with FNC field offices located in Rufaa, Wad Madani and Haj Abdallah.

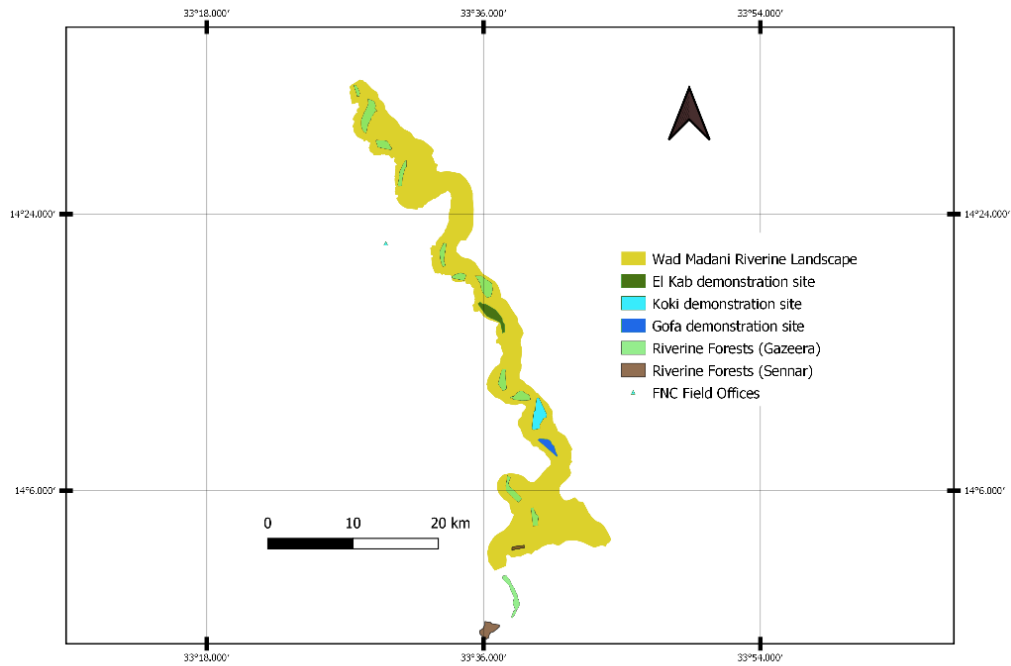


Riverine Landscapes in Gezira State

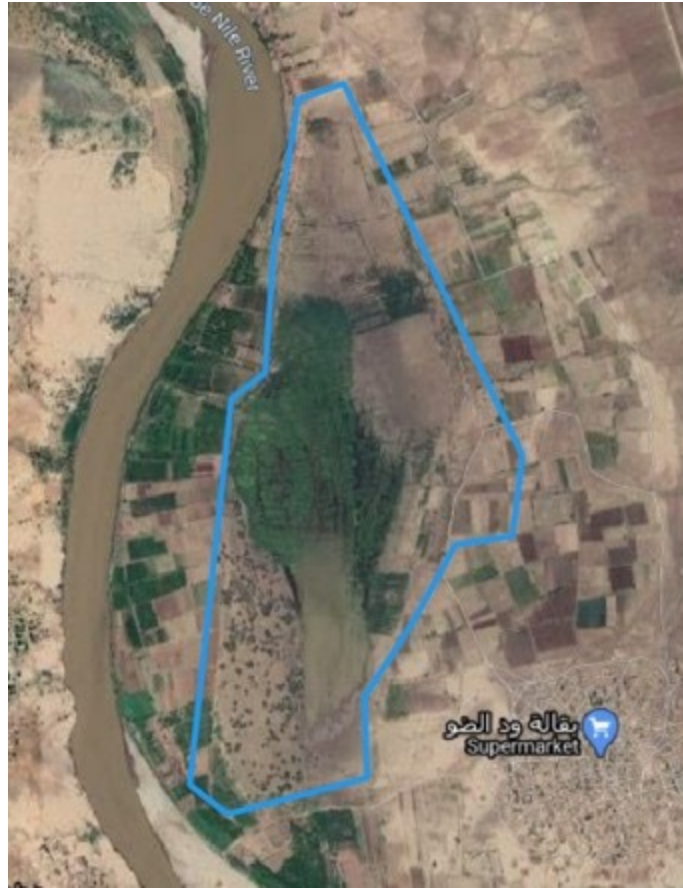




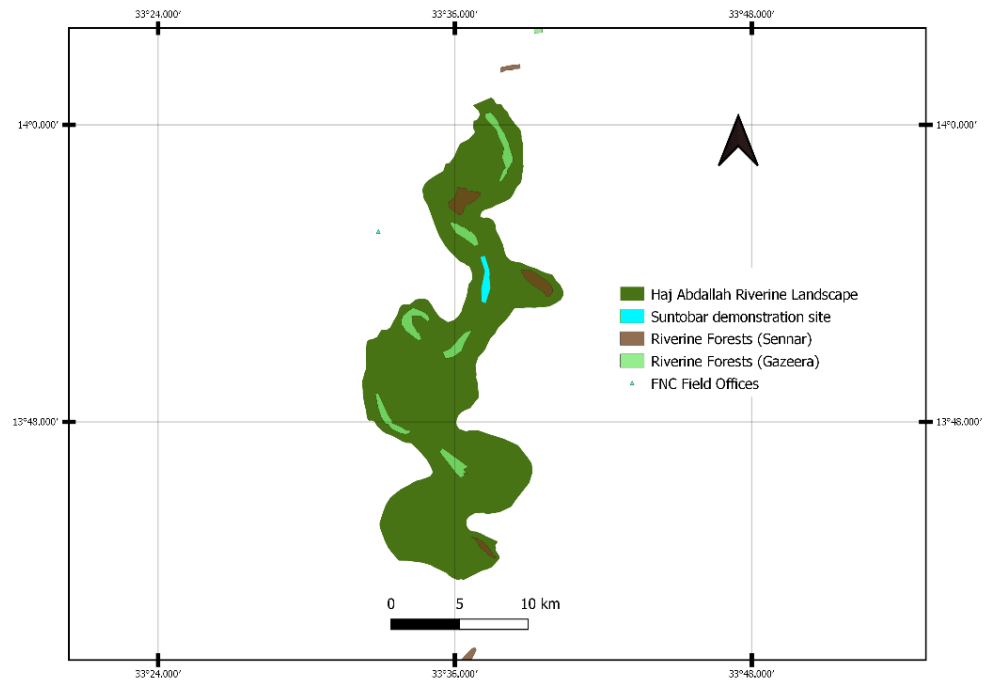
El Sinait Rufaa Riverine Landscape in Gezira State







Wad Madani Riverine Landscape in Gezira State







Haj Abdallah Riverine Landscape in Gezira State

43. The Forest Reserves were established in 1915. The most recent forest management plan was adopted in 2017 and is being implemented by the FNC field Office in Gezira. The institutional landscape is similar to the one described for the Northern State above. Other important stakeholders playing key roles are the Agriculture Research Corporation, through its State-level research center, the University of Gezira, through its Faculty of Forest Science and Technology, and the University of Khartoum, through its Faculty of Forestry.

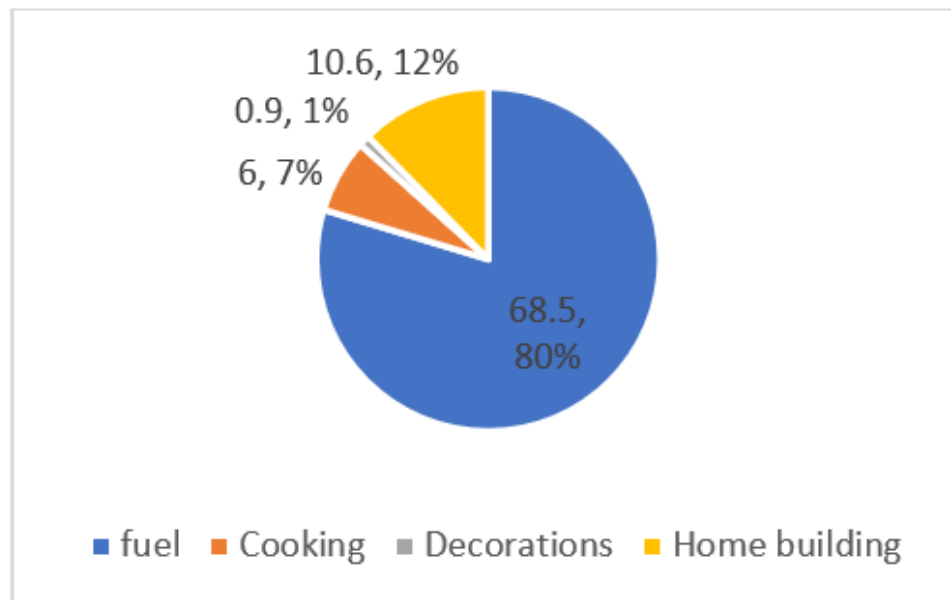
44. There are about 5,000 farmers, 2,500 herders and 500 fishermen in the targeted riverine landscapes. During a survey conducted in the PPG phase, approximately 235 households located in 7 villages within the target riverine landscape were met interviewed. Represented villages included *Beryab, Hillat, Abaas, Salama, Somtobar, Synga* and *Wadrahom*.

45. Members of the surveyed households were between 20-86 years old. The mean age was 48.5 years. Most of the household heads finished primary education. Women made up 40.3% of the surveyed. Only 23.8% finished high school and 6.8% had university educations. Approximately 72% of the surveyed families send their children, including girls, to school.

46. Several key findings resulted from the informal survey. Health conditions in the villages tend to be stable or slightly deteriorating over the last 2 years. Agriculture productivity was reported to be slight decreasing. Most persons interviewed stated that firewood is the most important ecosystem service provided by the forests. Other elements included grazing, medicinal plants, forest fruits and drinking water for animals. Agriculture is dominated by subsistent farming for household consumption, with farmers most selling the surplus on the farm or selling few products to local consumers. Farm sizes are generally larger in this area with most farmsteads being approximately 10 hectares.

47. Surveyed households reported that riverine forest resources are decreasing rapidly, both inside and outside of Forest Reserves. Surveyed households stated that a growing demand from an increasing population and the lack of alternative of energy alternatives to fuelwood was driving deforestation. Sunut trees, *Acacia nilotica*, are primarily used as fuelwood are generally collected by women. Over-harvest unaccompanied by pro-active conservation-oriented management negatively impacts the availability of timber, fuelwood, drinking water, forage, fishing, hunting, honey production and forest fruits. Several surveyed stated that habitat for wild animals and aquatic environments for fish are diminishing. Riverine forests are important to local residents for their spiritual lives, including local beliefs and folklore. While recreational services such as bird watching were noticeably decreasing, excursion and sightseeing activities were on the rise pre-Covid 19.

Forest use Gezira State



48. To reverse negative trends, most respondents identified agroforestry and community involvement as the key considerations. More than 50% of the respondents believe that a better

management of forest resources could be achieved by involving local communities, strengthening the extension support provided by the FNC, and supporting alternative livelihoods for local populations. More than 63% of the participants highlighted their willingness to actively contribute to forest conservation if they can derive benefits from it.

C. Threats, Root Causes and Impacts

49. Over-exploitation and habitat degradation are the primary drivers of riverine forest loss. These drivers are compounded by climate change. The root causes for these drivers are related to management approaches not keeping pace with the rate of development and change, including population growth and economic demands.

50. There is limited adaptive management taking a landscape or ecosystem-based management approach. In many cases, this is linked to the fact that Forest Reserves, which provide the main reservoir for riverine forests were established nearly 100 years ago. Since this time, the flow of the river Nile has naturally changed course leaving riverine forests that depend upon seasonal flooding and wetlands for their survival to become isolated from the river.

51. Expanding agriculture and other uses have occupied riverine habitat that would normally be naturally colonized by riverine forests. As the river changes course, the accretion of sediments occurs. Soil deposits along the riverbanks are fertile and provide easy access to water. This makes them very valuable for agricultural development. According to FAO's analysis, some 17 million hectares of forests have been converted into mechanized and traditional rain-fed and irrigated agriculture since 1940. Agriculture has also become increasingly dependent upon irrigation. Irrigation systems channelize and alter natural river flow. Irrigation developments compound the loss of wetlands, sediment deposits, and other locations upon which riverine forests depend for their survival. As agriculture moves into traditionally forested areas, bank erosion increases. According to FAO's 2020 country report, bank erosion now affects up to 35 percent of the riverine forests in some areas.

52. Where forests do exist, the resources of these forests are in high demand. Local communities rely upon forests for fuelwood and building materials. Sudan derives 80% percent of its energy from fuelwood (Mugo and Ong, 2006^[12]). In addition, unsustainable grazing practices further degrade and decrease the ability of riverine forests to regenerate. The secession of Southern Sudan led many pastoralists that would normally seasonally migrate to Southern Sudan to rely more heavily upon riverine forests in Sudan (EcoAct UK, 2018). Increasing numbers of livestock and particularly small ruminants are pushed into forested lands as demand for good grazing areas has increased. Increased stocking rates are in some ways the result of geo-political changes.

53. As noted, there are several Forest Reserves established along the Nile within Sudan. These Forest Reserves are not designed specifically to protect forests. They are commercial use zones where timber and fuelwood are actively harvested. The use of FR resources is managed according to a permit system. Although licenses are required to clear forests for agriculture particularly for mechanized farming, this policy has not been effective in forest conservation and protection against vast expansion of agriculture. Recently, forest ownership has attracted public attention as is reflected in the process of forest reservation under communal, private and investors names.

54. As the Nile has changed course over the decades, the borders of many Forest Reserves where most riverine forests are found are no longer associated with wetlands. Habitat that would normally be colonized gradually by *Sunt* forests have instead been replaced by agriculture and livestock use. Often times, this is exacerbated by irrigation and other water management that has resulted in the further degradation and loss of wetlands habitat. The results are evident as shown from satellite data. Sudan is very quickly losing riverine forests both within and outside of Forest Reserves.

55. This situation is quite easy to see through satellite imagery. The images show Forest Reserves (outlined in blue) with surrounding productive landscapes and the river Nile. Additional images may be found in the Project Document's map section.





El Kab, Gofa, and Koki riverine forest reserves in Wad Madani in Gezira State

56. Riverine forests provide critical support for biodiversity. These forests and associated wetlands are very important to terrestrial and avian biodiversity, this includes migratory bird species. In addition, the wetlands associated with riverine forests are important areas for fish species. Wetlands provide nurseries for Nile fish with many species entering wetlands during high water periods to deposit eggs. These fisheries and other biodiversity are very important to the livelihoods and food security of local communities. Each of these biodiversity values are being lost, as riverine forest ecosystems are degraded. However, as noted, there is a dearth of data and monitoring to allow for a full understanding of how habitat loss has impacted riverine biodiversity.



Changes in Sudan forested area 1990 to 2020 (1,000 ha) (source FAO FRA, 2020)

57. Climate change is and will continue to further exacerbate existing challenges. Riverine forests rely upon dependable water flows. As noted, riverine forests require at least two to three months of wetland conditions per year to survive. As climate change alters river flows and rainfall events ? including more erratic and severe weather patterns ? the rates of flooding are altered. Drought and/or unreliable water levels result in riverine forests not having access to wetlands conditions during critical survival periods. When flooding becomes too severe, high siltation rates occur. This accumulation can bury riverine forests and cause die-off with trees lacking respiration. Again, there is a very urgent need to adopt adaptive landscape level management approaches that provide for ecosystem elasticity so that ecological buffers exist allowing riverine forests to adapt to and survive climate change impacts and continue to provide important ecosystem services.

58. Riverine forests provide highly valuable climate change adaptation functions. This includes the ability to help regulate and diffuse the impacts of flooding and to increase bank stabilization. As these ecosystem services are diminished with lower forest cover, the impacts of climate change increase and further drives the loss of riverine forests.

59. Sudan features a tropical sub-continental climate, extending from desert climate in the north through a belt of summer-rain climate to semi-dry climate. Sudan experiences mean annual temperatures between 26°C and 32°C, with summer temperatures in the north often exceeding 43°C. Rainfall is erratic, with great variation experienced between northern and southern regions. Northern regions typically experience virtually no rainfall (less than 50 mm annually), central regions receive between 200 mm and 700 mm per year, and some southern regions experience more than 1,500 mm annually. Most rainfall occurs during the rainy season from March to October, with greatest concentration between June and September.^{[13]¹³}

60. Climate scenario analyses indicate expected rises in temperature and rainfall decrease. Air temperatures in Sudan have been steadily increasing between 0.2°C and 0.4°C per decade

since 1960, with temperatures in the 2000 ? 2009 period between 0.8°C and 1.6°C warmer than they were in the 1960 ? 1969 period.

61. Rising temperature trends have also increased the rates of evaporation and the likelihood of drought events. From 1941 to 2000, average annual rainfall has declined of about 0.5% per year and a greater rainfall unreliability is expected in the near future. Annual variability in rainfall at the national level is increasing at a rate of about 0.2% per year. This variation within years has seen annual dry season rainfall totals increasing 20-30 mm per decade in the extreme north and south, while annual rainy season rainfall totals have been decreasing by 10-30 mm per decade, primarily in the west (source World Bank).

62. These historical and current variations in the climate regime are causing extreme weather events that affect the management of natural resources, the provision of ecosystem services and the well-being of local population. River flooding hazard is classified as 'high' in Sudan, meaning that potentially damaging and life-threatening river floods are expected to occur at least once in the country in the next 10 years. The hazard level is high across all regions of the country. Floods have been the most frequently recorded hazards in Sudan between 1990-2014, comprising 73% of disasters, and are expected to increase in frequency. Riverine forest ecosystems, that are at the core of this project, play a key role in reducing the damaging effect of floods and stabilizing stream channel (Yousif and Tawhida, 2014).^[14]

63. In addition to floods, droughts are the second most frequently recorded hazards in Sudan between 1990-2014, comprising 15% of disasters and expected to increase in frequency. Other climate extreme events such as dust storms, thunderstorms and heat waves whose occurrence though less frequent, still pose serious threat to local livelihood.

64. According to Mohamed et al. (2016)^[15] 'during the last 50 years a large change occurred in the recent ecological zones and the areas covered by vegetation classes compared to those mapped in 1958. The harmful impact was manifested in the disappearance of the wetlands (flooded region) class. The forest cover was severely decreased by approximately the half. The desert and semi-desert boundaries were shifted southwards due to declining of precipitation, increasing of temperature. The semi-desert areas were subject to deforestation, expansion of intensive rain-fed agriculture, civil war and population displacement. The woodland savannah ecological class encompassing the two subclasses low rainfall savannah and high rainfall savannah forms the green central belt of the country; it was the only increased ecological zones in 2010. Its improvement has been occurred in detriment of the two other missing classes: wetland and forest cover zones'. These changes in ecological zones are the result of negative impacts of global warming and climate change that represent a serious sustainable development problem for the country. In rural areas as in the landscapes where Sudanese riverine forests are located, non-climatic factors also contribute to increased vulnerability, including resource mismanagement, fragile land and water resources, deforestation and natural resource conflicts.

D. Barriers

Barrier 1: Limited capacity to strategically mainstream biodiversity conservation within spatial and management planning

65. Sudan has struggled to take an ecosystem-based approach to strategically conserve riverine ecosystems at the landscape level. The country does not have a working example of spatial planning at a scale large enough to provide for adaptive management approaches designed to prioritize and mainstream pro-biodiversity conservation approaches within agriculture, livestock, and forest management. As a result, productive practices both within and outside of Forest Reserves do not have the contextual parameters required.

66. Without spatial planning at the landscape scale that integrates biodiversity conservation, productive activities continue to encroach upon and reduce riverine forest habitat. Many Forest Reserves are slowly becoming habitat islands isolated from the Nile floodplain and associated critical wetlands. Private agriculturalists, herders, and forest users do not have guidance regarding how to identify areas for riverine forest conservation and restoration. There is no assessment and/or strategic guidance regarding how to adapt and prioritize practices at a spatial level to support riverine forest conservation and associated ecosystem services.

67. Both within Forest Reserves and across surrounding riverine ecosystems, engagement of agriculture and livestock productive sectors in pro-biodiversity conservation management is limited. This includes the ability to fully integrate and reflect biodiversity conservation within management and land use planning within and beyond Forest Reserves. Areas beyond Forest Reserves, including patches of riverine forest, benefit from no conservation planning. The result is that Forest Reserves exist as islands surrounded by increasing development with forests within these reserves dwindling as a result of physical changes to riverine landscapes (e.g., natural and human cause alteration of river course) and over-exploitation of Forest Reserve resources.

68. Management of Forest Reserves tends to focus upon the productive and commercial aspects of forest management rather than biodiversity conservation aspects. This includes the use of *Acacia nilotica* for timber and fuelwood. Management plans are not spatially oriented. They do not consider biodiversity conservation, including the needs of biodiversity dependent upon riverine forests for survival. Beyond the boundaries of Forest Reserves, little consideration is given to conserving riverine forests and associated biodiversity. This includes maintaining the critical ecosystems that are provided by riverine forests.

69. FNC has made efforts to improve environmental community-based interventions in the management of riverine forests but not inclusive of the integration of surrounding land uses. Community-based interventions both within and beyond Forest Reserves have been challenged due to the lack of a coherent, landscape-based approach to spatial planning to provide the context necessary to direct and monitor effective interventions. Again, this includes the need for adaptive management principles and practices that reflect the natural changes that constantly alter the Nile's riverine ecosystem.

70. There is a need to build capacities of a broad range of government agencies, communities and private entities to better understand and value riverine forests so that these values can be mainstreamed within planning, permitting, and restoration functions. This includes advancing strategic, spatial planning that addresses threats related to agriculture, irrigation, livestock management, and unsustainable harvest of forests and associated biodiversity resources. Communities, including both women and men, need to be engaged through a planning process to identify and prioritize production practices that are pro-biodiversity conservation. The FNC and local decision-makers need to have a cohesive set of standards and priorities in terms of how to restore riverine forests beyond the boundaries of Forest Reserves that are increasingly isolated from necessary river flows and wetlands.

71. Conservation of riverine forests in Sudan demands that collaborate and adaptive management principles and practices be in place at the landscape level. There is an urgent need to assist stakeholders at all levels, including communities, private entities, government decision-makers, and FNC managers, to engage in a process of assessing riverine forest conservation requirements. This includes making certain that ecosystems are managed to make certain elasticity remains in the system to maintain natural function. There is a need for management regimes that spatially orientate production practices to maintain connectivity of riverine forests. This includes making certain that forests with reserves are not isolated from physical functions such as river flow and wetlands. Planning is required to integrate climate change adaptation features. In addition, planning is required to inform decision-making and strategically identify appropriate development actions and improved production practices designed to enhance riverine forests and maintain important ecosystem services.

Barrier 2: Limited experience with demonstrating the potential benefits for mainstreaming pro-biodiversity conservation within productive sector actions

72. Sudan has almost no major successful examples of pro-biodiversity production practices effectively mainstreamed within riverine forest ecosystems, particularly at a scale necessary to generate meaningful ecological, social, and economic benefits at the landscape level.

73. Forest management practices within Forest Reserves tend to focus upon commercial production with little consideration given to biodiversity conservation objectives. FNC does support forest restoration within reserves supported by their system of tree nurseries. These nurseries generally focus upon native plant species and primarily Sunt trees. However, biodiversity conservation is tangential. In addition, restoration is focused within the boundaries of Forest Reserves. Although the FNC does provide trees for reforestation actions outside of Forest Reserves, productive sector actors have a limited capacity to engage in and promote agroforestry that could potentially increase overall Forest cover. Even the effectiveness of restoration action within Forest Reserve boundaries is often hindered by the isolation of these reserves from existing Nile fluctuations and wetlands.

74. To help support community development, FNC has established the 'Taungya system' which is an agroforestry management tool. Taungya aims to regenerate and protect Forest Reserves while helping vulnerable landless persons to earn a living. Economic incentives are the main reason for the application of Taungya by the forest service. Plantation establishment is expensive due to the cost of weeding and pressure from livestock grazing. Through practical application and experience, there are strong motives that point towards the need to reforming this approach through contractual arrangements and participatory management to establish a comprehensive and sustainable benefit sharing mechanism.

75. Beyond the boundaries of Forest Reserves, there are no programs in place to promote demonstration of benefits associated with mainstreaming riverine forest conservation within productive practices. Agriculture and livestock extension outside of Forest Reserves do not have experience and/or knowledge with best international principles and practices related to integrating forest conservation within the productive sector. Forest Reserve management and staff tend to be isolated from surrounding productive lands. Expertise does exist with the FNC regarding reforestation. However, this expertise is not generally transferred beyond the boundaries of Forest Reserves. Agriculture, livestock and forest use activities do not benefit from examples of how to improve practices designed to maintain forests outside of Forest Reserves and benefit from pro-biodiversity conservation impacts. This includes the promotion of community-based conservation activities and/or alternative income generation actions that

would incentivize conservation of forests and associated biodiversity. Although extension services do exist at the target landscapes, these extension services are isolated.

76. Addressing this barrier requires a systematic approach to building the capacities of government agencies to identify pro-biodiversity production practices, the ability to transfer these practices to communities and productive sector actors, and the generation of opportunities and stimulus for these actors to uptake improved practices designed to evince the short and long-term economic, social, and environmental benefits of mainstreaming biodiversity conservation within Forest Reserves and across associated riverine ecosystem landscapes. This includes helping the productive sector to identify practices designed to conserve forest ecosystems so that those ecosystems also improve soil productivity and reduce the negative impacts of climate change and recognize the value of pro-biodiversity conservation practices.

Barrier 3: Inadequate familiarity with monitoring and knowledge management systems required to inform decision-making and sustain adaptive management that mainstreams biodiversity considerations within productive sector actions

77. Riverine forest ecosystems of Sudan do not benefit from informed decision-making support. This includes frameworks designed to build knowledge, monitor conservation progress, and/or provide the policy and financing required to make certain conservation progress is sustained and amplified.

78. Sudan does not have experience with the development and implementation of programmatic approach to generating the data required to inform riverine ecosystem conservation action. Again, this situation applies both within and outside of Forest Reserves. There is no system in place to identify, track and capture critical biodiversity conservation indicators. This includes the ability to monitor progress and results related to improved production practices. Absent this capacity, it is very difficult for government decision-makers, communities and private producers to make informed and strategic decisions.

79. The country has also struggled to set in place an effective mechanism to improve awareness regarding riverine conservation importance and effectiveness. As noted, FNC is working to improve conservation of forests within Forest Reserves. However, there is a need to build and extend this capacity to more fully incorporate biodiversity conservation concepts and principles. More importantly, there are no mechanisms in place to provide agriculturalists, livestock herders and forest users with knowledge and awareness regarding how to identify and integrate best conservation practices within their activities. The one example where the value of ecosystem services provided by riverine forests is better appreciated is the Khartoum Forest Reserve. In this instance, the reserve provides critical flood mitigation for the city as well as recreational opportunities. However, forest management even here is challenged due to a lack of awareness regarding the need for pro-biodiversity urban planning and how unsustainable use primarily by urban area residents degrades forest health.

80. Under the existing scenario, there is limited capacity within government policy and financing regimes to incentivize and encourage the adoption of pro-biodiversity conservation practices. This includes making certain that financing and policy frameworks are in place to support the capture and amplification of best practices related to planning, demonstration, and strategic monitoring required to advance adaptive management of riverine ecosystems at the landscape level. Again, this applies to practices within and outside of Forest Reserves. Outside of Forest Reserves, there are only loosely managed traditional systems to help safeguard remaining forests and conserve landscapes where both natural and plantation-based restoration and rehabilitation might occur. The existing system for access to Forest Reserves is highly

complex and does not mainstream biodiversity conservation concerns. This capacity barrier contributes to on-going issues related to habitat loss and degradation that directly result in biodiversity loss.

E. Baseline: The baseline scenario and any associated baseline projects

81. The Sudanese government recognizes the need to address forest and biodiversity loss. The country has several institutions, policies, and programs in place to build upon. There are a number of government agencies at both the federal and state levels with mandates to support sustainable development, including biodiversity conservation. However, beyond the efforts of the FNC within Forest Reserves, there is very little focus upon riverine forest conservation. Policy and institutional framework ambiguities remain. Capacities related to natural resource management and biodiversity conservation are in the development phase and not keeping pace with conservation challenges. There is an urgent need to improve expertise and experience with the application of successfully proven forest and natural resources management approaches. This is particularly the case at the state level where most immediate forest conservation actions occur.

82. The Republic of Sudan is a federal democratic republic composed of 18 States. A new Constitutional Charter for the Transitional Period was signed in August 2019 following the 2018 revolution. This new Charter is intended to cover a 39-month transition period. The governance system is expected to be revised based upon the recently signed Juba Peace Agreement between the transitional government and the armed movements with a return to the previous regional system most likely.

83. The *Ministry of Agriculture and Forestry* is generally responsible for overseeing the forestry sector. The *Forest National Corporation (FNC)* is a parastatal linked with the Ministry of Agriculture and Forestry. The FNC is tasked with the technical supervision of forests. The FNC has several technical staff. Part of the FNC's mandate is to generate awareness. The FNC also conducts research to help assess and plan forest use. The FNC is to encourage investment in forests, in collaboration with the competent authorities. FNC is directly responsible for the management of Forest Reserves. This includes imposing tariffs or fees or increasing royalties on forests crops and other use fees. Importantly, the FNC has the authority based upon the competent Minister's approval to own, buy and sell of land. Many of the Forest Reserves have management plans but biodiversity conservation is not generally integrated or reflected within planning regimes.

84. The FNC has a Forestry Extension Department, a Remote Sensing Unit as well as a Renewable Energy Unit. The FNC's budget for the year 2006 was of 2.26 billion Sudanese Pounds (the equivalent of US\$ 11.3 million). FNC generates this budget through a combination of timber sales, royalties, permits, and government investments. In 2007, it operated with 2,414 staff including 2,037 forest guards (out of which 15% are female), 74 technical staff (all male), and another 303 forest managers (out of which about 29% are women)[16]¹⁶.

85. More than 90% of FNC personnel are located in the decentralized offices. These field offices conduct inventories, surveys and geospatial data analysis of stocks, soil, topography, and water assessments to inform a number of interventions such as lowering high-lands, barriers removals, rehabilitation and opening of new canals for water spreading, as well as opening roads and inspection lines inside the forest reserves.

86. Both national and state level FNC offices are working with stakeholders to improve conservation. There is limited experience and awareness of concepts such as Participatory Forest Management (PFM), Joint Forest Management (JFM) and Payment for Ecosystem Services (PES). The FNC often works with local associations (such as farmers associations, village councils, agricultural cooperatives, women's groups, youth groups, and farmer groups involved with sustainable resources management of riverine forest landscapes). Although laudable, these practices to date do not adequately integrate biodiversity conservation and do not approach conservation at landscape levels required to alleviate biodiversity loss.

87. The *Higher Council for Environment and Natural Resources*' mission is to 'Protect environmental health and the functional integrity of ecosystems for inclusive sustainable development and utilization of natural wealth and the environment to support the economic, social, and cultural wellbeing of current and future generations.' The HCENR is the arm of the Council of Ministers of the Government of Sudan responsible for environmental protection and sustainable development of the country's natural resources. The HCENR is constituted to function as the inter-ministerial government agency coordinating the environmental affairs and sustainable management of natural resources across all sectors of economic and social activities at federal and state levels under the Chairmanship of the Prime Minister. The primary mandate of the HCENR is formulation of environmental policies and legislation and strategic planning for conservation and sustainable management of the country's environmental and natural resources. Its mandate also includes the oversight and facilitation of the implementation and enforcement of the government environmental policies and legislation in coordination with respective executive bodies of the federal and state governments. The HCENR also aims to promote international cooperation and coordinate participation in global environmental conventions and protocols and utilize associated multilateral financing instruments and technology transfer mechanisms and is mandated to support Strategic Planning for Sustainable Environment Development; National Biodiversity Strategy and Action Plan and Climate Change aspects.

88. The *Forestry Research Centre is under the Agricultural Research Corporation (ARC)*. The Forestry Research Centre (FRC) was established in 1950 with headquarters in Soba, Khartoum. The FRC's main research areas include Botany, wood technology, arid zones, agroforestry, seed research, gum Arabic, range management, and tree fodder. In 2007, the FRC employed about 52 personnel at BSc, MSc, and PhD levels^[17].

89. The *General Administration for National Energy Affairs* undertakes national energy planning in coordination with concerned institutions, for the promotion of the use of alternative renewable energy resources and energy substitutes. The *Ministry of Irrigation and Water Resources* and the *Ministry of Animal Resources* engage in conservation and management through proper distribution of water resources to allow balanced utilization of grazing resources and production of fodder crops under irrigation, protection and management of pasture and animal feed. The *Wildlife Conservation General Administration* is responsible for the management of protected areas.

90. There are important organizations at Federal and State level that contribute to the baseline, including *Agricultural Research Centers* and *state universities* such as the University of Gezira, faculty of Forest Science and Technology, University of Khartoum, faculty of Forestry, University of Dongola, faculty of Agriculture, and University of Bahri, College of Natural Resources and Environmental Studies.

91. The *State Ministry of Production and Economic Resources* in each state supports the formulation of State land use maps, provides trainings, supports the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products.

92. Under the baseline scenario, there is on-going provision of extension services. There are several hundred extension officers located in each of the project's demonstration landscapes. However, as noted, these extension services including FNC agents do not strategically integrate biodiversity conservation within their current efforts.

Gezira Extension Services	
Entity	Staff
FNC	196
FNC Extension Officers	7 (4men & 3women)
Fisheries Agencies	7
Agriculture Agencies	40

Khartoum: Extension Services	
Entity	Staff available
FNC	6
FNC Extension Officers	2 (2women)
Fisheries Agencies	NA
Agriculture Agencies	NA

Northern State Extension Services	
Entity	Staff available
FNC	95
FNC Extension Officers	7 (4women and 3men)
Fisheries Agencies	27
Agriculture Agencies	500 (at head quarter + staff in 7 localities)

93. The *Forests and Renewable Natural Resources Act (2002, rev 2015)* provides the framework for the management and protection of forests and renewable natural resources encompassing pasture and range as well as the framework governing the managerial system of the forestry sector. The act covers the FNC mandates intensifying afforestation activities and encouraging stakeholder participation in Forest Reserve actions. In 2015, the *Forests and Renewable Natural Resources Act* was revised. The revised Act provides for joint forest management, benefit sharing, community forestry, and recognizes indigenous culture and peoples, as well as the protection of genetic resources. The 'reconciliation mechanism' and the natural resources police have been revoked in the new Act. The multi-sectoral approach of the 2002 Act has also been repealed and all measures related to range and pastures in the 2002 Act have been disregarded. The revised Act of 2015 was not sanctioned[18]¹⁸. The FRNR Act for 2002 remains binding but not administered. The FNC has not levied fees for browsing or grazing resources used by livestock in forest reserves. The FRNR 2002 Act furthermore required the establishment of a Forests Police Force, which is beyond the FNC budget capacity and remains unrealized.

94. The *Forests Act* of 1989 is often recognized as being innovative and reasonably effective. The Act established several new types of forest ownership: private, community and institutional forest reserves to be managed by owners, committees and institutions respectively. These new ownership types are in addition to the national and regional Forest Reserves. Unfortunately, implementation within riverine forests has not been effective due to limited capacity related to management, land use planning, and clear institutional mandates.

95. Additional laws and policies under the baseline include the *Wildlife Conservation and National Parks Act* (1986), the *Water Resources Act* (1995) and the *Environment Protection Act* (2000, rev. 2020).

96. Civil Society Organizations are engaged in forest conservation and management improvements. For instance, The Farmers Union of the Gezira Scheme started large scale irrigated plantations to provide its members with fuelwood and building poles. The effort was financed by a statutory allocation of 2% of the net profit of the cotton crop grown annually with technical assistance provided by the Forests Administration. The *Rainfed Farmers Association* established a fund through which several tree shelterbelts and woodlots were created in mechanized farming areas in Gadarif and Blue Nile States. Groups such as the *Sudanese Social Forestry*, *Sudanese Environmental Conservation Society* and *Sudanese Forestry Society* are each working to promote better forest management practices. However, under the baseline, these efforts have not effectively mainstreamed pro-biodiversity conservation practices.

97. Private sector organizations contribute to baseline efforts. The *Gezira Scheme* Board manages the production of agricultural crops including wheat and cotton and supports social development projects in Gezira State. The Kenana Sugar Company supports forest management and tree planting through Community Forestry Partnerships. Although primarily focused upon production aspects, the Timber Industry Workshops are engaged in milling and woodworking and provide a potential entry point under the baseline to advance biodiversity conservation mainstreaming within private sector activities.

98. Donor effort under the baseline includes the following.

Project	Financing, implementation timelines & partners	Objectives	Baseline problems addressed by the project and link to FAO project's objectives
Butana Integrated Rural Development Project (BIRDP)	<p>USD 43 million</p> <p>2006-2022</p> <p>Implementing agency: IFAD</p> <p>Executing agency: Butana Development Agency (BDA)</p>	<p>To improve the livelihoods of poor rural households in Butana region and strengthen communities' resilience in the face of drought.</p> <p>The specific objectives of the project are to:</p> <p>i) support improvements in natural resource governance to ensure regulated access to land and water resources in Butana region for all;</p> <p>ii) improve the access of women and men to livestock markets and strengthen their bargaining position within markets, by rehabilitating market infrastructure and by establishing market information systems and organizing producers' groups;</p> <p>iii) build the capacity of grass-roots organizations to design and implement environmentally sound development initiatives that include women and marginalized social groups.</p>	<p>- The enhancement of agro-forestry systems will support the activities foreseen by the FAO project in the areas surrounding the sunut forest reserves</p> <p>- The successful involvement of targeted and non-targeted communities will be used as example to enhance the adoption of the practices for the conservation and management of riverine forest ecosystems (component 2)</p> <p>- Community-based groups are empowered and become more business oriented, which is of direct interest for component 2.</p>

BRIDGES - Boosting Restoration, Income, Development, Generating Ecosystem Services	<p>USD 3 million from Turkey and USD 600 000 from the EU-ACP funded Action Against Desertification project</p> <p>2017-2020</p> <p>Executing agency: FAO in collaboration with FNC</p>	<p>Objectives:</p> <ul style="list-style-type: none"> - Catalyze action, support sustainable management and restoration of dryland forests and agrosilvopastoral systems in three Great Green Wall countries - Eritrea, Mauritania, Sudan - stimulating production, benefiting livelihoods and generating ecosystems goods and services - Stimulate South-South cooperation between Turkey and Africa's Great Green Wall and across dryland regions worldwide. 	<ul style="list-style-type: none"> - The planned restoration of 5 000 hectares of dryland forests and landscapes will be of interest for component 1 and in particular the production of guidelines and involvement of local farmers, stakeholders and communities - The compilation, management and sharing of knowledge and good practices, promoting communications and visibility will be useful to the communication and awareness strategies to be developed under component 3
Sustainable Natural Resources and Livelihoods Programme (SNRLP)	<p>USD62.94 million from IFAD</p> <p>2019-2025</p>	<p>The project objective is to increase the adoption of natural resources management practices,</p> <p>technologies and business models enhancing NR sustainable use and securing access for vulnerable resources users.</p> <p>The project will have two main components:</p> <p>Component 1. Upscaling of community based natural resources management practices, technologies and Businesses; and</p> <p>Component 2. Improving the institutional framework for upscaling community based NRM</p>	<p>Operating in the Butana region where most of the riverine forests are located, and where the FAO-GEF project is planning to intervene, this IFAD investment supports planning and implementation of community NRM plans, harmonizing current legal NR frameworks, and strengthening NR governance.</p> <p>It will therefore complement the components 1 and 2 of the proposed project. Both projects have the opportunity to jointly capture, document and disseminate sustainable practices and lessons learned.</p>

<p>Sudan Sustainable Natural Resources Management Project</p>	<p>USD 7.73 million from GEF (2014-2018) + Additional USD 5.5 million from GEF-LDCF extends the project to June 2022</p> <p>Implemented by the World Bank through FNC</p>	<p>The objective of the project is to increase the adoption of sustainable land and water management (SLWM) practices in targeted landscapes.</p>	<p>This investment will not be considered as co-financing, but one to further build upon and collaborate with. The project aims at (i) adoption of improved soil and water management practices; (ii) forested ecosystem rehabilitation and rangeland management; (iii) creation of sustainable alternative livelihood activities related to natural resource management; and (iv) strengthened capacity to implement SLWM and biodiversity conservation. Component 2 of this proposed project will benefit from lessons learned and established good practices by the SSNRMP.</p>
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REDD+	<p>World Bank's Forest Carbon Partnership Facility (FCPF)</p> <p>USD 8.8 million during 2015-2019</p> <p>Addition grant of USD 5 million</p>	<p>Supports management arrangement, information sharing, stakeholder's consultation and participation, as well as some aspect of national forest monitoring</p> <p>Supported the preparation of the REDD+ strategy including social and environmental assessment.</p>	<p>FAO launched in 2016 a two and half-year USD 3.3 million project to develop and implement a national monitoring and reporting system for Sudan's forests in the framework of REDD+ Readiness in Sudan. The project is providing technical assistance to the Government of Sudan to establish a national reference scenario and inventory of forest resources. In doing so, FAO is institutionalizing the use of an effective monitoring, reporting and verification (MRV) system and strengthening the capacity of key institutions to build the foundation needed for future:</p> <ul style="list-style-type: none"> i) operationalization of Forest Monitoring System, ii) calculation of a national reference emission level (REL)/reference level (RL), and iii) generation of robust forest data feeding into the National Greenhouse Gas Inventory and National Communications/Biennial Updates to the United Nations Framework Convention on Climate Change (UNFCCC). <p>The project supports data collection and measurement activities underpinning the Sudan Forest Monitoring System. In line with relevant UNFCCC decisions and IPCC guidelines, the project is supporting Sudan to use a combination of remote sensing and ground based forest carbon inventory approaches for estimating forest-related GHG emissions by sources and removals by sinks, forest carbon stocks and forest area changes. This project is a source of information for the assessment of land use changes in riverine forest landscape planned for component 1.</p>
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The Great Green Wall for the Sahara and Sahel (GGW) Initiative	More than eight billion dollars have been mobilized and pledged	The National Action Plan provides a framework for long-term solutions to deforestation and land degradation in Sudan.	The Great Green Wall for the Sahara and Sahel (GGW) Initiative is a program initiated in 2007 that links 20 countries from Africa's Sahel-Saharan region and aims to address desertification, land degradation and drought in the Sahara and Sahel. Sudan is part of this initiatives that will harness national and local capacities for land management to support local communities in sustainable management and use of forests, croplands, rangelands and water in dryland areas, as well as to protect biodiversity. The Initiative will also strengthen the resiliency of local communities by contributing to climate change mitigation and adaptation, with significant improvements to food and nutrition security and livelihoods for Sudanese communities. There are six intervention zones across the states of North Darfur, Northern Kordofan, Kassala, River Nile, Northern State and Khartoum State. The Plan contains 5 key components: Rehabilitation of degraded lands; forest and rangeland management; livelihood support for local communities; capacity building; and the development of an implementation framework. The Plan outlines a set of activities and outcomes for each component and intervention area, and provides a detailed provisional budget for each. Many of the activities outlined in the Plan will also generate income and create jobs for Sudanese households, especially those involved in food and livestock production. Despite the GGWI and this FAO project on riverine forest landscape will not have the same target areas, many lessons learnt can be shared between the two projects, from the stakeholder's
	Initiated in 2007	The Great Green Wall for the Sahara and Sahel (GGW) Initiative is a program initiated in 2007 that links 20 countries from Africa's Sahel-Saharan region and aims to address desertification, land degradation and drought in the Sahara and Sahel. It is an initiative of the African Union and is supported and led by stakeholders across diverse sectors at regional and international organizations, national institutions, local authorities and communities.	

ACACIA- (Arabic Gum Value Chain in Sudan) Support SSGASS Phase two	<p>10,000,000 EUR from EU Trust Fund</p> <p>Implemented by AFD through FNC</p> <p>Implementation over 5 years, started in 2020- 2021</p>	Supports reforestation and rehabilitation of degraded forests and rangeland in Sennar and Blue Nile States (where a high number of riverine forests reserves exist), as well as the neighboring states of Gadaref (shared borders with kahrtoom and Gezira States) and North Kordofan (Shared borders with Khartoum and Northern States).	Builds on the AFD pilot project., relevant interventions include the rehabilitation of degraded open forest and rangelands through the provision and planting of pasture seeds; the protection of planted areas; the rehabilitation and establishment of community gum Arabic farms/woodlots on communal village land (seed collection and treatment, nurseries establishment, seedling production and planting); and the management of ?livestock routes? to prevent and manage conflicts between farmers and herders.
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Gums for Adaptation and Mitigation in Sudan (GAMS)	USD 9.975 million from the GCF	Aims to enhancing adaptive capacity of local communities and restoring carbon sink potential of the Gum Arabic belt, expanding Africa's Great Green Wall	<p>Restoration of gum agroforestry systems in neighboring Kordofan States (shared borders between North Kordofan, Khartoum and Northern States). Relevant interventions include the restoration of agroforestry systems with gum Arabic trees, capacity building to 500 smallholder gum Arabic producer associations, mobilization of private finance, and the establishment of gum quality standards to strengthen livelihoods of smallholders while increasing climate resilience.</p>
	Implemented by FAO and executed by FNC		<p>Gum Arabic, harvested from Acacia trees, provides smallholder farmers with up to 38% of their income. Gum trees are grown in association with annual food crops increasing crop yields by enhancing soil fertility, improving water infiltration and lowering evaporation by reducing</p>
	60 Months, project approved in 2020		<p>temperature and wind speed, thus reducing farmers' exposure to climate change impacts. The yield loss from gum trees due to moisture stress is 50 percent that of annual crops. Gum-based agroforestry associations thus both significantly boost crop yields and reduce household vulnerability to climate change stresses. Past policies and violent conflict have led to the degradation of gum-based farming systems, contributing to land use/land use change and forestry emissions that account for 47% of all GHG emissions. The project will support smallholders in restoring their CC resilient gum agroforestry systems and reforesting degraded lands, thus contributing to the implementation of the national REDD+ strategy, and fund rehabilitation of livestock corridors and</p>

F. The proposed alternative scenario with a brief description of expected outcomes and components of the project and the project's Theory of Change

99. The project's objective is to restore and maintain critical ecosystem services of globally significant riverine forest landscapes along the River Nile in Sudan.

100. Sudan's globally significant riverine forests are critical to the survival of the Nile river and associated fisheries. These forests help to maintain the quality of the Nile's aquatic and riparian habitats. Riverine forests provide important refugia for a host of avian and terrestrial biodiversity. The ecosystem services of riverine forests are critical to local residents. Ecosystem services include flood control, erosion mitigation, fish recruitment, and livelihoods. Riverine forests and associated "intact" landscapes are important buffers to climate change impacts.

101. The riverine ecosystems of Sudan are a complicated mix of land uses. The riverine landscape has both irrigated and non-irrigated farmlands. Agriculture is expanding with cultivation of wetlands often displacing riverine forests and potential riverine forest habitat. There are significant and growing numbers of domestic livestock that restrict forest survival and natural rejuvenation. Residents of the riverine are highly dependent upon natural resource use, including fisheries, non-timber forest products, and timber.

102. There are generally two types of riverine forests remaining in Sudan: forests within Forest Reserves and forests outside of reserves. Both types are diminishing rapidly due to combination of factors, including unsustainable agriculture, livestock management, and forestry management. There is also limited direct take of forest related wildlife species. All riverine forests are quickly becoming remnant islands that exist in ecological isolation surrounded by intensifying human development.

103. Riverine forests are not well suited to a static environment. These forests have adapted and evolved to survive along with shifting patterns of Nile flows. Riverine forests migrate over time depending upon the wetland and soil conditions associated with the Nile's shifting accretion and erosion patterns along the riparian. This means that riverine forest conservation must also be predicated in part upon adaptive management at a spatial scale large enough to accommodate ecosystem change. Conservation must take place at a scale large enough to allow for forest restoration, regeneration, and adaptation congruous with the natural fluctuations of the Nile river.

104. Management of riverine forests both within and outside of Forest Reserves is not currently designed to be adaptive and allow for forest conservation and regeneration based upon the consistently changing course of the Nile. As noted, riverine forests and particularly Surt trees are dependent upon seasonal wetland conditions for their survival. The boundaries of most Forest Reserves were established over one-hundred years ago when the Nile's riparian system was much different. Patches of riverine forests outside of Forest Reserves are highly vulnerable. Management and conservation of non-reserve forests depend upon traditional and community-based approaches. Management of riverine forests and associated landscapes at all levels do not adequately mainstream biodiversity conservation principles and practices.

105. The project is designed to directly address each of the three barriers that stand between the existing situation and the objective of effective riverine forest ecosystem conservation:

Barrier 1: Limited capacity to strategically mainstream biodiversity conservation within spatial and management planning

Barrier 2: Limited experience with demonstrating the potential benefits for mainstreaming pro-biodiversity conservation within productive sector actions

Barrier 3: Inadequate familiarity with monitoring and knowledge management systems required to inform decision-making and sustain adaptive management that mainstreams biodiversity considerations within productive sector actions

106. Under Component 1, the project will support the establishment of strategic spatial and management planning. Management planning will be improved for the target Forest Reserves. These reserves will have new and/or updated management plans that fully integrate and reflect biodiversity conservation management objectives and associated actions.

107. Spatial planning will mainstream biodiversity conservation at the landscape level, inclusive of both Forest Reserves and the surrounding ecosystem. Together, the management and spatial plans will fully mainstream the conservation of riverine forests and associated biodiversity creating a comprehensive and adaptive management regime for each target landscape based on specific riverine forest conservation targets. Project investments will address the immediate need for management and spatial planning based upon comprehensive assessments of ecological, social, and economic factors related to riverine forest survival.

108. Spatial planning will help define productive and conservation priorities at the landscape level. Management and spatial planning improvements will assist smallholder farmers, herders, and persons reliant upon forest resources for fuelwood, fodder, NTFPs, and building materials to identify and activate pro-biodiversity conservation practices. This will include setting in place a collaborative approach to define appropriate actions. The project will support the realization of innovative Community Action Plans to help engage community, government and private stakeholders in the process of identifying and prioritizing best practices at the landscape level.

109. An important element of the management and spatial planning work will be to support efforts designed to improve wetland and riparian conservation linked to riverine forest health. This will include elevating issues such as water resource management and 'ecosystem connectivity'. Improved management and spatial planning will be designed to support that natural regeneration of forests and make certain forests are better able to withstand climate shocks while providing local inhabitants with critical climate change adaptation related ecosystem services, e.g., flood management.

110. Under Component 2, the project will establish a program to support the demonstration and upscale of productive practices designed to integrate and reflect pro-biodiversity conservation actions. The project will invest in efforts that specifically target threats emanating from unsustainable agriculture, livestock and forestry management practices. This will include building the capacity of extension staff to identify pro-biodiversity conservation practices and transfer skills and knowledge to communities, smallholders and private parties operating both inside and outside of Forest Reserves.

111. These practices will be designed to support the management and conservation objectives detailed under Component 1's management and spatial and planning improvements. Demonstrated practices will fit within and be prioritized based upon the parameters of the spatial conservation and management plans. Improved production practices will be designed to support the conservation objectives of the spatial and management plans.

112. Demonstrations and associated capacity building will take place at the landscape level, both inside and outside Forest Reserves, so that cumulative impacts result at a meaningful scale. This includes positive social, economic, and ecological impacts. Importantly, this should be directed towards maintaining the ecosystem services provided by riverine forests and particularly those related to climate change adaptation. It is foreseen that community-based management and improved native forest restoration techniques outside of Forest Reserves will be important parts of the demonstration process.

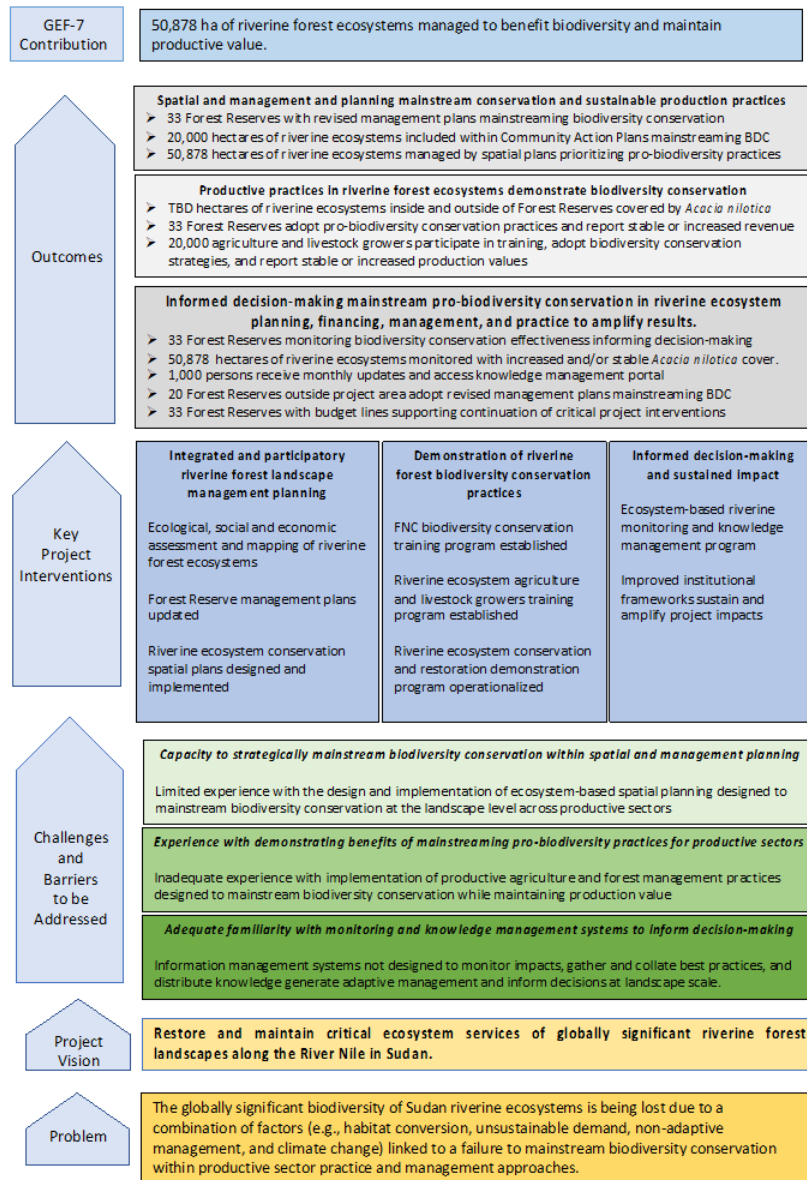
113. Under Component 3, the project will assist Sudan to set in place activities required to make certain adaptive management at the landscape level benefits from informed decision-making and adequate policy and financing support. Project investment will make certain that monitoring programs are in place to track how conservation actions stemming from planning and demonstrations are effectively supporting riverine forest conservation and impacting social and economic values.

114. Monitoring will be linked to decision-making platforms at the producer, community, Forest Reserve and government policy levels. This will make certain that conservation management at the landscape level is adaptive and is driving towards the achievement of short and long-term conservation objectives while maintaining production levels required to sustain communities.

115. The project will take a strategic approach to make certain the necessary financial and human resources are in place to sustain and amplify good practices post-project. The project will facilitate government agencies to integrate 'best practices' within fiscal, policy, and planning processes. The project will support the establishment of communication tools to make certain that private agriculture, livestock, and forestry interests have access to knowledge and information required to make informed decision and are aware of the financial and social benefits that can derive from pro-biodiversity conservation practices.

116. By project close, at least 50,000 hectares of riverine forests will be included within improved management and spatial planning regimes that prioritize and mainstream biodiversity conservation within productive sector practices at the landscape level. Over 30 Forest Reserves will be actively managed according to updated management plans oriented towards biodiversity conservation. At least 20,000 smallholder private agriculturalists, livestock herders, and forest product users will have access to and will benefit from production practices that demonstrate the ecological, social, and economic benefits of adopting pro-biodiversity conservation practices. A comprehensive riverine ecosystem monitoring program and knowledge management regime will provide government, communities and private stakeholders with the information required to make informed decisions so that their actions actively support the achievement of riverine forest biodiversity conservation objectives at landscape levels. The entire program will be designed to make certain that by the end of the GEF investment period financial, policy, and human resource capacities are in place to carry forward and amplify project emplaced success using adaptive management principles and practices.

Theory of Change



G. Brief Description of Expected Outcomes and Components

<i>Project Objective</i> Restore and maintain critical ecosystem services of globally significant riverine forest landscapes along the River Nile in Sudan.	
Impact Indicators	<p>50,878 ha of riverine forest ecosystems managed to benefit biodiversity and maintain productive value.</p> <p>20,000 private agriculturalists, livestock herders, and forest users (10,000 female/10,000 male) reporting stable or improved standard of living resulting from BD conservation mainstreaming</p>
Assumptions	<p>Capacity built by project to adequately monitor results</p> <p>Strong government and stakeholder engagement</p> <p>Improved practices adopted</p>
Lead Executing Agency	Forest National Corporation
Anticipated Budget	<p>GEF: US\$ 2,589,726</p> <p>Co-Financing: US\$ 14,699,100</p>

Component 1: Integrated and participatory riverine forest landscape management planning

Outcome 1: Spatial and management and planning assess, prioritize and mainstream conservation and sustainable production practices

Impact Indicators	<p>33 Forest Reserves implementing revised management plans and regularly monitoring associated biodiversity conservation targets.</p> <p>20,000 hectares of riverine ecosystems included within Community Action Plans designed to support pro-biodiversity conservation commercial practices.</p> <p>50,878 hectares of riverine ecosystems managed according to government approved spatial plans that prioritize pro-biodiversity conservation practices with conservation targets monitored.</p>
Assumptions	<p>Capacity built efficiently and effectively by project</p> <p>Strong government and stakeholder engagement</p> <p>Improved practices adopted.</p>
Lead Executing Agency	Forest National Corporation
Anticipated Budget	<p>GEF: US\$ 808,333</p> <p>Co-Financing: US\$ 3,000,000</p>

Output 1.1 Ecological, social and economic assessment and mapping of riverine forest ecosystems

117. Efforts under this output will focus upon generating the information required to fully inform the Component's spatial planning activities. The results of this Output will also help to inform innovations to be applied under Component 2 and generate objectives and indicators for Component 3 monitoring program.

118. As noted, there is currently a dearth of data for informed decision-making. Filling this gap is critical to the identification and achievement of riverine ecosystem management objectives for both conservation and sustainable development. Assessment work will engage the FNC, other relevant government agencies, communities and private stakeholders to help enhance capacities. The project will build the capacity of agencies outside of the Forest Reserves to coordinate assessment and monitoring. The component will help build the capacity of the relevant FNC field offices to identify key biodiversity conservation indicators, assess these indicators and monitor for success.

119. The assessment work will capture baseline information at each target landscape related to economic, production, social and ecological factors. The assessments will look closely at forest health and biodiversity conservation indicators along with land and water management to better determine how to maintain the functionality of riparian and wetland habitats upon which riverine forests depend. Again, these efforts will be inclusive of both Forest Reserve and surrounding target landscapes. As noted, Forest Reserves are both conservation and productive landscapes where commercial and subsistence grazing, agriculture, fuelwood collection and timber production activities actively occur. A critical part of this work will be to understand more clearly the regulatory, financial, management, and practice constraints relevant to incentivizing increased forest conservation and rehabilitation at the landscape level both inside and outside of Forest Reserve boundaries.

120. To help inform the economic valuation of riverine forests and associated ecosystem services, the assessment will utilize Natural Capital Accounting (NCA) tools. NCA is designed to help determine the value of natural assets. This includes assessing biodiversity and relevant ecosystem services in both monetary and physical terms. NCA assists to build a holistic, integrated accounting framework, which will be developed using the System of Environmental Economic Accounting for Agriculture, Forestry and Fisheries (SEEA AFF) often used by FAO.

121. The process of assessment and analysis will be supported by a mapping exercise to help delineate and prioritize riverine habitats for conservation and restoration of forest system. This will include building the capacity of FNC and other government agencies to generate remote sensing information using established tools such as FAO's Hand-In-Hand (HIH) geospatial platform, Trends Earth, and Earth Map.

122. As noted, the assessments will be directed towards supporting the planning process. The assessment process will help to create a platform to better fine-tune and identify opportunities and locations for conservation of riverine forests beyond the boundaries of Forest Reserves. The assessment will carefully look at issues in terms of identifying conservation challenges, clarifying opportunities, and collaboratively determining how best to mainstream biodiversity conservation within productive sector activities.

Output 1.2 Forest Reserve management plans updated

123. Activities under this output will generate revised and updated management plans for each of the Forest Reserves within the targeted landscape. These updated management plans will benefit from information generated through Output 1.1. Forest Reserves management planning currently does not mainstream biodiversity conservation issues. This includes the establishment of pro-biodiversity conservation targets, prioritization of actions required to meet these targets, and investments in capacity and financing required to implement these actions. Building this capacity is critical to supporting the conservation of endangered riverine forest ecosystems. The project will sponsor formal management training programs. The project will assist with the formulation of model management plans so that the planning process across the Forest Reserve regime is more streamlined and generating comparative data sets. The model management plans will look at all aspects of riverine forest ecosystem conservation, including issues revolving around sustainable financing and conservation issues inclusive of Forest Reserves and surrounding target landscapes.

124. The aim will be that by project close Forest Reserve managers have enhanced capacity to mainstream biodiversity conservation in decision-making and that the Forest Reserves regime has a strong model for management planning and plan adaptation that can be carried forward and replicated nationally. This will include improved operational guidelines for forest

conservation and reforestation. The management plans will also integrate financing issues, both in terms of capturing financial value from Forest Reserve management ? keeping in mind that Forest Reserves are productive landscapes designed to be commercially viable ? while identifying conservation investments required to sustain best practices post-project. The financial strategies will be based in part upon FAO's international experience with sustainable forest management that includes biodiversity conservation and participatory approaches. This will include tools such as FAO's Restoration Opportunities Assessment Methodology? and the ?Road to Restoration Guide? specifically designed to support native forest restoration and conservation schemes. The management planning and capacity enhancement process will benefit from inputs from forestry and biodiversity conservation experts to make certain Sudanese managers have an opportunity to increase their exposure to best international principles and practices and to create a network of connections and support for these managers.

Output 1.3 Riverine ecosystem conservation spatial plans designed and implemented

125. The project will support the design and implementation of comprehensive spatial plans for the targeted riverine ecosystems. This will build upon the assessment and mapping conducted under Output 1.1 and integrate the updated Forest Reserve management plans from Output 1.2. As noted, under the baseline, development and production activities outside of Forest Reserves occur with very little analysis and/or consideration given to generating a balance between production and the conservation of forest ecosystems that are vital to maintaining production.

126. The spatial planning process will assist key stakeholders including smallholders, private producers and Forest Reserve managers to strategically identify biodiversity concerns and prioritize conservation actions at the landscape level. The output will be aimed at making certain productive practices across the targeted landscapes mainstream pro-biodiversity concerns while maintaining desired productive values. The plans will move the current ?fragmented? approach to riverine ecosystem use and development into a much more holistic, landscape-based approach. This will include current habitat connectivity constraints.

127. The spatial plans will prioritize conservation action. This includes identifying critical locations and zoning for the conservation and restoration of riverine forests both inside and outside of Forest Reserve boundaries. As noted, the long-term conservation of riverine ecosystems is largely dependent upon maintaining the ability of forests to naturally expand into wetlands as the course of the river Nile changes over time. The spatial plans and planning process will help to coordinate and balance competition between conservation priorities and agriculture, livestock and forestry demands. Local communities are very much dependent upon the ecosystem services (e.g., flood control), timber resources (e.g., fuelwood and building materials) and NTFPs provided by riverine forests. The plan will help to coordinate and balance these interests, making certain that adequate buffers exist to allow for forest regeneration.

128. Spatial planning will identify and prioritize potential improvements to agriculture, grazing, and forest management helping to create parameters and guidance to shift practices towards more pro-biodiversity conservation activity. This will help to inform the actions to be taken under Component 2 (demonstration of improved management practices). Importantly, the plans will consider issues related to water resources management with particular emphasis upon maintaining and/or restoring natural ecosystem functionality along the river Nile to conserve wetland and riparian habitats upon which riverine forest ecosystems depend.

129. This planning process will represent a much-needed step forward in terms of mainstreaming biodiversity conservation across the productive landscape. However,

development of these plans will be challenging. Capacity building will be a major part of the output's approach, including training for FNC and other government staff regarding the fundamentals of collaborative and effective spatial planning designed to mainstream conservation concerns across complex landscapes. FAO will provide technical assistance based upon collaborative processes proven to be effective in other settings, particularly related to community-based forest conservation approaches. During the planning process, Community Action Plans (CAPs) will be generated to help stakeholders engage and collaboratively identify and prioritize critical conservation and production needs. The CAPs will be integrated with the riverine ecosystem conservation spatial planning process.

130. The plans will identify management objectives based upon spatial parameters. This includes economic, social, and ecological indicators that can be tracked over time to make certain project funded and future conservation activities are on-track to deliver. The plan, in this way, will help to guide and inform future decision-making by government agencies and private stakeholders to support monitoring under Component 3. Of particular importance will be detailing the conservation needs and objectives of Sunt forests (*Acacia nilotica*) as a key indicator of riverine ecosystem health. However, the plans will help to identify other conservation and ecosystem functionality indicators such as fisheries and flood control.

131. Importantly, the spatial plans for each target landscape will detail implementation and oversight responsibilities. The plans will provide for adaptive management principles, allowing the plans to evolve and improve as information flow increases and implementation capacity grows in sophistication. Part of this will be to identify institutional, human resource and financing needs to be certain that once generated plans benefit from a strong framework of support to continue implementation once the GEF project closes. These aspects will be linked to and help to inform activities and action under Component 3 in terms of monitoring, financing, policy and knowledge management improvements.

132. By project close, each of the target riverine landscapes should have spatial plans in place and operational. These plans should be guiding productive and conservation practices across at least 50,000 hectares of riverine ecosystems. This will include helping to inform and shift agriculture, livestock and forestry practices to become more pro-biodiversity. The effectiveness of spatial plans should be actively monitored with lessons learned captured. Capacities should be built to enable government, communities and private stakeholders to effectively implement and financially support spatial plan implementation. FNC staff in particular should have the knowledge and ability to carry-forward project success applying the spatial planning module across additional landscapes so that project impacts are amplified.

Component 2: Demonstration of riverine forest biodiversity conservation practices

Outcome 2: Productive practices in riverine forest ecosystems mainstream BD conservation

Impact Indicators	<p>Hectares of riverine ecosystems inside and outside of Forest Reserves with native species forest cover, including <i>Acacia nilotica</i></p> <p>Forest Reserves: TBD</p> <p>Outside FRs: TBD</p> <p>Target Increase: 10%</p> <p>33 Forest Reserves adopting pro-biodiversity conservation practices and reporting stable or increased revenue generation.</p> <p>40 FNC Forest Reserve managers and staff participating in pro-biodiversity conservation training programs.</p> <p>20,000 agriculturalists, livestock herders, and forest users participating in training programs and adopting ?on-farm? riverine forest biodiversity conservation strategies resulting in stable or increased production values.</p> <p>50% female</p> <p>50% male</p>
Assumptions	<p>Capacity built efficiently and effectively by project</p> <p>Strong government and stakeholder engagement</p> <p>Improved practices adopted.</p>
Lead Executing Agency	Forest National Corporation
Anticipated Budget	<p>GEF: US\$ 983,239</p> <p>Co-Financing: US\$ 10,399,100</p>

Output 2.1 FNC biodiversity conservation training program established

133. The aim of this output will be to enhance the capacity of the FNC to support mainstreaming of biodiversity conservation practices both inside and outside of Forest Reserves. This will particularly focus upon building abilities of the FNC to engage in community outreach and conservation facilitation. Under the existing scenario, the FNC is making attempts to engage smallholder private agriculture, livestock and forest users through use permitting and other functions. FNC also has capacity and knowledge with regards to riverine forest restoration. This includes a long-standing system of nurseries. However, most FNC efforts have to date focused upon issues related to commercial harvest and production of riverine forests. Very little capacity exists within FNC to promote the mainstreaming of riverine forest conservation practices within or beyond Forest Reserve boundaries.

134. The aim will be to assist FNC to improve ability to engage in conservation and ecosystem restoration both within and beyond the boundaries of the Forest Reserves. The training program will build the ability of FNC to mainstream biodiversity conservation principles and practices within their activities and extend this knowledge beyond the boundaries of Forest Reserves.

135. Building the skills required to extend forest restoration and conservation practices beyond the boundaries of Forest Reserves is critical. As noted, many Forest Reserves are now isolated from wetlands and riparian areas. Forest Reserve boundaries were established decades ago when the riverine habitat of the Nile was radically different. Forest Reserves have in some cases become marginal habitat for native tree species dependent upon wetland functionality. Riverine forests are becoming increasingly fragmented. Forests outside of reserves are highly vulnerable to degradation. Little effort is being made to generate and apply innovations to actively conserve and restore riverine forests outside of Forest Reserves.

136. The training program will support the FNC to establish and fund a cohort of extension agents with knowledge regarding conservation innovations and benefits. This cohort will have the capacity to transfer knowledge and awareness to agriculture, livestock and forest users across the target riverine landscapes. Part of the program established with GEF investment will be aimed at targeting extension services within other state agencies, particular those related to agriculture and livestock. The FNC cohort will work with these state agencies to build their capacity to mainstream riverine conservation principles and practices effectively within their extension and outreach programs. This will be linked to activities under Output 2.2 and 2.3 where the project will support the initiation of farmer-forest field schools (FFFS) and assist FFFS participants to demonstrate the ecological, social, and financial benefits of adopting pro-riverine biodiversity conservation practices.

137. The capacity building program will go beyond extension services and build FNC technical capacity to support adoption and monitoring of pro-biodiversity conservation practices. The training program will be designed to assist FNC to expand the impact of their system of nurseries and other regeneration capacities across the productive landscape beyond the borders of the Forest Reserves. This will include providing FNC with training in agro-forestry principles and practices that can be applied both within and beyond the Forest Reserves.

138. The project will build the capacity of FNC agencies across the target landscape to more effectively monitor and assess biodiversity conservation effectiveness. This will include generating and executing curriculum specific to monitoring as well as provisioning FNC with cost-effective monitoring tools, e.g., GPS/GIS and mapping systems. The aim will be to enhance the ability of FNC staff to actively monitor riverine forests and forest ecosystems for biodiversity conservation purposes. The training will cover fundamentals of ecosystem approaches to forest management and conservation with a particular emphasis upon cost-effective approaches to determine the ecosystem services provided by healthy riverine systems

(e.g., wildlife, flood control, fisheries, etc.) and the ability to translate this knowledge into active learning and informed decision-making.

139. The training program will also enhance capacities related to conservation financing. The project will assist FNC to strengthen and diversify their capacity to generate and allocate financing to biodiversity conservation activities both within and beyond the boundaries of Forest Reserves using community-based approaches to incentivize conservation. This will include working with FNC agencies to enhance capacity to quantify ecosystem services value. The project will assist FNC to identify and develop innovative financing tools. The aim will be to help the FNC diversify income generation moving away from purely forest extraction modalities. This may include seeking out opportunities for carbon financing, potential improvement to permitting for forest use and extraction, and strengthening biodiversity-based value chains. At the same time, the project will provide the FNC with technical support to help identify conservation investment priorities and re-orientate budgets to better mainstream biodiversity conservation actions. This may include improvements to licensing, permits, quotas, use agreements and associated monitoring, enforcement and collection oversight. The project will specifically assist the FNC to review and, as required, revise the current umbrella concession with the Sudan Charcoal Producers Association to better mainstream biodiversity conservation concerns.

140. By project close, the FNC offices at each of the target landscapes should have the full capacity to mainstream biodiversity conservation within their own activities. These FNC offices will have the capacity to operationalize outreach and extension programming in concert with key agencies responsible for agriculture, livestock, water and forestry extension services at the landscape level. FNC will have the ability to effectively innovate and incentivize adoption of pro-biodiversity conservation practices, finance these extended conservation efforts, and monitor the effectiveness of conservation programming at the landscape level.

Output 2.2 Riverine ecosystem agriculturalists, herders, and forest users training program established

141. The project will support the development and implementation of Forest Farmer Field Schools across the target landscape. This programming will build upon and enhance the capacities established under Output 2.1. The FFFS programming will be specifically aligned with and supportive of the management and spatial planning improvements generated under Component 1. These efforts will take a landscape scaled approach, inclusive of smallholders and private stakeholders both inside and outside of Forest Reserves.

142. FAO has a long and successful track record of implementing FFFS programming. FAO will support the FNC as well as extension agents from state agencies responsible for livestock and agricultural management improvements to garner and apply best practices from this suite of experience. The aim of the FFFS program will be to support and incentivize livestock, agriculture, and forestry interests to mainstream pro-riverine biodiversity conservation actions within their productive sector activities.

143. The training programs will be designed to assist farmers and livestock producers to identify opportunities to improve productivity and access to forest resources while simultaneously conserving valuable and highly threatened riverine forests. This will include working with stakeholders to identify and capitalize upon alternative income generation approaches designed to enhance conservation of riverine forest ecosystems.

144. The FFFS programs will be designed specifically to address issues of gender. This will include providing support for alternative livelihoods designed to empower women. This will include exclusive training cohorts for women with specific training program designed specifically for women. These programs will be used to engage women so that they have an avenue to meaningfully engage in decision-making, including issues related to landscape planning and management. The programs will be designed to assist women to realize a greater share of income generation opportunity. The FFFS programs for women will also focus upon raising the capacity of women to improve issues of concern related to household incomes, independence, and food security.

145. The program will be based upon FAO's global experience and knowledge implementing such programming. The aim of this output will be to effectively incentivize local communities to engage in forest conservation and restoration beyond the boundaries of Forest Reserves.

146. By project close, FFFS training programs should be fully operational at the landscape level. The project should be engaging at least 20,000 participants through this comprehensive program. Importantly, this will include as noted women specific cohorts with tailored capacity building. These training programs should be effectively engaging stakeholders to build their capacity to innovate, identify, and implement pro-riverine biodiversity conservation practices. The FFFS training program should have developed a comprehensive set of training materials and curriculums that can easily be amplified at the target landscape level and exported to additional riverine landscapes in Sudan. The FFFS should be supported by extension agencies representing the FNC as well as state agencies responsible for livestock, agriculture and forest use outside of Forest Reserve boundaries. The results of the on-going FFFS program and associated curriculum should be linked to the knowledge management and monitoring outputs generated under Component 3.

Output 2.3 Riverine ecosystem conservation and restoration demonstration program operationalized

147. This output will focus upon investing in restoration demonstration programming. Demonstrations will be part of the FFFS programming. Each FFFS cohort will have the benefit of technical support from FNC and other agencies to apply lessons learned. These demonstrations will be informed by and supportive of Component 1 spatial planning and management planning results. The project will take an adaptive management approach. As demonstrations are rolled out, lessons learned will be used to inform and improve spatial and management planning, capacity building, and FFFS training programming. In addition, demonstrations will be closely monitored with lesson learned and captured for amplification through Component 3 knowledge management activities.

148. The project foresees implementing a suite of demonstrations that are designed to strategically target and support the achievement of spatial and management planning objectives. Demonstrations will address each of the drivers of forest degradation. Demonstrations will also take into account issues related to climate change and generate results that support adaptation and resilience improvements. Demonstrations will mainstream pro-biodiversity conservation directly within livestock management, agriculture, and forest use practices. Demonstrations will focus upon contributing to the restoration and conservation of ecosystem functionality and associated services. Investments will be designed to maintain wetlands and riparian habitats as critical areas for biodiversity conservation and riparian forest survival.

149. A number of innovative approaches will be formally designed and costed with technical support from FAO to build the capacities of FNC, associated government agencies, and private stakeholders.

150. Demonstrations will mitigate the environmental impacts of livestock. This will include assisting herder to improve herd quality and profitability by lowering total livestock numbers. Demonstrations will support improved oversight and management of livestock movement to reduce the current issues associated with grazing and inhibited forest restoration and rejuvenation. Opportunities to improve fodder production, particularly as it relates to *Sunt* trees, and shift this towards more sustainable and pro-biodiversity conservation practices will be implemented. Livestock management improvements may also look at value chains and permitting to incentivize pro-conservation practices that encourage the maintenance of ecosystem services while improving profitability.

151. The project will support demonstrations related to mainstreaming biodiversity conservation within forest use practices. This will include working with stakeholders at the landscape level to improve forest management and conservation as it relates to extraction of both fuelwood and building materials. The project will apply lessons learned and innovations from FAO's global experience with community-based forestry designed to sustain livelihoods while reducing biodiversity degradation. The project will explore opportunities for community management designed to increase stability of available resources, rational management, and incomes as incentives to mainstream pro-biodiversity practices within forest use.

152. Alternative livelihood demonstrations will be set in place and demonstrated through the FFFS modules. For instance, there are opportunities for honey production within riverine forests. Honey production which is a high value product that is linked directly to riverine forest conservation. FAO in Sudan has experience with the development of sustainable bee-keeping and setting in place value chains to increase profitability for local producers. In Khartoum and some other Forest Reserves there are opportunities to expand tourism and to generate revenues from tourism that can be reinvested in community development and forest conservation.

153. Sustainable agriculture will be a critical area for demonstrating the financial and ecological benefits of pro-conservation practices. This will include working to establish agro-forestry or 'on-farm' forests as a mechanism to expand and enhance forest habitat and reduce pressures of natural forested areas. FAO Sudan has experience working with several government and academic organizations in terms of improving crop production practices to limit ecological impacts. This includes working to maintain soil fertility as a mechanism to reduce pressure upon riparian and wetland habitats. Additionally, demonstrations will focus upon crop diversification and looking for ways to increase profits and food security using more intensive agriculture reliant upon smaller plots of land. Again, this will reduce expansion pressure upon existing forests and potential forest habitat.

154. Irrigation and water use related to agriculture will be a key area for demonstration. This will include working with stakeholders to identify and implement agricultural technologies designed to reduce water demands and improve water usage so that natural ecological systems can be maintained. This will include working to reduce the blockage and channelization of riverine habitat so that the degradation of riparian and wetland habitat is lessened.

155. The project will demonstrate the benefits of conserving existing forests and reforestation of degraded habitat. Working with FNC's current system of nurseries and expertise, the project will support FFFS cohorts to actively reforest areas both inside and outside of Forest Reserve boundaries. This will specifically include incentivizing the afforestation of

priority habitats identified through Component 1's spatial and management planning prioritization exercise. In addition, opportunities exist to populate marginal habitat with riverine forests. For instance, there is emerging evidence that planting native trees along irrigation canals is viable. This helps to reduce evaporation, provides additional habitat for forest dependent species, and offers opportunities for communities to benefit from additional fuel and timber sources.

156. By project close, a host of demonstrations should be on-going across each of the targeted landscapes. These demonstrations will address the drivers of riverine forest ecosystem degradation and biodiversity loss, including unsustainable agriculture, livestock and forest management practices. The suite of demonstrations should be delivering valuable lessons to inform planning and management improvements at each target landscape. Demonstrations should be providing evidence to private and government stakeholders that pro-biodiversity conservation practices can result in maintained ecosystem services, improved biodiversity conservation, climate change resilience, and improved livelihoods and financial returns. These lessons should be captured and integrated within Component 3's knowledge management efforts to amplify impact. Capacities should exist within the FNC and other relevant agencies to build upon and carry forward project success.

Outcome 3 Informed Decision-making and Sustained Impact

Outcome 3 Informed decision-making results in riverine ecosystem planning, financing, management, and practice that mainstream pro-biodiversity conservation and amplifies results.

Impact Indicators	<p>33 Forest Reserves with rigorous riverine ecosystem monitoring assessing biodiversity conservation effectiveness.</p> <p>50,878 hectares of riverine ecosystems monitored annually reflecting increased and/or stable levels of native forest cover.</p> <p>1,000 persons subscribed to and receiving monthly project updates and electronic newsletters.</p> <p>1,000 monthly users accessing project generated knowledge management portal.</p> <p>20 Forest Reserves outside project target sites on-track to adopt revised pro-biodiversity conservation management plans.</p> <p>33 Forest Reserves with budget lines allocating adequate financing to continue critical interventions post-project including pro-biodiversity conservation practices monitoring and reporting.</p>
Assumptions	<p>Capacity built efficiently and effectively by project</p> <p>Strong government and stakeholder engagement</p> <p>Improved practices adopted.</p>
Lead Executing Agency	Forest National Corporation
Anticipated Budget	<p>GEF: US\$ \$674,833</p> <p>Co-Financing: US\$ 500,000</p>

3.1 Ecosystem-based riverine monitoring and knowledge management program

157. In the existing scenario, there is very limited monitoring of riverine ecosystem health and few pathways to effectively collate and distribute data to inform decision-making. This output will address the current need to generate data and information required to mainstream biodiversity conservation concerns within decision-making processes. The output will target FNC, other relevant government agencies, smallholders and private stakeholders engaged in

agriculture, livestock and forestry management. The output's actions will be designed to assist these stakeholders to more fully and effectively mainstream biodiversity conservation considerations within policies, planning, financing, and productive sector actions.

158. The project will support FNC to design and implement a riverine forest ecosystem and biodiversity conservation monitoring strategy. This will build upon and inform the assessment work completed under Component 1. The implemented monitoring strategy will also help to inform progress and adaptation of the improved spatial and management plans implemented under Component 1. The monitoring strategy will incorporate issues related to Component 2, including monitoring and tracking of sustainable livelihood improvements and conservation advancements linked to pro-biodiversity conservation production practices demonstrated through the FNC and FFFS programming.

159. The monitoring strategy will be accompanied by capacity development support. FAO will assist FNC and other relevant stakeholders (e.g., HECNR) to design the strategy and to build the technical capacities required for implementation. The engagement of smallholders and private stakeholders in the monitoring work will be facilitated through the field schools implemented under Component 2. This will include provisioning of FNC and relevant government agencies with equipment required to conduct rigorous biodiversity conservation monitoring, including the generation of comparable data sets that will inform improved riverine forest management at landscape levels. The monitoring system set in place will 'cast the net' wide to make certain social and economic issues are considered relevant to achieving intended biodiversity conservation results. The monitoring system will also look at issues such as land use and dynamic changes to Nile flows that will likely impact biodiversity conservation success.

160. The project's own monitoring and evaluation process, including PIR, MTR, and FRs, will be used to both build communication and engagement, but will also be linked to and will inform the monitoring process at the site level. This will include providing inputs regarding project progress, potentially required adaptive measures, and recommendations regarding specific biodiversity conservation issues that should be addressed through the monitoring program.

161. The monitoring program will be linked to an improved knowledge management and awareness system. This should include making certain that lessons learned are well-captured in order to incentivize amplification and sustained action. The project will generate a communications strategy within the first six months of implementation. This communication strategy will clearly detail the best approaches to generating and implementing a comprehensive knowledge management program. The communication strategy will detail how the project will establish a web-based platform and other electronic media approaches (e.g., social media) to distribute information. The communication strategy will outline target audiences (e.g., key stakeholders) and how the project will make certain that the project's communication materials are effectively reaching, engaging, and motivating these audiences. In particular, the implemented communication strategy will make certain that relevant government agencies and private stakeholders are regularly updated regarding project actions and results. The communication strategy will be linked directly with and informed by actions taken under each component.

162. The project will work with stakeholders at national and state levels to make certain all relevant agencies are aware of project activities, engaged in these activities, and prepared to absorb and amplify project success. This will include organizing annual reporting workshops at each target landscape. These progress reporting workshops will serve as an opportunity for relevant stakeholders to be informed and provide input to project efforts and actions. As noted,

the communication strategy will also provide relevant stakeholders with monthly electronic updates regarding project progress and success.

163. A major emphasis of this output will be to set the stage for FNC along with HCENR to spearhead improvements to spatial and management covering the entire regime of Forest Reserves and associated landscapes. The project under this output will develop training materials and templates for this purpose. In addition, the project will support the capture and collation of FFFS training materials and best practices so that these efforts may be amplified to support mainstreaming. This package of templates and training materials will be used by FNC and HCENR to amplify project results. The project will assist FNC and HCENR to establish targets for delivery of this post-project impact. These targets and accompanying training and templates will be considered during the project's final review. The specific purposes will be to make certain project success at each target site is being captured and that the Government of Sudan is fully capacitated to strategically amplify biodiversity conservation mainstreaming efforts at a meaningful scale beyond the project's immediate area of concern.

164. By project close, each of the project's target landscapes should benefit from a comprehensive biodiversity conservation monitoring program. This program should be supported by capacitated technical experts from relevant agencies. FFFS participants should be assisting to feed information into the data collection system. This will include making certain that government agencies in particular have the equipment, technical skills and government financing required to sustain a rigorous monitoring program post-project. All of these stakeholders should be receiving information from the system and be able to apply and integrate knowledge learned within their riverine forest related activities. This includes improving the mainstreaming of biodiversity conservation within productive sectors. Importantly, the monitoring and knowledge management system should be informing adaptive spatial and management planning and improving the expansion and uptake of pro-biodiversity productive practices.

3.2 Improved institutional frameworks sustain and amplify project impacts

165. Under this output, the project will assist the Government of Sudan to set in place the policy, financial, and institutional arrangements required to support continuation and amplification of successful project activities post-GEF investment.

166. The project will provide FNC with technical assistance to enable the identification, design, and help initiate financial approaches to support and incentivize riverine ecosystem conservation and particularly Sunt (*Acacia nilotic*) forests. This will include assisting the Government of Sudan to identify and generate regulatory policies (e.g., user fees, land trades, land use restrictions, water harvest and irrigation scheme improvements, etc.) designed to directly tackle the financial and regulatory approaches that currently incentivize encroachment, the loss of ecosystem services, and the degradation of biodiversity values. The project will provide the Government with the technical support required to make certain any changes that need to be made to regulatory or institutional structures in order to maintain project success are made prior to close. These efforts will be linked to Component 1 through improved spatial planning and Outcome 2 demonstrations to make certain both components have the regulatory and financial support required to advance.

167. By project close, all parties should be well-positioned to advance and amplify project success. This will be achieved in part through the design of a hand-over strategy at least six months prior to project close. This handover strategy will identify requirements to continue and amplify project success. The handover strategy implementation will be facilitated by the FNC,

the HCENR as well as the Project Steering Committee. The comprehensive project assessment and handover strategy will be evaluated during the project's final review mission to make certain all necessary actions and agreements are in place to advance project efforts post-GEF investment.

H. Alignment with GEF focal area and/or Impact Program strategies

168. The proposed project is aligned with the Biodiversity Focal Area under the GEF-7 Programming Directions, and specifically with Objective 1-1 "Mainstream biodiversity across sectors as well as landscapes and seascapes." Following GEF-7 directions, the project will target the productive sectors of agriculture, livestock, and forestry. The project's suite of activities and impact indicators each align directly with GEF-7 priorities.

169. The project will under Component 1 emplace spatial and land-use planning to ensure that land and resource use is appropriately situated to maximize production without undermining or degrading biodiversity.

170. Throughout the project and specifically under Component 2, the project will demonstrate improved and altered production practices to be more biodiversity-positive again with a focus upon agriculture, livestock management and forestry. The project's aim is to incentivize actors to change current practices that are degrading riverine ecosystem biodiversity.

171. Under Component 3 and integrated throughout the project, the concepts of changing economic dynamics and frameworks to increase positive financial incentives to shift to biodiversity-positive land and resource use are fully integrated. This includes making certain that resource use remains productive while avoiding biodiversity degradation. Project impacts will be made sustainable through policy and financing frameworks that encourage amplification of best practices.

I. Incremental/additional cost reasoning and expected contributions from the baseline, the GEF TF, LDCF, SCCF, and co-financing

172. If the baseline situation persists, Sudan riverine ecosystems and associated globally significant biodiversity will likely continue to experience increased levels of degradation as described. As detailed in the baseline description, Sudan has a reasonable foundation upon which the project will build. The country has several technically-qualified institutions in place and consistent aspirations to pursue biodiversity conservation objectives. This baseline along with several international donor investments will be aligned with the GEF investment. However, Sudan has struggled to make solid progress with regards to conserving riverine habitat. This has been particularly challenging across the productive landscapes where unsustainable agriculture, livestock and forestry management practices hinder advances. These challenges will be addressed through the catalytic investment of GEF funds

173. The incrementality of GEF funds will be used to assist Sudan to enhance capacities required to address the root causes riverine forest loss. An advantage of GEF programming is the ability to incentivize coordination between a variety of stakeholders. This is very much required in Sudan where decision-making and associated development investments are not always well-aligned between FNC (forest reserves) and the surrounding landscapes. With GEF investment, Sudan will have a working model for how best to generate strategic land use planning focused upon incentivizing pro-biodiversity action while providing parameters to help guide and coordinate investment and results.

174. The incremental financing supplied by GEF will provide access to sustained technical training and exposure to best international practices. Under the baseline, Sudan does not benefit from a coordinated approach to providing capacity building for rural producers engaged in forestry, livestock and agricultural production. There are no strategic programs at the landscape level to help producers identify and adopt improved practices.

175. In the existing scenario, the Government of Sudan does not have a consolidated planning, management, demonstration and monitoring program to again address riverine conservation issues. There is not a basic monitoring program and knowledge management platform in place to inform decision-making. The GEF investment will provide the technical support and capacity to help re-direct this existing baseline to help stakeholders with the information and knowledge required to inform decision-making in a structured manner is directed towards establishing and delivering GEBs.

176. Investments considered as co-financing:

Co-Financing Source	Component 1	Component 2	Component 3	PMC	Total Co-Financing
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<p>FNC Implemented projects: USD 2,000,000 FNC executed projects and regular budget (EU/AFD funded ACACIA (Arabic Gum Value Chain in Sudan) Support SSGASS Phase two Project); USD 4,500,000 FNC budget over 2022-2025 dedicated to the riverine forest reserves (restauration, demarcation, surveying, protection, mapping, etc.); and FNC's in kind contributions through technical and logistical backstopping by HQ & Field Offices in Dongola, Wad Manadi, Haj Abdalla and Sinait Rufaa</p>	3,000,000	3,000,000	500,000	400,000	6,900,000
<p>SECS in kind contributions through technical and logistical backstopping.</p>	0	0	0	200,000	200,000

FAO implemented projects: USD 5,599,100 GCF funded GUMS project (Restoration of gum agroforestry systems in neighboring Kordofan States); Turkey/EU funded BRIDGES Project in support of Africa's Great Green Wall, and TCP Projects (over the period 2022-2024) and; FAO's in-kind contributions through technical and logistical backstopping.	0	7,399,100	0	200,000	7,599,100.00
Totals	3,000,000	10,399,100	500,000	800,000	14,699,100.00

J. Global environmental benefits (GEFTF) and/or adaptation benefits (LDCE/SCCF)

177. The project will lead to the achievement of the following GEBs:

Biodiversity Conservation Benefits
<p>? 50,878 ha of riverine forest ecosystems managed to benefit biodiversity and maintain productive value</p> <p>? 20,000 private producers (10,000 female/10,000 male) reporting stable or improved standard of living resulting from BD conservation mainstreaming</p>

178. The project will lead to the achievement of the Aichi Targets. The project will support Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society and each of the associated targets.

Target	Anticipated Contributions
<p>Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p> <p>-</p>	<p>The project will assist rural communities to come to a much greater understanding of biodiversity value through awareness building, including mainstreaming of biodiversity concerns within productive sectors through participatory spatial planning.</p>
<p>Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.</p> <p>-</p>	<p>The project will pay particular attention to mainstreaming biodiversity concerns with sectoral planning and policies related to development and poverty reduction.</p>
<p>Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.</p>	<p>This project is designed to deliver GEF-7 mainstreaming objectives, including elimination of incentives for biodiversity negative actions.</p>
<p>Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p> <p>-</p>	<p>The project's efforts with regards to spatial planning, capacity building, and policy improvements will result in contributions to this target.</p>
<p>Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</p>	<p>Project effort is designed to reduce loss of natural habitats, including globally significant forests currently under threat by productive practices.</p>

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	Efforts are designed specifically to incentivize sustainable management of agriculture to ensure biodiversity conservation.
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K. Innovativeness, sustainability, potential for scaling up and capacity development ?

179. **Innovation:** This project represents a series of 'firsts' for Sudan. The project will take a landscape approach to riverine ecosystem conservation and management. This approach will mainstream conservation across three primary productive sectors: agriculture, livestock and forestry. The approach will integrate conservation management inclusive of Forest Reserves and surrounding landscapes. The project will support the Sudan to innovate approaches that benefit from international experience while tailoring these to the specific context and requirements for riverine biodiversity conservation along the river Nile. The project will innovate adaptive management approaches related to spatial and management planning, demonstration of productive practices, and the establishment of a comprehensive monitoring and knowledge management system designed to support informed decision-making.

180. **Sustainability:** The project will ensure sustainability through capacity building and mainstreaming of best practices within government offices, community institutions, and the private sector. This includes the completion of spatial plans which will be legally binding. Financial sustainability is a challenge under the current situation. The project addresses this challenge by building the capacity of private enterprise to reach a level of profitability where improved value chains, investment returns, and market access generate financial incentives to engage in conservation-oriented production and sustain conservation-oriented production. In cases where the government is required to play a larger role in regulating and monitoring project emplaced activity, the project will make allowances for payment structures such as access fees, licenses and permits. These small fees will be reinvested to make certain finances available to support government oversight and monitoring. In addition, the project has a specific hand-over plan integrated within the design to identify and address sustainability constraints well prior to project close.

181. **Up-Scaling:** The project is specifically designed to incorporate and mobilize up-scaling. At each of the target sites, the project will generate replicable models and demonstrations for improved management and amplification. Although targeting specific landscapes, a core principle embedded within the project design is making certain that track record exists to facilitate upscale of success across additional landscapes beyond the immediate demonstration sites. Central to this effort will be the provisioning of knowledge management, lesson capture, and monitoring to show the ecological, social, and economic benefits of adopting improved practices as a way to incentivize upscale. As noted within Component 3, lessons learned will be systematically captured. However, the project moves beyond this simple statement by requiring that all models be accompanied by templates and curriculums that will be made available electronically and in print format. These templates and curriculums will generate a body of knowledge relevant to spatial and management planning, demonstration, capacity building and monitoring. This record of success and operation will serve as a manual to guide and inform up-scale and amplification of impact. It is envisioned that as progress is made by government and private stakeholders over time with mainstreaming of biodiversity within productive practices that this body of knowledge will grow in sophistication to increase impact, effectiveness and upscale. Once project successes are in place and well proven through monitoring and evaluation, upscaling will be further advanced through federal and state level capacities built

through project effort. This is one reason that the project takes a 'trainer of trainers' approach throughout many of its component work. This will be facilitated by capacity building within the FNC and HCENR so that these offices are able to build capacity and awareness across the realm of Forest Reserves and associated productive landscapes. Through the FAO regional and global networks and Sudan being part of various regional initiatives, the results of the project will be disseminated and applied in other regions.

182. **Competencies and Lessons Applied:** As noted, FAO's has significant experience with successful project design and implementation of riverine and forest conservation in the Sudan and internationally. These competencies and lessons learned are reflected in the project design and will be applied to increase project effectiveness throughout implementation through the provision of technical support services drawing upon FAO's global cohort of expertise.

183. **Capacity Development:** As shown throughout the project's design structure, this investment is very much directed towards enhancing riverine ecosystem conservation capacity for government agencies and private stakeholders. Capacity building is integrated within each of the project's components. Under Component 1, capacity will be enhanced to design and implement management and spatial planning that mainstreams biodiversity conservation concerns. Under Component 2, capacity will be enhanced through extension training programs and the establishment of FFFS programming. Under Component 3, the project will build regulatory, financial and knowledge management capacity to fully support the sustainability and amplification of project success. As noted, the project will generate a comprehensive assessment and hand-over strategy that will be completed well-prior to the final project review to ensure capacity exists to advance and sustain biodiversity mainstreaming results.

L. Summary of changes in alignment with the project design with the original PIF

Summary of Alternation	Justification
Project Framework	The project framework was adjusted to be more practical and refined. The basic framework was not altered with similar components and outcomes. This was done to focus effort upon identified barriers, facilitate successful implementation and help make certain desired impact targets are achieved.
Indicators	Indicators were refined and detailed based upon PPG findings.
Co-Financing	During the PPG, additional sources of co-financing were identified and reflected.

Risks	The risks were reviewed and enhanced. This includes more emphasis upon environmental risks such as climate change. The project's risk mitigation now integrates Covid-19 concerns.
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[4] <https://www4.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/Sudan%20NAP.pdf>

[5] https://inis.iaea.org/collection/NCLCollectionStore/_Public/46/045/46045254.pdf

[6] https://www.researchgate.net/publication/280533817_Assessment_of_air_pollution_effects_in_the_subjects_of_Khartoum_industrial_area_Sudan_via_cytological_interpretations

[7] <https://link.springer.com/article/10.1007/s100649900021>

[8] <http://www.diva-portal.org/smash/get/diva2:16994/FULLTEXT01>

[9] <https://reliefweb.int/report/sudan/sudan-floods-prompt-state-emergency-khartoum-state-flash-update-no-5-31-august-2020>

[10] <https://www4.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/Sudan%20NAP.pdf>

[11] Gaafar Abdalla 2011. Forest plantation and woodlots in Sudan

[12] F. and Ong, C. 2006. Lessons of eastern Africa's unsustainable charcoal business.

[13] <https://climateknowledgeportal.worldbank.org/country/sudan/vulnerability>

[14] Yousif, Tawhida. (2014). The Role of Khartoum Sunt Forest Reserve (Riparian Forest) in Climate Modification of Khartoum ? Sudan. JOURNAL OF NATURAL RESOURCES & ENVIRONMENTAL STUDIES. <http://researchpub.org/journal/jonares/number/vol2-no1/vol2-no1-3.pdf>.

[15] Mohamed, N.A.H., Bannari, A., Fadul, H.M. and Zakieldeen, S. (2016) Ecological Zones Degradation Analysis in Central Sudan during a Half Century Using Remote Sensing and GIS. Advances in Remote Sensing , 5, 355-371. <http://dx.doi.org/10.4236/ars.2016.54025>

[16] <http://www.fao.org/forestry/14184-0f7db07a76b05f7f6fcd714d97c3a7b7.pdf>

[17] <http://www.fao.org/forestry/14184-0f7db07a76b05f7f6fcd714d97c3a7b7.pdf>

[18] Abdel Magid, T.D and Sharif, A.M. 2018. A review of Sudan's National Forestry Policy and Strategy: for developing IGAD Regional Forestry Policy and Strategy- National Status Report, Sudan Submitted to IGAD/FAO, TCP/SFE/3605 project

1b. Project Map and Coordinates

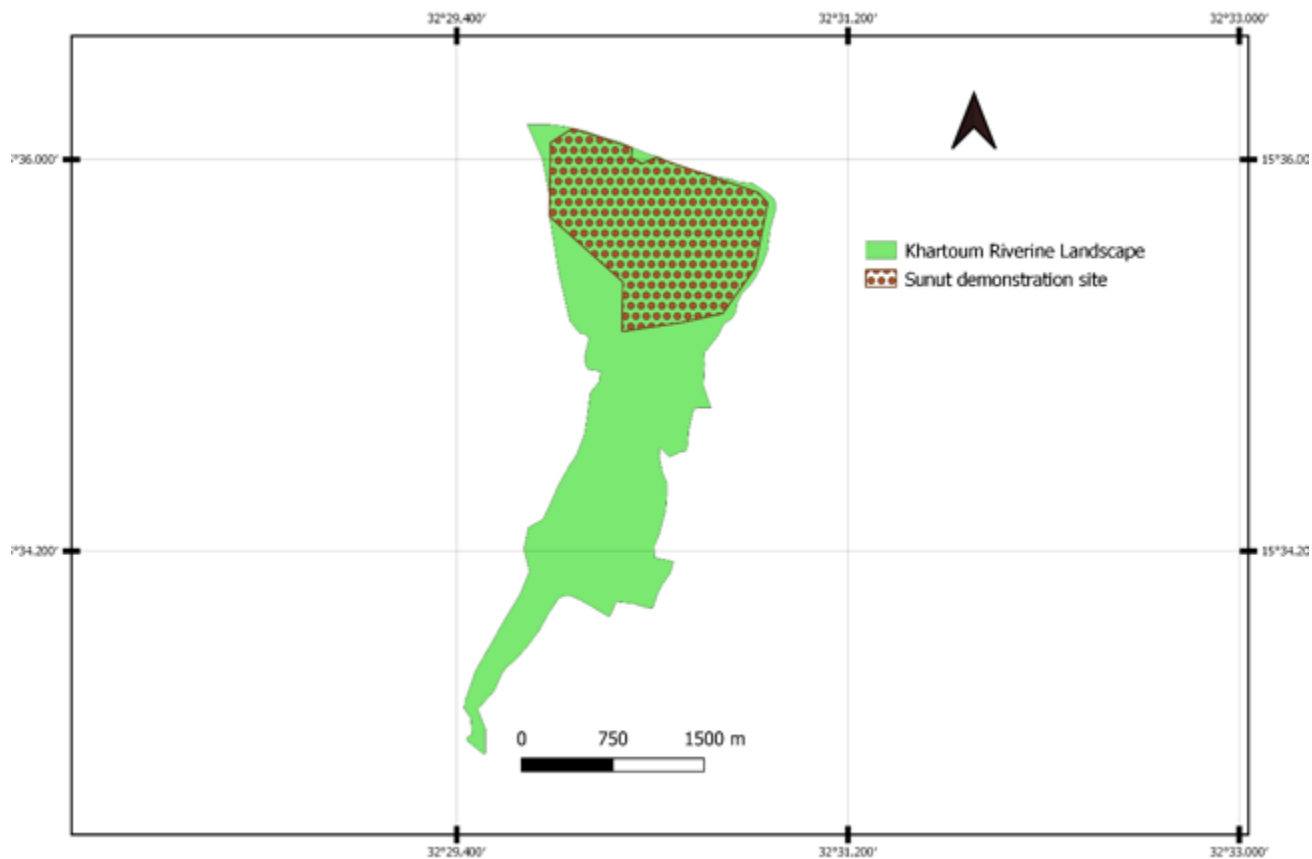
Please provide geo-referenced information and map where the project interventions will take place.

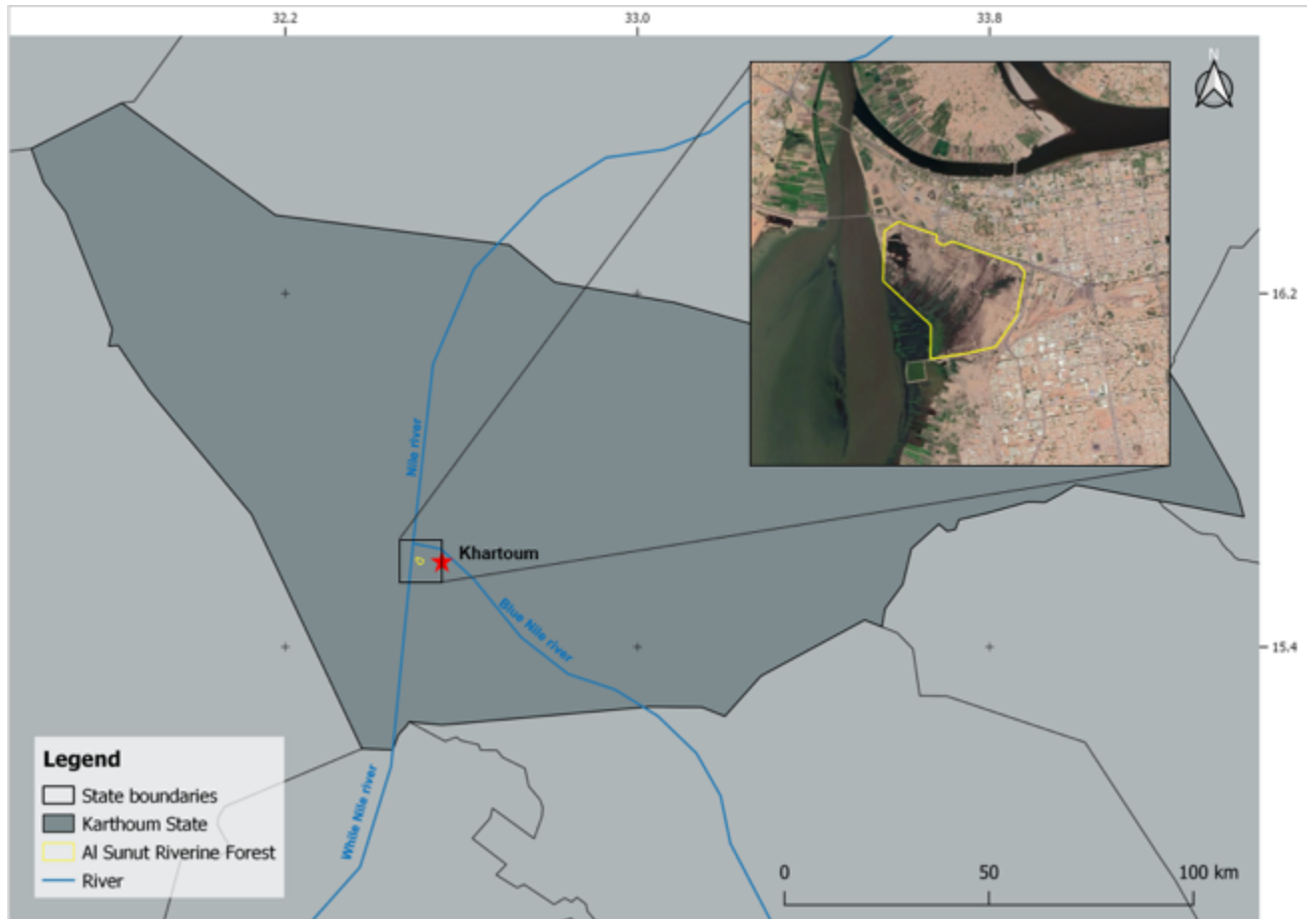
1.b Project Map and Geo-Coordinates.

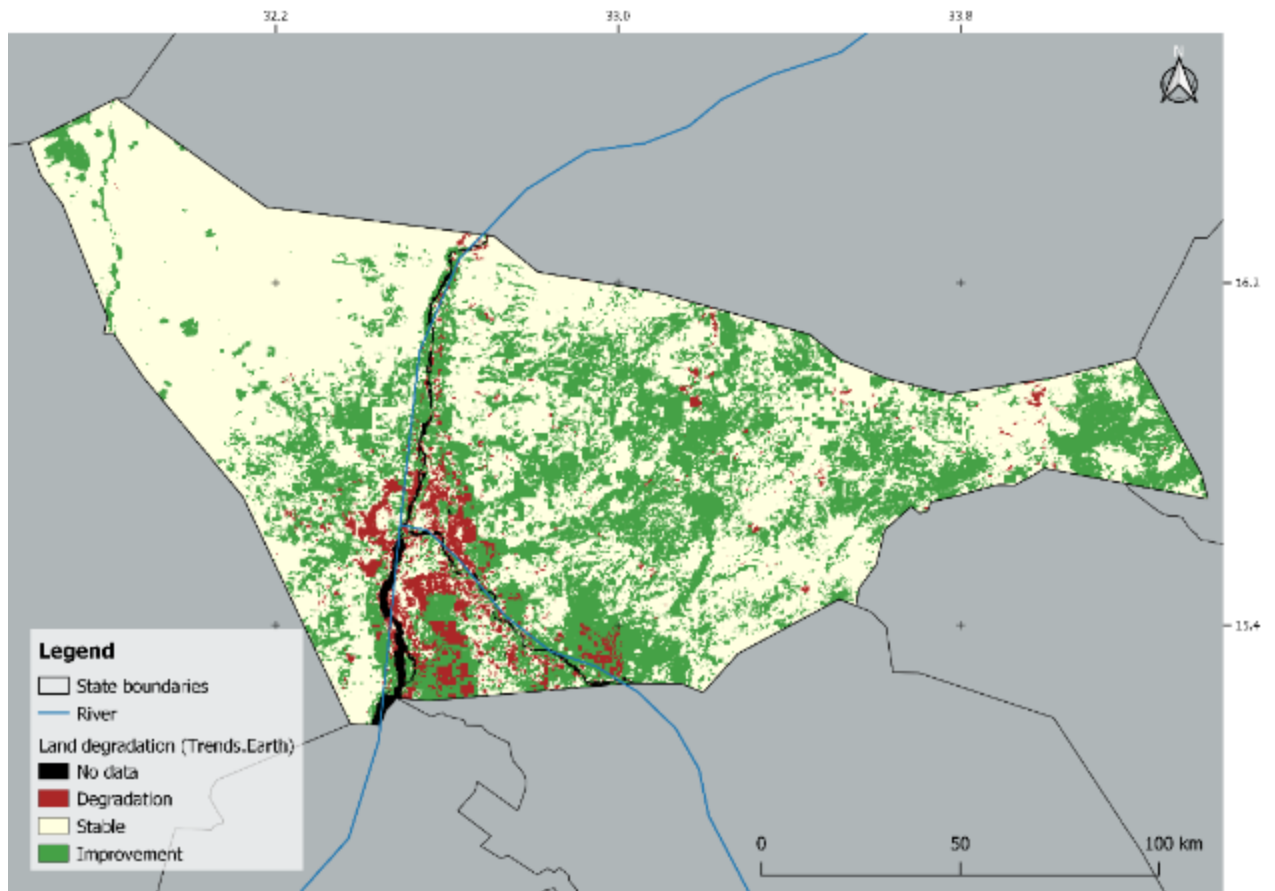
Khartoum

Khartoum: Forest Reserve Location			
Riverine Forests	Easting	Northing	Area (Ha)
Sunut Forest	32,504,158	15,596,217	194.67
Total			194.67



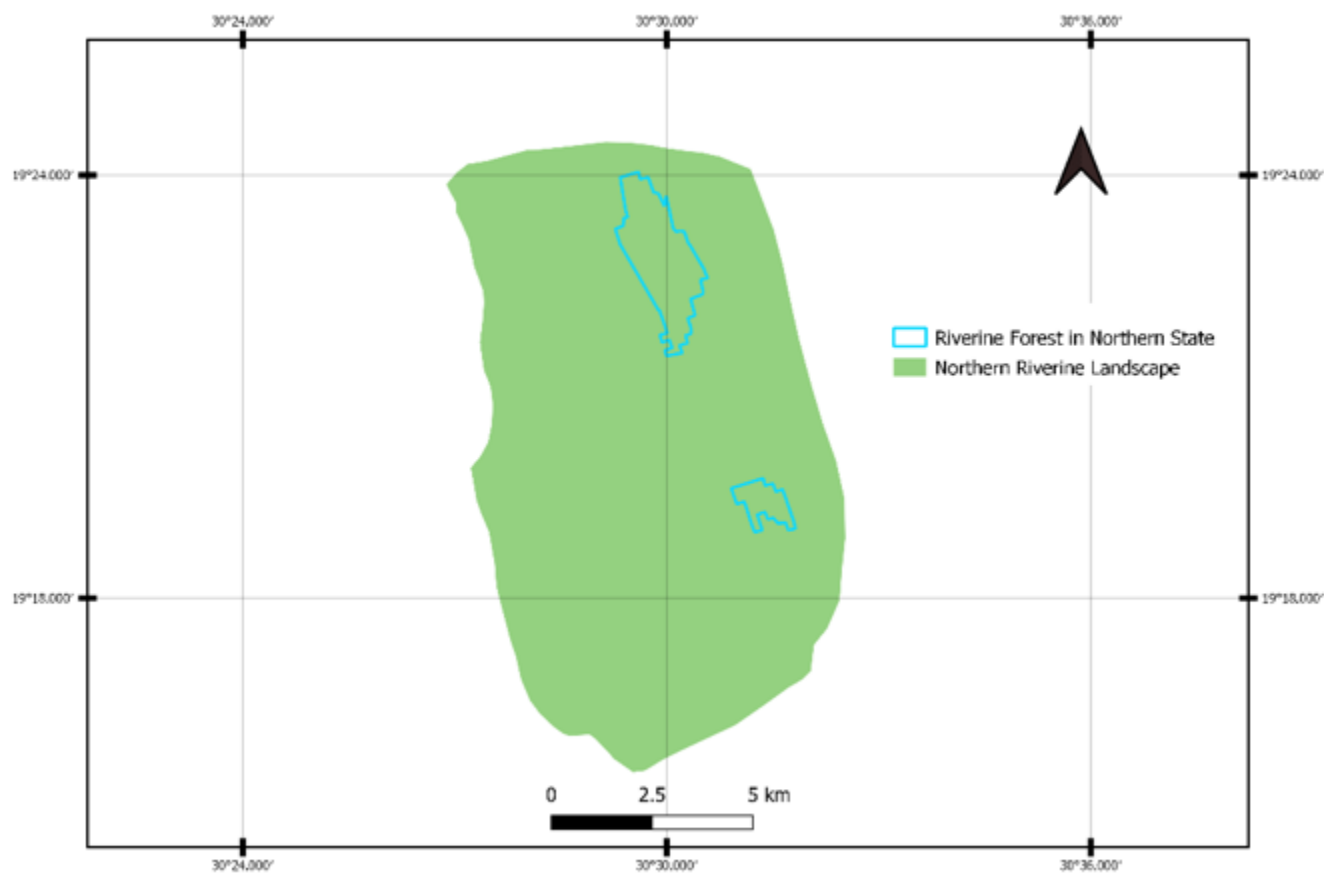




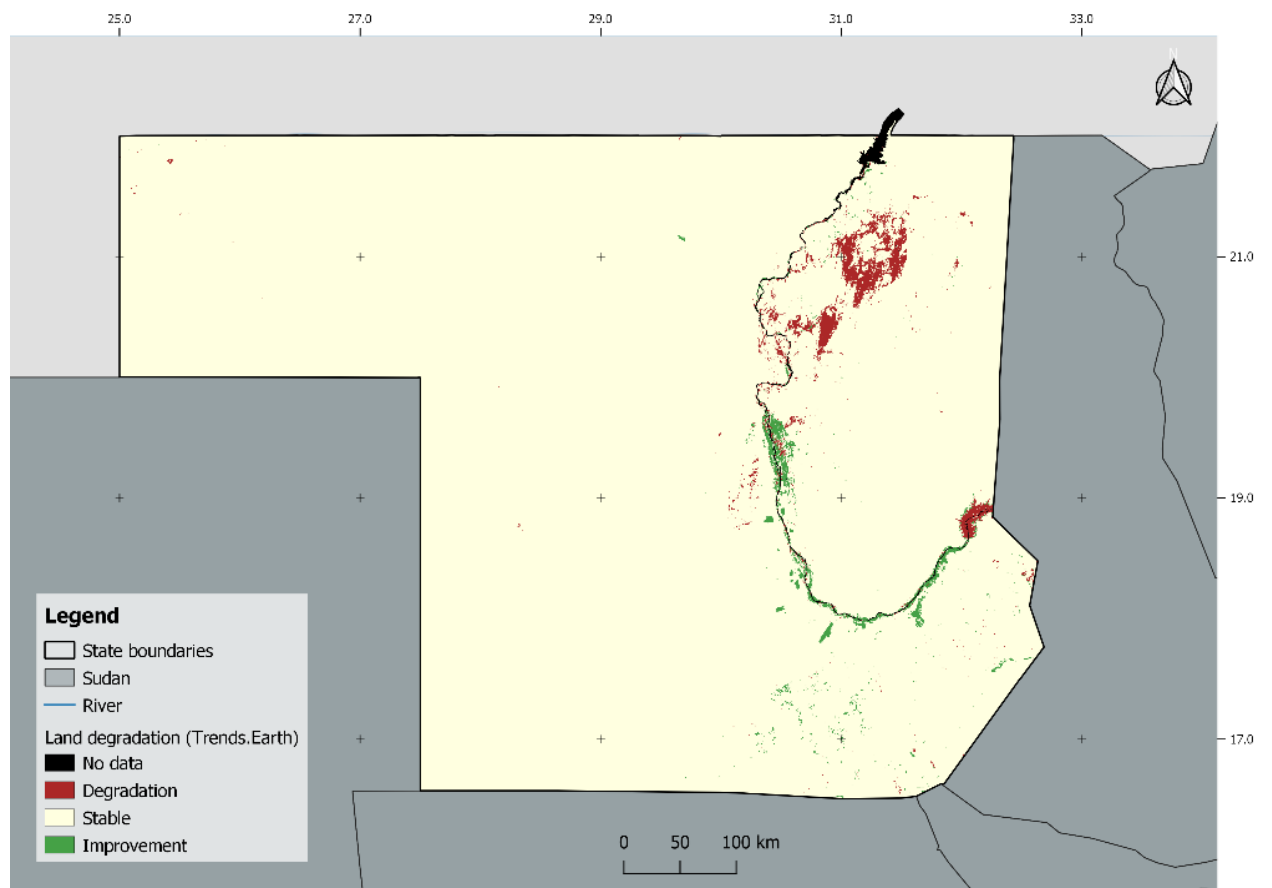


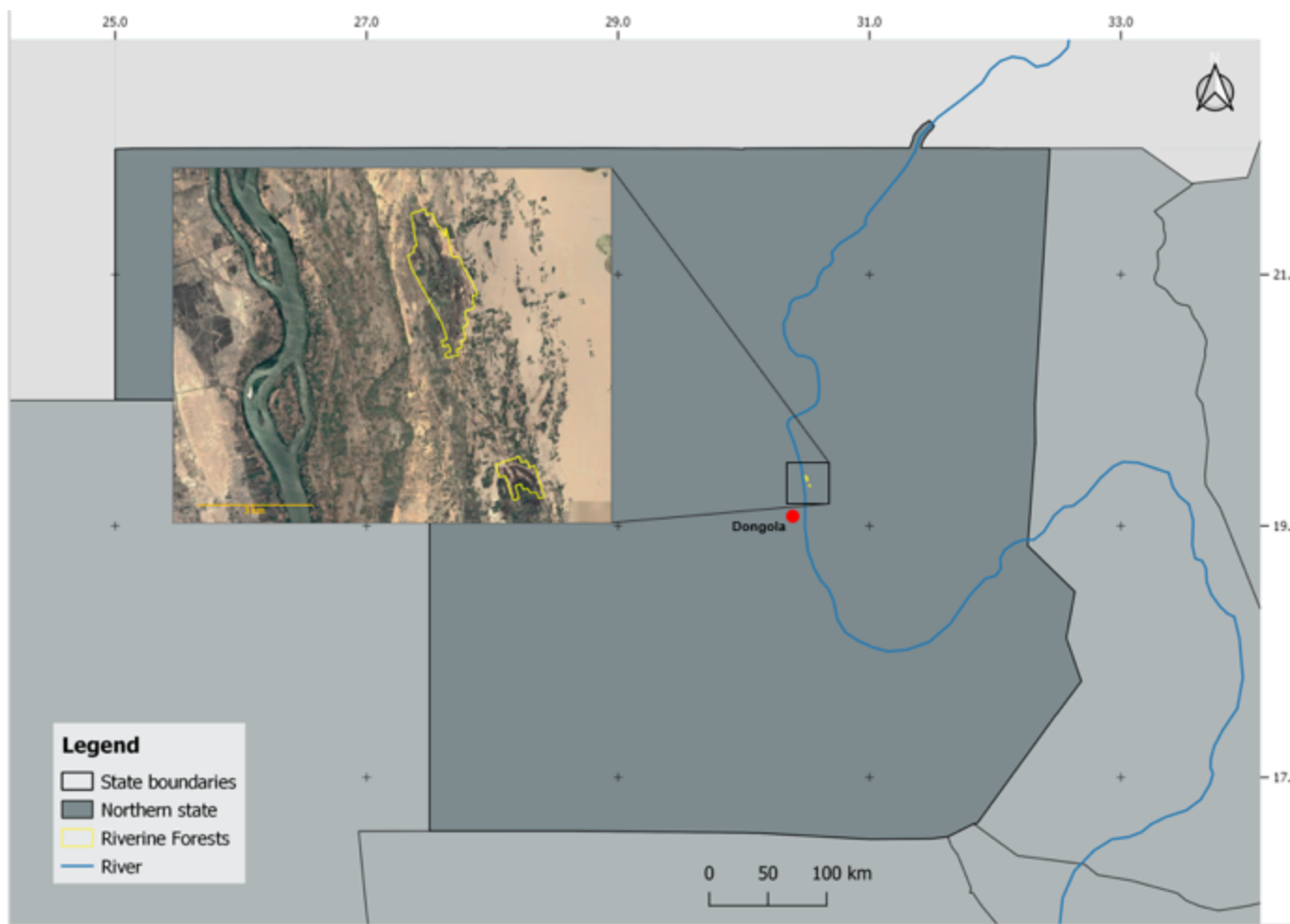
Northern State

Riverine Forests	Easting	Northing	Area (Ha)
Kodroka	30,500,428	19,375,839	521.42
Birkat elMlook	30,522,861	19,322,529	116.49







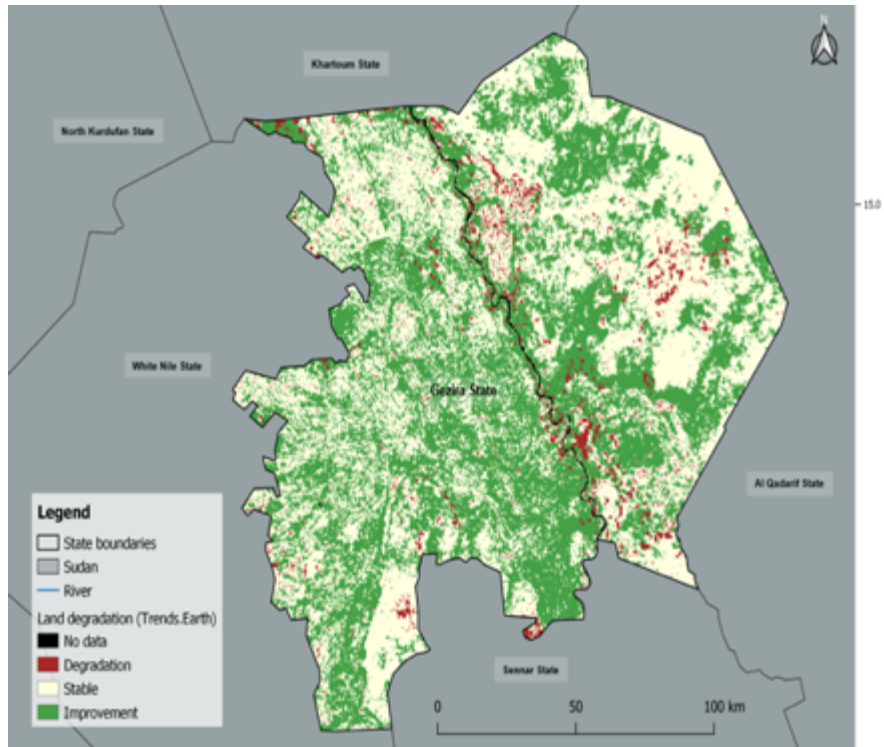


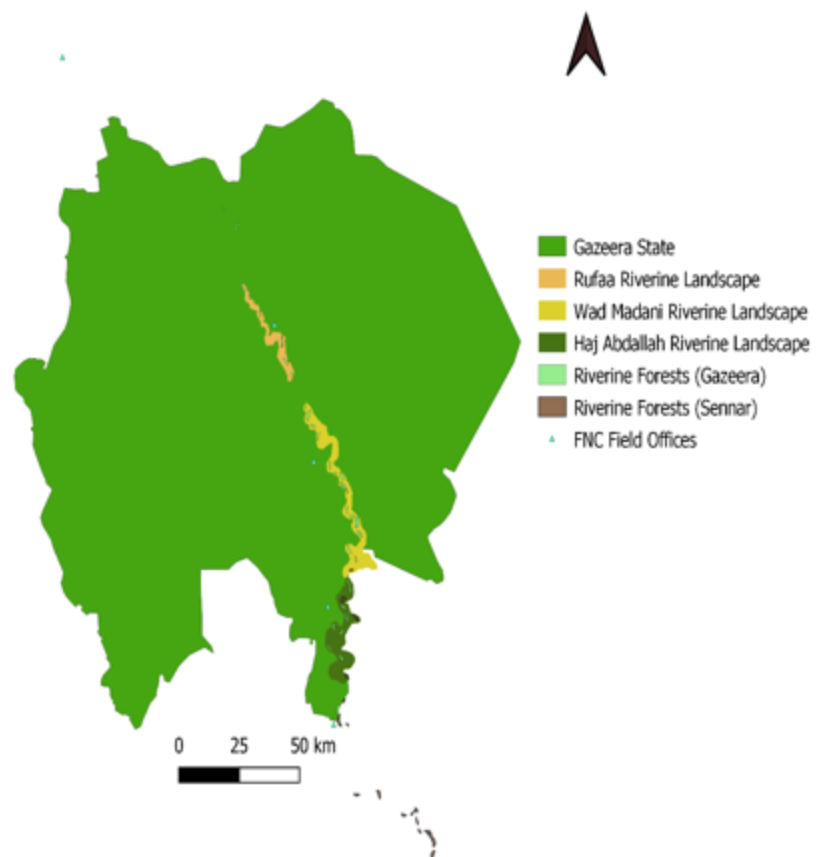
Gezira State

Gezira: Forest Reserves				
Reserves		Easting	Northing	Area (Ha)
1	Gandal	33,600,148.00	13,771,841.00	162.03
2	Daim El aamara	33,583,100.00	13,623,580.00	184.94
3	Wad el Hadad	33,549,010.00	13,807,320.00	160.89

4	Daloat	33,409,160.00	14,634,530.00	107.65
5	Wad aashaib	33,148,460.00	15,135,644.00	44.02
6	El Matama	33,199,190.00	15,082,725.00	148.69
7	El sinait Rufaa	33,373,105.00	14,736,222.00	146.68
8	El Gosaira	33,640,668.00	14,201,903.00	172.71
9	El aafna	33,624,570.00	14,215,000.00	171.05
10	Kardgaili	33,555,263.00	14,359,572.00	132.06
11	Sabie Deelaib	33,635,190.00	13,981,382.00	256.42
12	El Dinaigeila	33,610,911.00	13,923,495.00	142.37
13	Khor Limon	33,571,650.00	13,865,110.00	203.24
14	Elhabaicka	33,384,623.00	14,673,051.00	160.75
15	Hantoub	33,509,199.00	14,446,404.00	133.73
16	El sinait Haj Abdalla	33,655,102.00	14,072,373.00	122.48
17	Wad el Majzoub	33,492,150.00	14,476,216.00	141.99
18	Koki	33,660,404.00	14,184,360.00	369.56
19	Khor El Matarfa	33,630,423.00	14,098,224.00	188.22
20	Gofa	33,671,112.00	14,150,810.00	175.99

21	Fadasi	33,463,543.00	14,532,079.00	48.31
22	Um Sunut	33,574,006.00	14,331,854.00	99.24
23	El bioda	33,247,506.00	14,866,916.00	80.33
24	Banat Garb	33,603,185.00	13,851,679.00	145.17
25	El aak	33,289,324.00	14,816,821.00	95.94
26	El Talbab	33,227,359.00	14,889,297.00	128.10
27	Suntobar	33,621,237.00	13,895,896.00	153.50
28	El Danagla	33,602,828.00	14,322,504.00	279.51
29	El Kab	33,605,935.00	14,294,102.00	336.25
30	Bankio Forest	33,475,131.00	14,510,071.00	353.65
Total Area				5,045.47



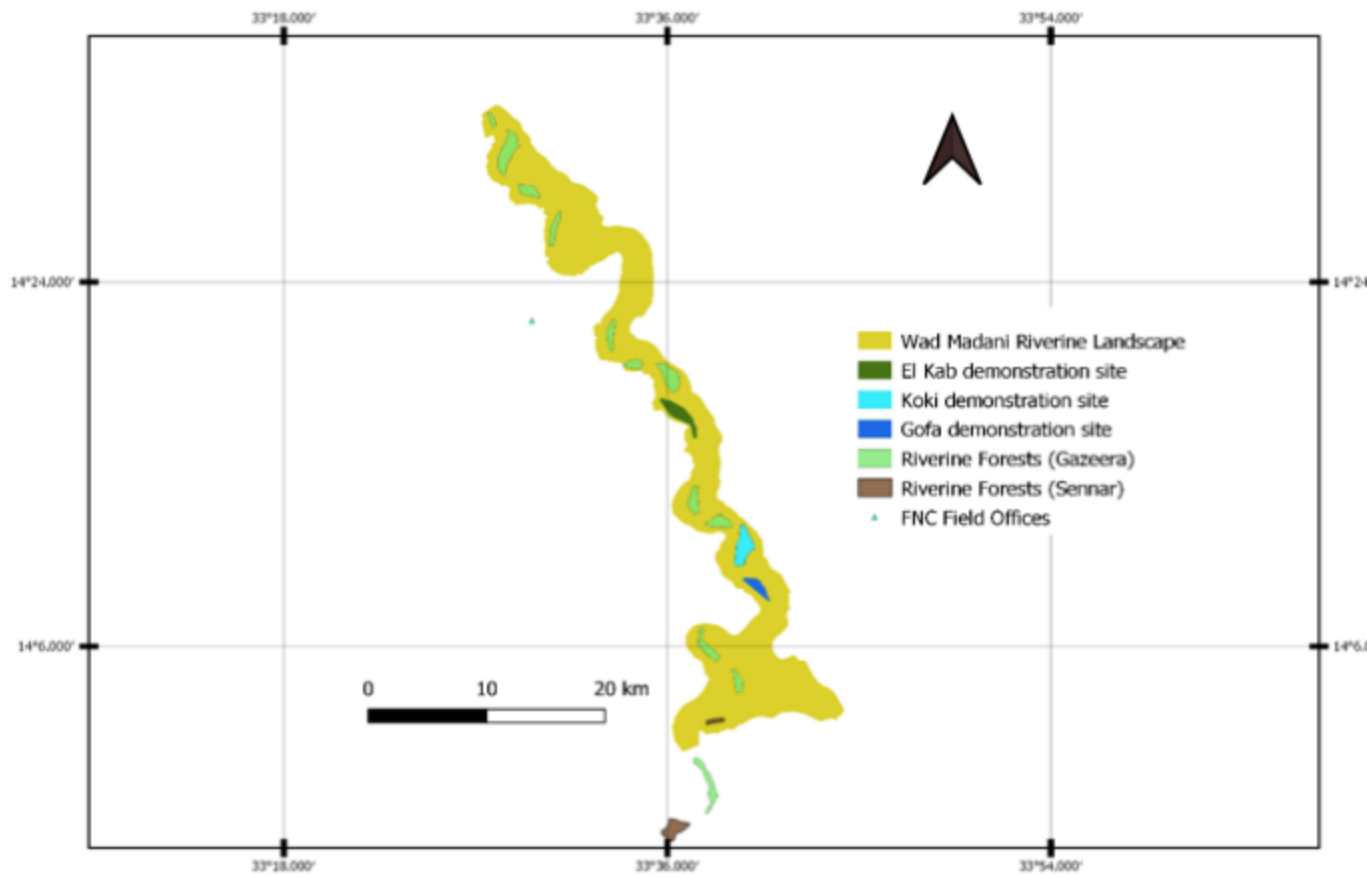


El Sinait Rufaa (Gezira)

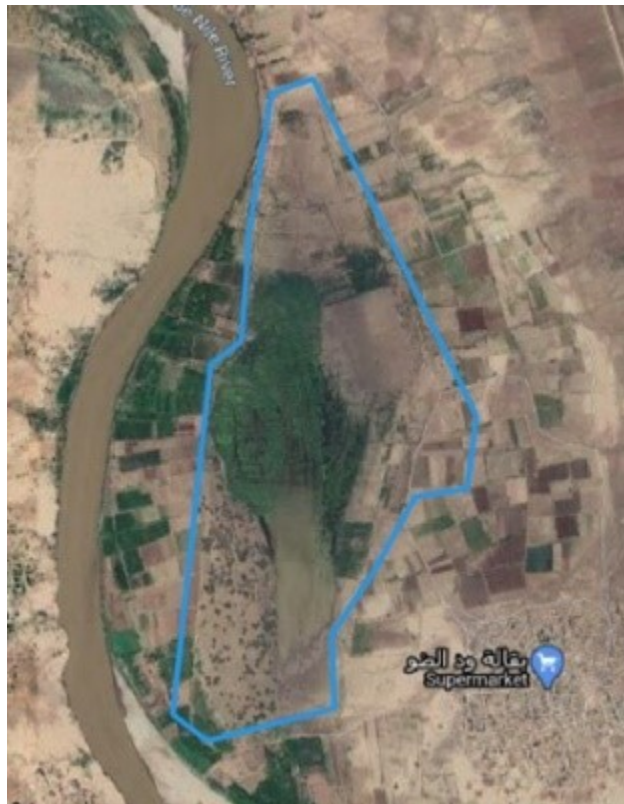


Wad Madani (Gezira)





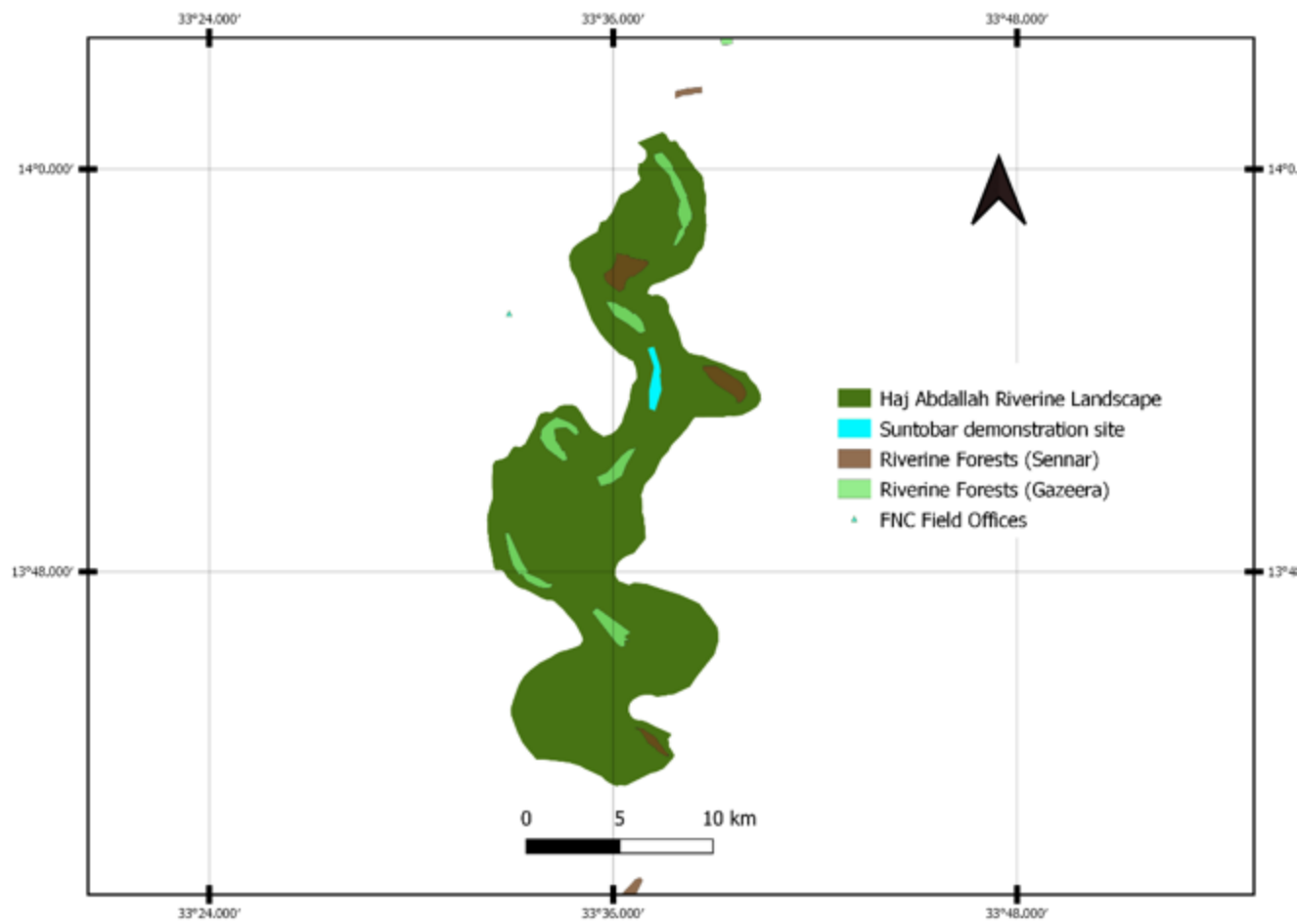
El Kab, Koki, and Gofa (Gezira)





Haj Abdallah (Gezira)





Soutbar (Gezira)



1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities Yes

If none of the above, please explain why:

Stakeholder Engagement During the PPG

1. For more details, please visit the Project Document annex.
2. The stakeholder engagement process during the PPG Phase included: National level bilateral meetings; Inception workshop; State level consultations; Household survey using an adapted questionnaire, and National validation workshop. More than one-hundred stakeholders participated in these different engagements. For more details, please visit the Project Document annex.
3. The project design process was informed by extensive cross-sectoral consultations involving all the categories of stakeholders concerned by the riverine forest ecosystems in Sudan. The project engaged these stakeholders in various ways since January 2020.
4. Fieldwork investigations were conducted despite COVID-19 related limitations. The PPG team made huge efforts to visit the targeted riverine landscapes in Gezira, Khartoum, and Northern States and proceed with series of meetings, focus group discussions and site visits.
5. A household survey was conducted in December 2020 - January 2021 despite COVID-19 challenges using tailored questionnaires and covering a sample of 235 households located in 7 villages within the target riverine landscape in Gezira State, these are namely Beryab, Hillat, Abaas, Salama, Somtobar, Synga and Wadrahom.

6. ICTs were used through virtual technical meetings and workshops to brainstorm with key resource persons representing different stakeholders and gather tailored inputs whenever needed.

7. Special attention was given to women and vulnerable social groups such as youth, which allowed the project to capture valuable contributions during the Household survey and focus groups discussions to design interventions for the empowerment of rural women and youth as indicated in details in the Gender Mainstreaming Strategy and Action Plan report annexed to the Project Document.

8. Furthermore, as part of the data analysis process, a clinic approach was used to identify any disgruntled actors and possibly opposing stakeholders who could potentially disrupt the project, in order to address their concerns and ensure their full engagement during project implementation by mainstreaming conflict sensitivity into project design.

Key meetings conducted during PPG Phase (excluding technical meetings)

Date	Activity	Summary
January-October 2020	Meetings at national level	Various meetings held by the PPG Team at national level with key stakeholders represented in Khartoum
October 14th, 2020	Inception Workshop	An introductory workshop was held on in Khartoum which familiarized over 30 stakeholders with the project and captured various inputs and guidance to inform its design. Due to COVID-19 restrictions remote participants who could not travel were offered the possibility to connect virtually

November 29 th - December 3 rd 2020	Field Work in Gezira State	<p>An extensive field mission was conducted in El Gezira State by a team of 5 including 4 PPG consultants and 1 FNC representative. It paved the way to consultations with a wide range of stakeholders at state and local levels, including with local communities.</p> <p>Focus group discussions were held with 30 men and 32 women in ?Abaas? village located in the vicinity of the ?Alkab? riverine forest, and with 24 men and 15 women from the ?Salama? village located in the vicinity of the ?Al Gofa? riverine forest. A specific consultation on Gender was held on Oct 12th to collect stakeholders? inputs regarding the existing gender gaps in communities living in the vicinity of riverine forests, the gendered roles assigned to women and men based on the underlying norms driven by culture, religion, and politics, and suggestions made to mainstream gender consideration into project interventions.</p> <p>A gender-balanced team of 6 forest inspectors (3 women and 3 men) were carefully selected and trained as enumerators using an extensive questionnaire composed of multiple modules carefully designed and translated into Arabic to generate critical inputs while reaching out to some of the most vulnerable stakeholders including rural women, children, and elderly.</p>
December 2020 - January 2021	Household surveys in Gezira State	Using tailored questionnaires and covering a sample of 235 households located in 7 villages within the target riverine landscape in Gezira State, these are namely Beryab, Elryab, Abaas, Salama, Suntobar, Synga and Wadrahom.
28 January and 9 March 2021	Training workshops on NCAA	Two virtual training sessions were organized. A first basic training session introduced project stakeholders to the concept of Natural Capital Assessment and Accounting (NCAA) based on The System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries (SEEA-AFF) accounts and related FAO statistical processes. A second advanced training session further examined specific applications of NCAA/SEEA-AFF accounts in the case of the Riverine Forests in Sudan. The training benefited representatives from the HCENR, FNC, universities, ARC, NCR, MoA, MoAR, MoI, MoIT, MoEM, MoFEP, CSOs, and private sector.

10th of February, and 11th of March, 2021	Consultation meeting	<p>A first consultation meeting was convened in the Sunut forest, the meeting was attended by FNC representatives from HQ and Khartoum State Forests, experts from related institutions including, natural resources, energy, the Higher Council for Environment and Natural Resources, the State Council for Urban development (Khartoum State), the Ministry of Agriculture, Wildlife Research centre, the Sudanese Environment Conservation Society, the Sudanese Social Forestry Society, Consumer Protection Society, Universities and community representatives (from areas around the forest).</p> <p>During a second field visit, in March 2021, the PPG team assessed the current situation of the forest and interviewed key stakeholders including a wandering seller selling potato chips, three women working as tea sellers, a fisherman in addition to two visitors (a young man and woman) visiting the forest for recreation. Also, two men living in the nearby Mogran residential quarter were interviewed who emphasized the importance of the forest for the people of Khartoum in general and to the nearby Mogran, Rumela and Lamab residential quarters in particular.</p>
8 April, 2021	Restitution workshop	A validation workshop took place semi-virtually on April 8th involving more than 30 participants. The concerns and issues discussed with stakeholders during project design were taken into consideration and reflected in project interventions presented for discussion by national and local stakeholders.

Example of stakeholders engaged by the project team in Gezira State

Stakeholder Name	Title	Organization	Consultation methodology and location
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Yassin Mohamed Ali	<i>Deputy Director of Technical Directorate</i>	<i>FNC Gezira</i>	<i>Meeting at FNC Gezira</i>
Gamal Abd-alsamad Mohamed	Deputy Director of Alhaj Abdalla Circle	<i>FNC Gezira</i>	<i>Meeting at FNC Gezira</i>
Neimant Salih Eissa	Forest Inspector	<i>FNC (Gezira State)</i> Rufaa Locality	<i>Workshop at FNC Gezira</i>

Salwa Omaraa	Forest Inspector	<i>FNC (Gezira State)</i> Western Medani Division	<i>Workshop at FNC Gezira</i>
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Dr. Nyazi Mohamed Osman Hamid	Director	<i>Directorate of Animal resources</i>	<i>Consultations in Gezira State</i>
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Please provide the Stakeholder Engagement Plan or equivalent assessment.

STAKEHOLDERS ENGAGEMENT PLAN

Purpose

1. This Stakeholder Engagement Plan (SEP) was designed to ensure an effective engagement between various stakeholders throughout the lifecycle of the project. The project shall strive to maintain an effective dialogue and consultations with all relevant stakeholders at national and local levels with national government entities, State-level and Local-level government entities, CSOs, NGOs, local communities, native administration, private sector, women groups, academic and research institutions and other key stakeholders hereby identified as relevant for an inclusive and participatory integrated management of the riverine forest landscapes in Sudan.

Legal and donor requirements

2. GEF implementation agencies and executing entities are required as per the GEF Minimum Standard 1 on "Environmental and Social Assessment, Management and Monitoring", to disclose relevant documents as part of the process enabling a strong engagement of stakeholders throughout the project lifecycle. This is to ensure that stakeholders are fully informed and consulted on matters related to environmental and social risk screening, assessment, and management.
3. In line with FAO's Environmental and Social Management Guidelines, projects with high and moderate environmental and social risks must disclose relevant documents at the end of the formulation phase as the last step of an extensive and iterative engagement process.

Disclosure

4. The latest available version of the key sections of the project document was disclosed to stakeholders at the national validation workshop. The project document will be also disclosed online **at least 30 days** before CEO endorsement and uploaded in both English and Arabic languages to the FAO's disclosure portal for open access to any users at <http://www.fao.org/environmental-social-standards/disclosure-portal/en/>. The project disclosure form indicating the risk classification and means of disclosure was signed and certified by the project Lead Technical Officer (LTO).

Stakeholder engagement during project design

Stakeholder engagement process during the PPG Phase

5. The stakeholder engagement process during the PPG Phase can be summarized as follow:
 - ? National level bilateral meetings
 - ? Inception workshop
 - ? State level consultations
 - ? Household survey using an adapted questionnaire and experts? field observations
 - ? National validation workshop
6. The project design process was informed by extensive cross-sectoral consultations involving all the categories of stakeholders concerned by the riverine forest ecosystems in Sudan. The project engaged these stakeholders in various ways since January 2020.
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Stakeholder engagement during project Implementation^[1]

To build on the participatory approach and the engagement process initiated during project design, different engagement interventions are fully embedded in each of the project components. A mapping of key stakeholder groups was conducted based on the analysis of stakeholders who have interest in the projects, those expected to be directly or indirectly affected by project interventions, and those having the potential to influence project outcomes.

Stakeholder analysis

To achieve its objective, the project will work together with a large spectrum of stakeholders including:

? Decision makers from the Forest National Corporation (FNC), national and state government agencies involved in forest and land management, and other institutions operating at State and Locality level willing to engage in improving the current management systems of riverine forests to integrate competing land uses into more inclusive and participatory co-management schemes;

? Intended beneficiaries including local communities located in the vicinity of riverine forests and deriving income from the riverine landscapes as livestock herders, farmers, seasonal workers, collectors of NWFP, beekeepers, fish catchers, etc;

? Indirect beneficiaries including the private sector along value chains processing nature-based products derived from the riverine forests, and the wider populations in settlements along the river Nile who will see their livelihoods and wellbeing improved as a consequence of restored and sustainable flows of ecosystem services generated in the riverine landscapes. And

? Potentially opposing stakeholders who may not understand how forest and habitat restoration, and biodiversity conservation can benefit them and perceive its interventions as a threat to their livelihoods.

These types of stakeholders were further structured into 3 main groups:

? Key Stakeholders: Have skills, knowledge or position of power to significantly influence the project

? Primary Stakeholders: Directly affected by the project / direct beneficiaries

? Secondary Stakeholders: Only indirectly or temporarily involved / indirect beneficiaries

Stakeholder Table

Stakeholder	Mandate	Project Role
Federal Government		

Forest National Corporation (FNC)	<p>The FNC is a Parastatal service-oriented and autonomous corporate body, it is the federal institution mandated to manage all federal forests in the country and is in charge of:</p> <ol style="list-style-type: none"> 1) Technical supervision for forests, range and natural resources all over the Sudan; 2) Training and qualifying the technical staff in the field of forest and natural resources; 3) Dissemination of awareness amongst the officials and citizen in matters relating to forests and natural resources; 4) Conducting studies and researches in order to lay out the necessary plans for assessing forests and natural resources all over the Sudan and developing them; 5) Increasing the forests, range and natural resources areas by reserving more areas and by increasing the required areas at a ratio not less than 25% of the total area of the country; 6) Coordinating efforts with the competent authorities in matters relating to general policies of forests, range and natural resources together with the preparation and implementation of anti-desertification projects; 7) Coordinating efforts with the competent authorities in matters relating to land use and land investment for the purpose of establishing new forests and range, developing them and encouraging agricultural afforestation; 8) Cooperating with the competent authorities in forest related fields such as: range, natural resources and encouraging applied research; 9) Encouraging investment in forests, range and natural resources in collaboration with the competent authorities in the country; 10) Employing a qualified staff in order to enable the corporation to carry out its responsibilities; 11) After obtaining the competent Minister's approval the corporation shall proceed to owning, buying and selling of lands, real state and constructing buildings on them as well as maintaining such buildings and constructing different facilities thereon in order to realize the corporation's objectives; and 12) Imposing tariffs or fees or increasing royalties on forests crops and gum Arabic, range and natural resources in accordance with the regulations. 	<p>Lead Executing Agency as per the OPIM modality, overall day-to-day project management, leads cross sectoral coordination for decision-making and policy strengthening across the riverine landscapes</p>
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<p>Higher Council for Environment and Natural Resources (HCENR)</p>	<p>The HCENR is the technical arm of the Council of Ministers of the Government of Sudan, under the Chairmanship of the Prime Minister, in charge of formulating environmental policies, legislation and strategic planning for the conservation and sustainable management of Sudan's environmental and natural resources. As an inter-ministerial government agency, it coordinates environmental affairs and sustainable management of natural resources across all socio-economic sectors at federal and state levels.</p> <p>Its mandate also includes oversight and facilitation of the implementation and enforcement of environmental policies and legislation in coordination with respective executive bodies of the federal and state governments. It also aims to promote international cooperation, coordinate participation in global environmental conventions and protocols and utilize associated multilateral financing instruments and technology transfer mechanisms.</p>	<p>Lead entity for cross sectoral coordination among all relevant Government entities at federal and state levels</p> <p>At project inception, the HCENR will organize multilateral consultations involving the FNC and other key technical ministries and departments, to coordinate the policy and technical interventions of the landscape approach that will be implemented inside the forest reserves (FNC led), and outside the forest reserves (Co-led by other federal and state entities)</p> <p>The HCENR will Co-lead the implementation of Output 1.3 and Output 2.3</p>
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Ministry of Agriculture and Forestry	<p>Since its inception in 1953, its name changed according to its specializations and tasks, it is currently called the Ministry of Agriculture since 2015.</p> <p>In charge of policy formulation, planning and monitoring of developments, research and extension services for agriculture and overall natural resources protection, conservation and development. Has a number of associated research centres at federal and state levels</p> <p>Its tasks and specializations include: 1) Select and adopt appropriate technology in the field of agriculture; 2) Develop programs and methods of agricultural extension; 3) Supervising and investing natural resources; 4) Rationalize the use of agricultural lands to stop environmental degradation and combating drought and desertification in cooperation and coordination with the relevant authorities; 5) Train human resources in the fields of agriculture and natural resources; 6) Develop and maintain pastures in coordination with the relevant authorities; 7) Monitoring and combating national pests in coordination with the concerned authorities; 8) Follow up on the implementation of laws that encourage and protect forests; 9) Supervise federal investment in the field of agriculture; 10) Supervise agricultural statistics and publish them at the national level; 11) Supervise international and regional cooperation projects and investments in the field of agriculture; 12) Promote cooperation in the fields of agriculture and natural resources</p>	<p>Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Agricultural extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)</p>
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Ministry of Animal Resources	<p>Since its inception in 1902, its name changed according to its specializations and tasks, it is currently called the Ministry of Animal Resources since 1996</p> <p>In charge of policy formulation, planning and monitoring of developments, research and extension services for livestock and rangelands. Has a number of associated research centres at federal and state levels</p> <p>Its tasks and specializations include: 1/Ensure livestock health to boost food security and exports of livestock and fish; 2/Develop and maintain slaughterhouses in line with international standards; 3/Develop and maintain veterinary services in the states; 4/Valorise Sudanese species and increase their productivity; 5/Improve breeds for intensive meat production systems to increase their competitiveness; 6/Prepare standard specifications for Sudanese animal products in conformity with international standards; 7/Facilitate the introduction of modern technologies to improve performance; 8/Encourage investment in of livestock and fisheries to achieve food security and support exports; 9/Provide market information on internal and external markets for animal and fish products; 10/Developing and qualifying veterinary extension and supporting pastoralist development programs; 11/Contribute to programs to combat poverty and increase family incomes; 12/Provide veterinary medicines, vaccines and monitor their uses; 13/Supervise the import and registration of medicines; 14/Upgrade the level of drug control; 15/Provide local poultry and fish production inputs, focusing on the optimal utilization of local resources; 16/Work to introduce livestock in the southern states into the national economy; 17/Develop and maintain infrastructure in war-affected areas; 18/Establish model productive farms; 19/Develop federal and state legislation to support production, marketing, quality control, consumer protection and environmental protection; 20/Follow-up programs to employ veterinary, animal production and natural resources graduates in appropriate fields in the public and private sectors.</p>	<p>Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Livestock extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)</p>
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Wildlife Conservation General Administration	<p>The WCGA was established in 1902, it is the federal authority in charge of the management of terrestrial and marine protected areas (MPA) in Sudan. It is responsible for implementing the Federal Protection of Hunting and National Parks Law of 1986 related to the biodiversity and habitat conservation in Sudan.</p> <p>Its functions and responsibilities include: 1) Developing and implementing laws and legislations concerning protected areas in Sudan; 2) Developing management plans and policies for the protected areas in Sudan; 3) Encouraging wildlife studies and research, as well as increasing awareness among Sudanese people.</p>	Support ecosystem assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
Agricultural Research Corporation (ARC)	<p>ARC is Sudan's principal research arm on agriculture, it ambitions to become a Centre of Excellence for agricultural research by developing skilled manpower, conducting quality research, and transferring technologies to ensure sustainable crop production. It aims to achieve food security, alleviate poverty, generate income, promote agricultural exports and conserve natural resources.</p> <p>ARC has about 24 national research programs, structured into 4 thematic areas namely: 1) Sustainable crop production; 2) Natural Resources management; 3) Agricultural socioeconomics and policy analysis; and 4) Knowledge management and Up scaling</p> <p>It runs 14 research centres (including the Forestry Research Centres), 27 research stations (including in Khartoum area, Dongula, Marwe, and Wad Medani) and employs about 610 staff, out of which more than 300 hold a PhD.</p>	Support forest assessments under Output 1.1, the FFFS trainings under output 2.1 and output 2.2, and the implementation of demonstration practices under Output 2.3 (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
Animal Resources Research Corporation (ARRC)	Established in 1995, the Animal Resources Research Corporation is a Government entity affiliated to the Ministry of Animal Resources, it has several research centres working on different thematic of livestock-related research.	Support livestock-related assessments, trainings and demonstration practices (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)

General Administration for National Energy Affairs	<p>Formerly the National Energy Administration which was affiliated to the Ministry of Energy and Mining since 1980. In 1995, it became part of the Sudanese Petroleum Corporation, under the name of the General Administration of Energy Affairs.</p> <p>The GANEA is an applied research department for renewable energy technologies. It is structured into 2 departments namely: 1) The Alternative Energy Department, working on solar, wind and hydroelectricity; and 2) The Department of Biomass working on Biogas, Composting of agricultural waste and Biofuels.</p>	Will facilitate the implementation of demonstration practices related to clean energy alternatives under Output 2.3 to reduce the pressure on forests from fuelwood collection (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
Ministry of Tourism and Wildlife	<p>It performs its activities through the central ministry, wildlife preservation department, tourism police forces department, the international Sudanese tourism company and the international Quasr Company.</p> <p>The Ministry is in charge of setting and implementing the general policies for wildlife protection, protecting wildlife and administering national game reserve parks, promote tourism in Sudan including wildlife-related ecotourism, and developing the standards for issuing hunting permits.</p> <p>It strategically aims to develop the tourism sector including wildlife-related ecotourism in compliance with Sudanese values and traditions, to create job opportunities and increasing tourism revenues.</p>	Will facilitate the implementation of demonstration practices related to eco-tourism especially in the Sunut Forest in Khartoum under Output 2.3 to support alternative livelihoods for women and youth from local communities (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)

Ministry of Irrigation and Water Resources	<p>Established in 2012, under the name of Ministry of Water Resources and Electricity, is in charge of maintaining the national water infrastructures, developing and efficiently using water resources using cost effective best practices in irrigation, drinking water & electricity to satisfy demands in line with the Standards, while taking into consideration environmental conservation.</p> <p>It has a Training and Capacity Development Unit in charge of planning and coordinating specialized training programs in all areas related to water resources, including the preparation of a concept and curriculum for training courses.</p> <p>It also has a Regional Water Harvesting Centre in charge of carrying out specialized training programs, capacity development activities, and raising awareness and knowledge in the field of water harvesting through training courses for participants at the national and regional levels.</p>	Will contribute to the FFFS curricula and training, facilitate the implementation of demonstration practices related to water harvesting under Output 2.3, as well as the maintaining of flood-water canals in the riverine landscape (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
Central Bureau of Statistics (CBS)	<p>Established in 1903 as a division within the Customs Department primarily Charged to collect and compile foreign trade statistics, it evolved over time to operate under the council of ministers since 2000.</p> <p>Today, the CBS aims to develop a unified and comprehensive up-to-date statistical system, to unite standards and concepts, definitions and statistical terminology into a comprehensive information system which serves as a tool for planning and development in all spheres of life in Sudan.</p> <p>The organizational structure of the central Bureau of statistics consists of 4 general administrations and other departments and subdepartment.</p>	Will contribute to the assessments under Output 1.1 related to the multiple values of biodiversity and ecosystems services across the riverine landscapes in Sudan, as well as the NCA trainings using FAO's SEEA AFF and B Intact tools (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
Ministry of Finance and Economic Planning (MoFEP)	As the main body responsible for managing Sudan's economy, the Ministry aims to invest internal resources and attract external resources towards a sustainable economic pathway in line Sudan's strategic economic and social goals.	Has a key role in mainstreaming biodiversity into national planning to get financing for biodiversity through advocacy based on the figures, data, and value for nature extracted from the NCA assessments under output 1.1

General Directorate of Women and Family Affairs	Part of the Gender Machinery in Sudan in charge of strengthening the capacity of federal and state institutions to deliver specific functions and responsibilities that accounts for gender equality and human rights of women	Will facilitate gender mainstreaming in line with the GAP and the upscaling of gender inclusive practices across productive landscapes in Sudan
Ministry of Higher Education and Scientific Research (MOHE)	<p>The Ministry aims to provide higher education according to quality and competence standards, to provide students with appropriate knowledge and skills for the job market.</p> <p>It also works to build human resource capacities in various scientific disciplines, develop and disseminate knowledge through scientific research and promote local technology.</p>	Cooperation to design and deliver the FFFS curricula and training, as well as to manage and disseminate the knowledge generated from the project
State and Local Government		
State Ministries of Production and Economic Resources in Northern, Khartoum and Gezira States	The State Governments exercise authority in their respective States and provide proximity public services. The State Ministries of Production and Economic Resources in Northern, Khartoum and Gezira States support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities
Rural Councils	Local governments are a subset of State governments. the Rural Councils were established following the People's Local Government Act of 1971, intended to have a wide range of responsibilities independent of the central government and to derive their authority from regular local elections	Will facilitate the implementation of project interventions at local level in close coordination with the HCENR, FNC, the State Ministries of Production and Economic Resources and other federal and state entities
International Organization		
FAO	Led detailed project design, FAO representatives participated to the inception and validation workshops, as well as the technical meetings Series during the PPG phase. FAO did also ensure that economies of scale are achieved to the extent possible with the LDCF project in North Darfur during project design and implementation.	GEF Implementing Agency. Will support implementation and technical back-stopping.

UNDP	UNDP has implemented/is implementing several projects in Sudan including ?Strengthening Targeted National Capacities for Improved Decision Making and Mainstreaming of Global Environmental Obligations?, and ?Strengthened Protected Areas System and Integrated Ecosystem Management in Sudan?	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
World Bank	Provided loans and grants through various projects in Sudan, currently implementing the GEF-funded Sudan Sustainable Natural Resources Management / SSNRMP and the Sustainable Natural Resources Management Project -AF	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
IFAD	Implemented various projects in Sudan, currently the GEF implementation Agency for the Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP)	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
UNEP	Implementing a number of projects in Sudan, including Sudan?s First State of Environment and Outlook Report 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
AfDB	Provided loans and grants to implement several projects in Sudan including the \$14.96 million ?Accelerating Women?s Entrepreneurship and Access to Finance (AWEAF) project approved in 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
Academia		
Sudan University of Science & Technology, College of Forestry & Range Sciences (SUST)	<p>The university includes 25 colleges, including the College of Forestry & Range Sciences, offering programs at postgraduate levels (doctorate, masters and higher diplomas) and other degrees at the bachelor?s and technical diploma levels, as well as training and continuing studies programs</p> <p>The university offers its programs through traditional methods, by affiliation and via e-learning. Relevant programs include agriculture, veterinary, and forests,</p> <p>It has a number of Institutes and research centres including the Institute for Women and Community Development.</p>	Cooperation to design and deliver the FFFS curricula and training, as well as to mainstream gender into project interventions, and disseminate knowledge generated from the project

National Centre for Research (NCR)	<p>Established in 1991, is affiliated to the Ministry of Higher Education and Scientific Research, and has a similar status to Sudanese universities. Its conducts scientific and applied research for the purpose of economic and social development in Sudan. The NCR has research relations with several national and international institutes.</p> <p>The Centre includes various Research Institutes including on Environment and Natural Resources, as well as an information and documentation centre, and a publication department. Research is carried out by 180 researchers, with facilities available for foreign scientists interested in working in Sudan.</p>	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, as well to conduct the biodiversity and ecosystem assessments under Output 1.1 and the design/implementation of demonstration practices related to NTFPs value chains under Output 2.3
University of Dongola, Faculty of Agricultural Sciences (UofD)	<p>Founded in 1994 and accredited by the Ministry of Higher Education and Scientific Research, the university offers Postgraduate Diploma, Master's Degree, Doctor's Degree, Bachelor's Degree or equivalent.</p> <p>Its Agricultural Sciences Faculty focuses on Crop Production, Horticulture, Agricultural Economics, Agronomy, Animal Husbandry, Food Science, and Agriculture.</p>	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Kudroka riverine landscapes
University of Khartoum, faculty of Forestry (UofK)	<p>Its faculty of Forestry has 4 departments specialized in Forest Management, Forest Products and Industries, Forest Protection and Conservation and well as Forest Silviculture. It also several institutes including the Institute of Environmental Studies and Peace Research the Institute.</p>	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Khartoum's Sunut forest riverine landscapes
University of Gezira, faculty of Forest Science and Technology (UofG)	<p>Gezira University, through its Faculty of Forest Science and Technology, conducts research aimed at solving the problems of forests and the environment, Its areas of expertise include contributing to short and long-term planning of forest resources, strengthening scientific links between the Faculty, Educational, Research and Production Institutions within and outside Sudan, and serving the community, meeting its needs and upholding the spiritual and human values pertaining to forest resources and the environment.</p>	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Wad Medani, Rufaa, and Haj Abdallah riverine landscapes

CSOs		
Farmers Associations and Unions	Such as the Farmers Union of the Gezira Scheme, a civil society organization in forestry programmes implementation, which started large scale irrigated plantations to provide its members with fuelwood and building poles. The effort was financed by a statutory allocation of 2% of the net profit of the cotton crop grown annually. Technical assistance was provided by the FNC.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices in Gezira
Gum Arabic Producers Association	Civil society organization that encourages its members to increase production and protect the gum trees	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Rainfed Farmers Association	Civil society organization that established a fund through which several tree shelterbelts and woodlots were created in mechanized farming areas in Gadarif and Blue Nile States	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Sudanese Social Forestry Society	A CSO active in the areas of awareness raising campaigns, campaigning, and advocacy on Social Forestry and the Environment in Sudan	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Sudanese Environmental Conservation Society	CSO working to promote environmental conservation and sustainable development through community participation in Sudan. It targets the public at large with an emphasis on local communities, decision makers, teachers, layers, women, farmers, pastoralists and local leaders. It runs an environmental literacy program with experience in small pilot projects for environmental conservation and poverty alleviation in rural and sub-urban areas.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Sudanese Forestry Society	CSO working on awareness raising, research and publication on forestry related matters	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices

Local associations	Various local CSOs exist within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Livestock producers? associations and unions	Similar to farmers, livestock producers are structured into associations and unions within the target riverine landscapes, working on a wide array of community-related thematics.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Women and youth groups	Various women and youth led groups are structured in local CSOs exist within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Private Sector		
Agricultural Cooperatives (agriculture, livestock and fisheries)	Similar to CSOs, farmers, livestock herders, and fishermen are also structured into private for-profit entities such as cooperatives, they provide their members with different services and defend their interests.	Consultations and cooperation to support FFFS trainings and experimentation practices
Private Service providers	These are involved in the procurement and distribution of different goods and services to farmers, livestock herders and fishermen in the riverine landscape, including agricultural inputs and equipment, as well as veterinary products and services.	Consultations and cooperation to support experimentation practices
Private Entrepreneurs	Sudanese women & men are increasingly doing business through digital mediation (using computers and smartphones) through social media platforms, linked to digital communities, to sell typical female consumer goods, such as cosmetics and perfumes.	Consultations and cooperation to support women-led and youth-led start-ups and entrepreneurship along NTFPs value chains at local and national levels
Gezira Scheme	Sudan's Gezira Board (SGB) manages the production of agricultural crops such as cotton and wheat in Gezira State. It supports social development projects.	Consultations and cooperation to support experimentation practices in Gezira

Kenana Sugar Company	<p>Established in 1975, produces 400,000 tonnes of sugar per year as well as ethanol and other by-products.</p> <p>It contributes to forest management and tree planting through Community Forestry Partnerships.</p>	Consultations and cooperation to support community-based forestry partnerships
Eco-tourism companies	<p>A number of eco-tourisms and tour agencies are operating in Sudan offering packages including medieval sites such as Old Dongola.</p> <p>The sector is poised to develop further in line with the Government's ambition to develop ecotourism including in tourist villages along the red sea coast. Popular attractions include Dinder National Park, the Marrah Mountains, and archaeological sites such as the Pyramids of Mero?, tombs at Kerma, and the temple at Soleb.</p>	Consultations and cooperation to valorise the eco-tourism potential of the Sunut forest reserve in Khartoum
Operators of NTFPs value chains	A number of private producers and small companies are operating along local value chains processing biodiversity-derived products such as baobab fruits, juice and power, extracts from aromatic and medicinal plants, and beekeeping products.	Consultations and cooperation to valorise NTFPs, structure local value chains and empower women and youth to generate alternative income
Banks and micro-finance institutions	Such as the Agricultural Bank of Sudan, through its rural finance programs such as the microfinance Initiative (ABSuMI) providing small loans not exceeding SDG 2,000 and oriented towards entrepreneurs, farmers, pastoralists, herdsman, and craftsmen from small rural families.	Cooperation to close the last-mile if rural micro-finance to establish micro-financing schemes for incomes generating activities through the valorization of NTFPs, and the introduction of clean energy alternatives to fuelwood

Engagement Methods

The project will be organizing over 100 consultations, focus groups, participatory planning meetings, as well as women and youth empowerment workshops. Methods that will be used to engage and/or consult with each of the stakeholder groups identified include Interviews with stakeholder representatives and key informants; Surveys, polls and questionnaires; Public meetings and/or focus groups with specific groups; Participatory methods; as well as other traditional mechanisms for consultation and decision making.

Methods that will be used to communicate with each of the stakeholder groups identified include Newspapers, posters, radio, television; Information counters and exhibitions, or other visual display; Brochures, leaflets, posters, non-technical summary documents and reports. Also, giving CV-19 limitations, logistical and security related challenges, the project will be using ICTs to receive feedback and to ensure ongoing communications with stakeholders outside of formal consultation meetings.

Mainstreaming gender and conflict sensitivity

Special attention was given to women and vulnerable social groups such as youth, which allowed the project to capture valuable contributions during the HH survey and focus groups discussions to design interventions for the empowerment of rural women and youth as indicated in details in the Gender Mainstreaming Strategy and Action Plan report annexed to the Project Document.

Furthermore, as part of the data analysis process, a clinic approach was used to identify any disgruntled actors and possibly opposing stakeholders who could potentially disrupt the project, in order to address their concerns and ensure their full engagement during project implementation by mainstreaming conflict sensitivity into project design.

Monitoring and Reporting

M&E and reporting milestones	How stakeholders will be involved
PPR	The PPR will be prepared by the PMU, under the lead of the NPC, and the overall oversight of the NPD, by June 30th and December 31st of each implementation year. The PPR will be shared with key relevant stakeholders for their inputs and their comments duly addressed in the final version of the PPRs.
PIR	The PIR will be conducted following an inclusive and participatory approach. At the beginning of each PIR exercise, a participatory workshop will be organized to navigate the requirements and deadlines. Inputs from key relevant stakeholders will be collected by the PMU, in coordination with the NPD/FNC and GEF OFP/HCENR.
MTR	During the MTR exercise, extensive consultations will be facilitated by the PMU to enable the external evaluators assess the progress achieved by the project towards meeting its mid-term targets, identify bottleneck and propose potential corrective measures and management responses to put the project on-track.
TE	Similar to the MTR, during the TE exercise, extensive consultations will be facilitated by the PMU to enable the external evaluators assess the progress achieved by the project towards meeting its end-targets, identify potential successes and failures, codify lessons learned, and recommend management responses to sustain project achievements and results.

STAKEHOLDER ENGAGEMENT MATRIX

Stakeholder	Type	Key function within mandate/activity related to the project	Consultation methodology & date of consultations (PPG)	Expected role in project implementation (Implementation)	Comments
Federal Government					
Forest National Corporation (FNC)	Key	Manages all federal forests in the country and is in charge of technical supervision for forests all over the Sudan; training and qualifying the technical staff in the field of forest and natural resources; dissemination of awareness amongst the officials and citizen in matters relating to forests and natural resources; conducting studies and researches in order to lay out the necessary plans for assessing forests and natural resources all over the Sudan and developing them.	Regular meetings during PPG phase, including PPG inception and validation workshops respectively on Oct 14 th and April 8 th	Lead Executing entity as per the OPIM modality, overall day-to-day project management, leads cross sectoral coordination for decision-making and policy strengthening across the riverine landscapes	NA

Higher Council for Environment and Natural Resources (HCENR)	Key	The HCENR is the technical arm of the Council of Ministers of the Government of Sudan, under the Chairmanship of the Prime Minister, in charge of formulating environmental policies, legislation and strategic planning for the conservation and sustainable management of Sudan's environmental and natural resources.	Regular meetings during PPG phase, including PPG inception and validation workshops respectively on Oct 14 th and April 8 th	Lead entity for cross sectoral coordination among all relevant Government entities at federal and state levels	NA
General Directorate of Policies, Planning and Environmental Awareness (GDPPEA)				At project inception, the HCENR will organize multilateral consultations involving the FNC and other key technical ministries and departments, to coordinate the policy and technical interventions of the landscape approach that will be implemented inside the forest reserves (FNC led), and outside the forest reserves (Co-led by other federal and state entities)	
General Directorate of Environmental Control (GDEC)					
General Directorate of Sustainable Resource Use and Ecological Balance (GDSRUEB)		GDPPEA supports interventions related to policies and planning, research and information, environmental education and awareness raising		The HCENR will Co-lead the implementation of Output 1.3 and Output 2.3	
General Directorate of Climatic Changes, Natural Disasters and Waste Management (GDCCNDWM)		GDEC is in charge of environmental inspection, environmental and social impact assessments, as well as biosafety related matters			
		GDSRUEB support interventions related to biodiversity conservation, desertification and land degradation control, and marine environmental protection			
		GDCCNDWM			

Ministry of Agriculture and Forestry (MoAF)	Key	In charge of policy formulation, planning and monitoring of developments, research and extension services for agriculture and overall natural resources protection, conservation and development.	Meetings with key federal and state representatives during field missions conducted in the target States (November 29th - December 3rd 2020, 10th of February, and 11th of March, 2021, March 26th - 28th, 2020) as well as during the Training workshops on NCAA on 28 January and 9 March 2021, and during the inception and validation workshops respectively on Oct 14th and April 8th	Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Agricultural extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Ministry of Animal Resources (MoAR)	Key	In charge of policy formulation, planning and monitoring of developments, research and extension services for livestock and rangelands. Has a number of associated research centres at federal and state levels		Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Livestock extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Wildlife Conservation General Administration (WCGA)	Key	It is responsible for implementing the Federal Protection of Hunting and National Parks Law of 1986 related to the biodiversity and habitat conservation in Suda		Support ecosystem assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

Agricultural Research Corporation (ARC)	Primary	It aims to achieve food security, alleviate poverty, generate income, promote agricultural exports and conserve natural resources. It runs 14 research centres (including the Forestry Research Centres), 27 research stations (including in Khartoum area, Dongula, Marwe, and Wad Medani) and employs about 610 staff, out of which more than 300 hold a PhD.	Support forest assessments under Output 1.1, the FFFS trainings under output 2.1 and output 2.2, and the implementation of demonstration practices under Output 2.3 (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Animal Resources Research Corporation (ARRC)	Primary	It has several research centres working on different thematic of livestock-related research.	Support livestock-related assessments, trainings and demonstration practices (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

<i>Wildlife Research Center (WRC)</i>	Primary	Established in 1968, currently affiliated to the MoAR. WRC aims to promote wildlife-related fundamental and applied research and knowledge for wildlife conservation through research, and technology transfer.	Support wildlife-related assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
General Administration for National Energy Affairs (GANEA)	Key	Working on alternative energies such as solar, wind and hydroelectricity, Biogas, Composting of agricultural waste and Biofuels.	Will facilitate the implementation of demonstration practices related to clean energy alternatives under Output 2.3 to reduce the pressure on forests from fuelwood collection (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

Ministry of Tourism and Wildlife (MoTW)	Key	in charge of setting and implementing the general policies for wildlife protection, protecting wildlife and administering national game reserve parks, promote tourism in Sudan including wildlife-related ecotourism, and developing the standards for issuing hunting permits.	Will facilitate the implementation of demonstration practices related to eco-tourism especially in the Sunut Forest in Khartoum under Output 2.3 to support alternative livelihoods for women and youth from local communities (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Ministry of Irrigation and Water Resources (MoIWR)	Key	in charge of maintaining the national water infrastructures, developing and efficiently using water resources using cost effective best practices in irrigation, It has a Training and Capacity Development Unit in charge of planning and coordinating specialized training programs in all areas related to water resources, including the preparation of a concept and curriculum for training courses.	Will contribute to the FFFS curricula and training, facilitate the implementation of demonstration practices related to water harvesting under Output 2.3, as well as the maintaining of flood-water canals in the riverine landscape (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

Central Bureau of Statistics (CBS)	Primary	aims to develop a unified and comprehensive up-to-date statistical system, to unite standards and concepts, definitions and statistical terminology into a comprehensive information system which serves as a tool for planning and development in all spheres of life in Sudan.	Will contribute to the assessments under Output 1.1 related to the multiple values of biodiversity and ecosystems services across the riverine landscapes in Sudan, as well as the NCA trainings using FAO's SEEA AFF and B Intact tools (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Ministry of Finance and Economic Planning (MoFEP)	Key	body responsible for managing Sudan's economy, the Ministry aims to invest internal resources and attract external resources towards a sustainable economic pathway in line Sudan's strategic economic and social goals.	Has a key role in mainstreaming biodiversity into national planning to get financing for biodiversity through advocacy based on the figures, data, and value for nature extracted from the NCA assessments under output 1.1	NA
General Directorate of Women and Family Affairs (GDWFA)	Key	in charge of strengthening the capacity of federal and state institutions to deliver specific functions and responsibilities that accounts for gender equality and human rights of women	Will facilitate gender mainstreaming in line with the GAP and the upscaling of gender inclusive practices across productive landscapes in Sudan	NA

Ministry of Higher Education and Scientific Research (MOHE)	Secondary	Aims to provide higher education according to quality and competence standards, to provide students with appropriate knowledge and skills for the job market. It also works to build human resource capacities in various scientific disciplines, develop and disseminate knowledge through scientific research and promote local technology.		Cooperation to design and deliver the FFFS curricula and training, as well as to manage and disseminate the knowledge generated from the project	NA
State and Local Government					
State Ministry of Production and Economic Resources in Northern State (MoPER)	Key	support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Meetings during field mission conducted in Northern State (March 26 th - 28 th , 2020)	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities	NA

State Ministry of Production and Economic Resources in Khartoum State (MoPER)	Key	support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Meetings during field mission conducted in Khartoum State (10th of February, and 11th of March, 2021)	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities	NA
State Ministry of Production and Economic Resources in Gezira State (MoPER)	Key	support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Meetings during field mission conducted in Gezira State (November 29th - December 3rd 2020)	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities	NA

Rural Councils	Key	intended to have a wide range of responsibilities independent of the central government and to derive their authority from regular local elections	Meetings during field missions conducted in the target States (November 29th - December 3rd 2020, 10th of February, and 11th of March, 2021, March 26th - 28th, 2020)	Will facilitate the implementation of project interventions at local level in close coordination with the HCENR, FNC, the State Ministries of Production and Economic Resources and other federal and state entities	NA
International Organization					
FAO	Key	Led detailed project design, FAO representatives participated to the inception and validation workshops, as well as the technical meetings Series during the PPG phase. FAO did also ensure that economies of scale are achieved to the extent possible with the LDCF project in North Darfur during project design and implementation.	GEF Implementing Agency	GEF Implementing Agency. Will support implementation and technical back-stopping.	NA

UNDP	Primary	UNDP has implemented/is implementing several projects in Sudan including ?Strengthening Targeted National Capacities for Improved Decision Making and Mainstreaming of Global Environmental Obligations?, and ?Strengthened Protected Areas System and Integrated Ecosystem Management in Sudan?	Meetings in Khartoum during exploratory meetings conducted by PPG Team and FAO Sudan	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
World Bank	Primary	Provided loans and grants through various projects in Sudan, currently implementing the GEF-funded Sudan Sustainable Natural Resources Management / SSNRMP and the Sustainable Natural Resources Management Project -AF		Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA

IFAD	Primary	Implemented various projects in Sudan, currently the GEF implementation Agency for the Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP)	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
UNEP	Primary	Implementing a number of projects in Sudan, including Sudan's First State of Environment and Outlook Report 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
AfDB	Primary	Provided loans and grants to implement several projects in Sudan including the \$14.96 million ?Accelerating Women's Entrepreneurship and Access to Finance (AWEAF) project approved in 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
Academia				

Sudan University of Science & Technology, College of Forestry & Range Sciences	Secondary	College of Forestry & Range Sciences offering programs at postgraduate levels (doctorate, masters and higher diplomas) and other degrees at the bachelor's and technical diploma levels, as well as training and continuing studies programs. It has a number of Institutes and research centres including the Institute for Women and Community Development.	Meetings in the 3 target States conducted by the PPG Team including during field missions (November 29th - December 3rd 2020, 10th of February, and 11th of March, 2021, March 26th - 28th, 2020), as well as during the Training workshops on NCAA on 28 January and 9 March 2021,	Cooperation to design and deliver the FFFS curricula and training, as well as to mainstream gender into project interventions, and disseminate knowledge generated from the project	NA
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National Centre for Research (NCR)	Secondary	<p>Its conducts scientific and applied research for the purpose of economic and social development in Sudan. The NCR has research relations with several national and international institutes.</p> <p>The Centre includes various Research Institutes including on Environment and Natural Resources, as well as an information and documentation centre, and a publication department. Research is carried out by 180 researchers, with facilities available for foreign scientists interested in working in Sudan.</p>	and during the inception and validation workshops respectively on Oct 14th and April 8th	Cooperation to design and deliver the FFFS curricula and training, as well to conduct the biodiversity and ecosystem assessments under Output 1.1 and the design/implementation of demonstration practices related to NTFPs value chains under Output 2.3	NA
University of Dongola, Faculty of Agricultural Sciences	Secondary	Its Agricultural Sciences Faculty focuses on Crop Production, Horticulture, Agricultural Economics, Agronomy, Animal Husbandry, Food Science, and Agriculture.		Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Kudroka riverine landscapes	NA

University of Khartoum, faculty of Forestry	Secondary	Its faculty of Forestry has 4 departments specialized in Forest Management, Forest Products and Industries, Forest Protection and Conservation and well as Forest Silviculture. It also several institutes including the Institute of Environmental Studies and Peace Research the Institute.	Cooperation to design and deliver the FFFS curricula and training for the Khartoum Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Khartoum's Sunut forest riverine landscapes	NA
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University of Gezira, faculty of Forest Science and Technology	Secondary	conducts research aimed at solving the problems of forests and the environment, Its areas of expertise include contributing to short and long-term planning of forest resources, strengthening scientific links between the Faculty, Educational, Research and Production Institutions within and outside Sudan, and serving the community, meeting its needs and upholding the spiritual and human values pertaining to forest resources and the environment.		Cooperation to design and deliver the FFFS curricula and training for the Gezira Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Wad Medani, Rufaa, and Haj Abdallah riverine landscapes	NA
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<i>University of Bahri, College of Natural Resources and Environmental Studies</i>	Primary	<p>Established in 2011 in the University of Juba's Khartoum campus following the secession of South Sudan</p> <p>The College of Natural Resources and Environmental Studies, has departments on urban forests, fisheries, environmental studies and wildlife management.</p>	Cooperation to design and deliver the FFFS curricula and training, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in target riverine landscapes	NA
CSOs				

Farmers Associations and Unions	Primary	Such as the Farmers Union of the Gezira Scheme, a civil society organization in forestry programmes implementation, which started large scale irrigated plantations to provide its members with fuelwood and building poles. The effort was financed by a statutory allocation of 2% of the net profit of the cotton crop grown annually. Technical assistance was provided by the FNC.	Meetings in the 3 target States conducted by the PPG Team including during field missions (November 29th - December 3rd 2020, 10th of February, 11th of March, 2021, and March 26th - 28th, 2020), as well as during the Training workshops on NCAA on 28 January and 9 March 2021, and during the inception and validation workshops respectively on Oct 14th and April 8th	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices in Gezira	NA
Gum Arabic Producers Association	Secondary	Civil society organization that encourages its members to increase production and protect the gum trees		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Rainfed Farmers Association	Primary	Civil society organization that established a fund through which several tree shelterbelts and woodlots were created in mechanized farming areas in Gadarif and Blue Nile States		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA

Sudanese Social Forestry Society	Primary	A CSO active in the areas of awareness raising campaigns, campaigning, and advocacy on Social Forestry and the Environment in Sudan		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Sudanese Environmental Conservation Society	Primary	CSO working to promote environmental conservation and sustainable development through community participation in Sudan. It targets the public at large with an emphasis on local communities, decision makers, teachers, layers, women, farmers, pastoralists and local leaders. It runs an environmental literacy program with experience in small pilot projects for environmental conservation and poverty alleviation in rural and sub-urban areas.		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Sudanese Forestry Society	Primary	CSO working on awareness raising, research and publication on forestry related matters		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA

Sudanese Wildlife Society	Primary	<p>Established in 2000 as an NGO, SWS works in collaboration with governmental entities in charge of wildlife conservation.</p> <p>It aims to raise awareness about wildlife conservation in Sudan, promote research and cooperation, and support the establishment of zoos.</p>		<p>Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices (eco-tourism and wildlife-related interventions in the Sunut forest in Khartoum)</p>	NA
Local associations	Primary	<p>Various local CSO's exit within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematic.</p>		<p>Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices</p>	NA
Livestock producers? associations and unions	Primary	<p>Similar to farmers, livestock producers are structured into associations and unions within the target riverine landscapes, working on a wide array of community-related thematic.</p>		<p>Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices</p>	NA

Women and youth groups	Primary	Various women and youth led groups are structured in local CSO's exit within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Private Sector					
Agricultural Cooperatives (agriculture, livestock and fisheries)	Primary	Similar to CSOs, farmers, livestock herders, and fishermen are also structured into private for-profit entities such as cooperatives, they provide their members with different services and defend their interests.	Meetings in the 3 target States conducted by the PPG Team including during field missions (November 29th -	Consultations and cooperation to support FFFS trainings and experimentation practices	NA

Private Service providers	Primary	These are involved in the procurement and distribution of different goods and services to farmers, livestock herders and fishermen in the riverine landscape, including agricultural inputs and equipment, as well as veterinary products and services.	December 3rd 2020, 10th of February, 11th of March, 2021, and March 26th - 28th, 2020), as well as during the Training workshops on NCAA on 28 January and 9 March 2021.	Consultations and cooperation to support experimentation practices	NA
Private Entrepreneurs	Primary	Sudanese women & men are increasingly doing business through digital mediation (using computers and smartphones) through social media platforms, linked to digital communities, to sell typical female consumer goods, such as cosmetics and perfumes.		Consultations and cooperation to support women-led and youth-led start-ups and entrepreneurship along NTFPs value chains at local and national levels	NA
Gezira Scheme	Secondary	Sudan's Gezira Board (SGB) manages the production of agricultural crops and supports social development projects.		Consultations and cooperation to support experimentation practices in Gezira	NA

Kenana Sugar Company	Secondary	It contributes to forest management and tree planting through Community Forestry Partnerships.	Consultations and cooperation to support community-based forestry partnerships	NA
Eco-tourism companies	Primary	A number of eco-tourisms and tour agencies are operating in Sudan offering packages including medieval sites such as Old Dongola. The sector is poised to develop further in line with the Government's ambition to develop ecotourism including in tourist villages along the red sea coast. Popular attractions include Dinder National Park, the Marrah Mountains, and archaeological sites such as the Pyramids of Mero?, tombs at Kerma, and the temple at Soleb.	Consultations and cooperation to valorise the eco-tourism potential of the Sunut forest reserve in Khartoum	NA

Operators of NTFPs value chains	Primary	A number of private producers and small companies are operating along local value chains processing biodiversity-derived products such as baobab fruits, juice and power, extracts from aromatic and medicinal plants, and beekeeping products.	Consultations and cooperation to valorise NTFPs, structure local value chains and empower women and youth to generate alternative income	NA
Banks and micro-finance institutions	Primary	Such as the Agricultural Bank of Sudan, through its rural finance programs such as the microfinance Initiative (ABSuMI) providing small loans not exceeding SDG 2,000 and oriented towards of entrepreneurs, farmers, pastoralists, herdsmen, and craftsmen from small rural families.	Cooperation to close the last-mile if rural micro-finance to establish micro-financing schemes for incomes generating activities through the valorization of NTFPs, and the introduction of clean energy alternatives to fuelwood	NA

[1] Please include identification and consultations of disadvantage and vulnerable groups/individuals in line with the [GEF policy on Stakeholder Engagement](#) and [GEF Environmental and Social Safeguard](#).

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Stakeholder Engagement Planned for Implementation

1. For additional details, please visit the Project Document's annex.

2. The Forests National Corporation (FNC) together with the Higher Council for Environment and Natural Resources (HCENR), will lead cross sectoral coordination and engagement efforts at federal and state level, inclusive of government entities and local communities (farmers, livestock producers and women groups). The current management of forest reserves and surrounding croplands falls under the responsibility of FNC but local communities are directly concerned: they have access to land and use of natural resources through permits but illegal cutting, overgrazing and agricultural encroachment are common problems. Therefore, facilitating the participation of local actors in the sustainable management of natural resources at landscape level will help their conservation and, at the same time, will enhance livelihoods. The project includes the involvement of associations, local cooperatives and unions at different levels and stages to plan management interventions and monitor progress and biodiversity status. Consultations of local communities to identify their needs, problems and challenges are considered crucial for the adoption of a robust landscape approach. The dialogue with local stakeholders will be key to change the current view of riverine forests as resources that do not provide any income to local populations. With the support of NCAA on forestry products, including NWFPs and forest related ecosystem services, local stakeholders will have a more complete appreciation of forest ecosystem and biodiversity. This will allow for more informed policy decision-making.

3. An assessment of existing associations, cooperatives and unions will be developed in order to plan a homogeneous and comprehensive consultation during the project preparation phase. This includes focus group discussions and consultation meetings with key stakeholders, key informants including community, tribal and local leaders, unions, private sector and key staff of relevant institutions at the federal and state levels. An inception workshop will be held at the start of the PPG phase with participation of main stakeholders. During the inception workshop, a project development team and steering committee including representatives of different stakeholders, will be established.

4. The project will be organizing consultations, focus groups, participatory planning meetings, as well as women and youth empowerment workshops. Methods that will be used to engage and/or consult with each of the stakeholder groups identified include Interviews with stakeholder representatives and key informants; Surveys, polls and questionnaires; Public meetings and/or focus groups with specific groups; Participatory methods; as well as other traditional mechanisms for consultation and decision making.

5. Methods that will be used to communicate with each of the stakeholder groups identified include Newspapers, posters, radio, television; Information counters and exhibitions, or other visual display; Brochures, leaflets, posters, non-technical summary documents and reports. Also, giving CV-19 limitations, logistical and security related challenges, the project will be using ICTs to receive feedback and to ensure ongoing communications with stakeholders outside of formal consultation meetings.

Stakeholder Table

Stakeholder	Mandate	Project Role
Federal Government		
<i>Forest National Corporation (FNC)</i>	<p>The FNC is a Parastatal service-oriented and autonomous corporate body, it is the federal institution mandated to manage all federal forests in the country and is in charge of:</p> <ol style="list-style-type: none"> 1) Technical supervision for forests all over the Sudan; 2) Training and qualifying the technical staff in the field of forest and natural resources; 3) Dissemination of awareness amongst the officials and citizen in matters relating to forests and natural resources; 4) Conducting studies and researches in order to lay out the necessary plans for assessing forests and natural resources all over the Sudan and developing them; 5) Increasing the forests areas by reserving more areas and by increasing the required areas at a ratio not less than 25% of the total area of the country; 6) Coordinating efforts with the competent authorities in matters relating to general policies of forests, together with the preparation and implementation of anti-desertification projects; 7) Coordinating efforts with the competent authorities in matters relating to land use and land investment for the purpose of establishing new forests, developing them and encouraging agricultural afforestation; 8) Cooperating with the competent authorities in forest related fields and encouraging applied research; 9) Encouraging investment in forests, in collaboration with the competent authorities in the country; 10) Employing a qualified staff in order to enable the corporation to carry out its responsibilities; 11) After obtaining the competent Minister's approval the corporation shall proceed to owning, buying and selling of lands, real estate and constructing buildings on them as well as maintaining such buildings and constructing different facilities thereon in order to realize the corporation's objectives; and 12) Imposing tariffs or fees or increasing royalties on forests crops and gum Arabic, in accordance with the regulations. 	<p>Lead Executing Agency as per the OPIM modality, overall day-to-day project management, leads cross sectoral coordination for decision-making and policy strengthening across the riverine landscapes</p>

<p><i>Higher Council for Environment and Natural Resources (HCENR)</i></p>	<p>The HCENR is the technical arm of the Council of Ministers of the Government of Sudan, under the Chairmanship of the Prime Minister, in charge of formulating environmental policies, legislation and strategic planning for the conservation and sustainable management of Sudan's environmental and natural resources. As an inter-ministerial government agency, it coordinates environmental affairs and sustainable management of natural resources across all socio-economic sectors at federal and state levels.</p> <p>Its mandate also includes oversight and facilitation of the implementation and enforcement of environmental policies and legislation in coordination with respective executive bodies of the federal and state governments. It also aims to promote international cooperation, coordinate participation in global environmental conventions and protocols and utilize associated multilateral financing instruments and technology transfer mechanisms.</p>	<p>Lead entity for cross sectoral coordination among all relevant Government entities at federal and state levels</p> <p>At project inception, the HCENR will organize multilateral consultations involving the FNC and other key technical ministries and departments, to coordinate the policy and technical interventions of the landscape approach that will be implemented inside the forest reserves (FNC led), and outside the forest reserves (Co-led by other federal and state entities)</p> <p>The HCENR will Co-lead the implementation of Output 1.3 and Output 2.3</p>
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<p><i>Ministry of Agriculture and Forestry</i></p>	<p>Since its inception in 1953, its name changed according to its specializations and tasks, it is currently called the Ministry of Agriculture and Forestry since 2019.</p> <p>In charge of policy formulation, planning and monitoring of developments, research and extension services for agriculture and overall natural resources protection, conservation and development. Has a number of associated research centres at federal and state levels</p> <p>Its tasks and specializations include: 1) Select and adopt appropriate technology in the field of agriculture; 2) Develop programs and methods of agricultural extension; 3) Supervising and investing natural resources; 4) Rationalize the use of agricultural lands to stop environmental degradation and combating drought and desertification in cooperation and coordination with the relevant authorities; 5) Train human resources in the fields of agriculture and natural resources; 6) Develop and maintain pastures in coordination with the relevant authorities; 7) Monitoring and combating national pests in coordination with the concerned authorities; 8) Follow up on the implementation of laws that encourage and protect forests; 9) Supervise federal investment in the field of agriculture; 10) Supervise agricultural statistics and publish them at the national level; 11) Supervise international and regional cooperation projects and investments in the field of agriculture; 12) Promote cooperation in the fields of agriculture and natural resources</p>	<p>Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Agricultural extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)</p>
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<p><i>Ministry of Animal Resources</i></p>	<p>Since its inception in 1902, its name changed according to its specializations and tasks, it is currently called the Ministry of Animal Resources since 2020</p> <p>In charge of policy formulation, planning and monitoring of developments, research and extension services for livestock and rangelands. Has a number of associated research centres at federal and state levels</p> <p>Its tasks and specializations include: 1/Ensure livestock health to boost food security and exports of livestock and fish; 2/Develop and maintain slaughterhouses in line with international standards; 3/Develop and maintain veterinary services in the states; 4/Valorise Sudanese species and increase their productivity; 5/Improve breeds for intensive meat production systems to increase their competitiveness; 6/Prepare standard specifications for Sudanese animal products in conformity with international standards; 7/Facilitate the introduction of modern technologies to improve performance; 8/Encourage investment in of livestock and fisheries to achieve food security and support exports; 9/Provide market information on internal and external markets for animal and fish products; 10/Developing and qualifying veterinary extension and supporting pastoralist development programs; 11/Contribute to programs to combat poverty and increase family incomes; 12/Provide veterinary medicines, vaccines and monitor their uses; 13/Supervise the import and registration of medicines; 14/Upgrade the level of drug control; 15/Provide local poultry and fish production inputs, focusing on the optimal utilization of local resources; 16/Work to introduce livestock in the southern states into the national economy; 17/Develop and maintain infrastructure in war-affected areas; 18/Establish model productive farms; 19/Develop federal and state legislation to support production, marketing, quality control, consumer protection and environmental protection; 20/Follow-up programs to employ veterinary, animal production and natural resources graduates in appropriate fields in the public and private sectors.</p>	<p>Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Livestock extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)</p>
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<i>Wildlife Conservation General Administration</i>	<p>It is the federal authority in charge of the management of terrestrial and marine protected areas (MPA) in Sudan. It is responsible for implementing the Federal Protection of Hunting and National Parks Law of 1986 related to the biodiversity and habitat conservation in Sudan.</p> <p>Its functions and responsibilities include: 1) Developing and implementing laws and legislations concerning protected areas in Sudan; 2) Developing management plans and policies for the protected areas in Sudan; 3) Encouraging wildlife studies and research, as well as increasing awareness among Sudanese people.</p>	Support ecosystem assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
<i>Agricultural Research Corporation (ARC)</i>	<p>ARC is Sudan's principal research arm on agriculture, it ambitions to become a Centre of Excellence for agricultural research by developing skilled manpower, conducting quality research, and transferring technologies to ensure sustainable crop production. It aims to achieve food security, alleviate poverty, generate income, promote agricultural exports and conserve natural resources.</p> <p>ARC has about 24 national research programs, structured into 4 thematic areas namely: 1) Sustainable crop production; 2) Natural Resources management; 3) Agricultural socioeconomics and policy analysis; and 4) Knowledge management and Up scaling</p> <p>It runs 14 research centres (including the Forestry Research Centres), 27 research stations (including in Khartoum area, Dongula, Marwe, and Wad Medani) and employs about 610 staff, out of which more than 300 hold a PhD.</p>	Support forest assessments under Output 1.1, the FFFS trainings under output 2.1 and output 2.2, and the implementation of demonstration practices under Output 2.3 (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
<i>Animal Resources Research Corporation (ARRC)</i>	Established in 1995, the Animal Resources Research Corporation is a Government entity affiliated to the Ministry of Animal Resources, it has several research centres working on different thematic of livestock-related research.	Support livestock-related assessments, trainings and demonstration practices (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)

Wildlife Research Center (WRC)	Established in 1968, currently affiliated to the MoAR. WRC aims to promote wildlife-related fundamental and applied research and knowledge for wildlife conservation through research, and technology transfer.	Support wildlife-related assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
<i>General Administration for National Energy Affairs</i>	<p>Formerly the National Energy Administration, which was affiliated to the Ministry of Energy and Mining since 1980. In 1995, it became part of the Sudanese Petroleum Corporation, under the name of the General Administration of Energy Affairs.</p> <p>The GANEA is an applied research department for renewable energy technologies. It is structured into 2 departments namely: 1) The Alternative Energy Department, working on solar, wind and hydroelectricity; and 2) The Department of Biomass working on Biogas, Composting of agricultural waste and Biofuels.</p>	Will facilitate the implementation of demonstration practices related to clean energy alternatives under Output 2.3 to reduce the pressure on forests from fuelwood collection (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)
<i>Ministry of Tourism and Wildlife</i>	<p>It performs its activities through the central ministry, wildlife preservation department, tourism police forces department, the international Sudanese tourism company and the international Quasr Company.</p> <p>The Ministry is in charge of setting and implementing the general policies for wildlife protection, protecting wildlife and administering national game reserve parks, promote tourism in Sudan including wildlife-related ecotourism, and developing the standards for issuing hunting permits.</p> <p>It strategically aims to develop the tourism sector including wildlife-related ecotourism in compliance with Sudanese values and traditions, to create job opportunities and increasing tourism revenues.</p>	Will facilitate the implementation of demonstration practices related to eco-tourism especially in the Sunut Forest in Khartoum under Output 2.3 to support alternative livelihoods for women and youth from local communities (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)

<i>Ministry of Irrigation and Water Resources</i>	<p>Established in 2012, under the name of Ministry of Water Resources and Electricity, is in charge of maintaining the national water infrastructures, developing and efficiently using water resources using cost effective best practices in irrigation, drinking water & electricity to satisfy demands in line with the Standards, while taking into consideration environmental conservation.</p> <p>It has a Training and Capacity Development Unit in charge of planning and coordinating specialized training programs in all areas related to water resources, including the preparation of a concept and curriculum for training courses.</p> <p>It also has a Regional Water Harvesting Centre in charge of carrying out specialized training programs, capacity development activities, and raising awareness and knowledge in the field of water harvesting through training courses for participants at the national and regional levels.</p>	<p>Will contribute to the FFFS curricula and training, facilitate the implementation of demonstration practices related to water harvesting under Output 2.3, as well as the maintaining of flood-water canals in the riverine landscape (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)</p>
<i>Central Bureau of Statistics (CBS)</i>	<p>Established in 1903 as a division within the Customs Department primarily Charged to collect and compile foreign trade statistics, it evolved over time to operate under the council of ministers since 2000.</p> <p>Today, the CBS aims to develop a unified and comprehensive up-to-date statistical system, to unite standards and concepts, definitions and statistical terminology into a comprehensive information system which serves as a tool for planning and development in all spheres of life in Sudan.</p> <p>The organizational structure of the central Bureau of statistics consists of 4 general administrations and other departments and subdepartment.</p>	<p>Will contribute to the assessments under Output 1.1 related to the multiple values of biodiversity and ecosystems services across the riverine landscapes in Sudan, as well as the NCA trainings using FAO's SEEA AFF and B Intact tools (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)</p>
<i>Ministry of Finance and Economic Planning (MoFEP)</i>	<p>As the main body responsible for managing Sudan's economy, the Ministry aims to invest internal resources and attract external resources towards a sustainable economic pathway in line Sudan's strategic economic and social goals.</p>	<p>Has a key role in mainstreaming biodiversity into national planning to get financing for biodiversity through advocacy based on the figures, data, and value for nature extracted from the NCA assessments under output 1.1</p>
<i>General Directorate of Women and Family Affairs</i>	<p>Part of the Gender Machinery in Sudan in charge of strengthening the capacity of federal and state institutions to deliver specific functions and responsibilities that accounts for gender equality and human rights of women</p>	<p>Will facilitate gender mainstreaming in line with the GAP and the upscaling of gender inclusive practices across productive landscapes in Sudan</p>

<i>Ministry of Higher Education and Scientific Research (MOHE)</i>	<p>The Ministry aims to provide higher education according to quality and competence standards, to provide students with appropriate knowledge and skills for the job market.</p> <p>It also works to build human resource capacities in various scientific disciplines, develop and disseminate knowledge through scientific research and promote local technology.</p>	Cooperation to design and deliver the FFFS curricula and training, as well as to manage and disseminate the knowledge generated from the project
State and Local Government		
State Ministries of Production and Economic Resources in Northern, Khartoum and Gezira States	The State Governments exercise authority in their respective States and provide proximity public services. The State Ministries of Production and Economic Resources in Northern, Khartoum and Gezira States support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities
Rural Councils	Local governments are a subset of State governments. the Rural Councils were established following the People's Local Government Act of 1971, intended to have a wide range of responsibilities independent of the central government and to derive their authority from regular local elections	Will facilitate the implementation of project interventions at local level in close coordination with the HCENR, FNC, the State Ministries of Production and Economic Resources and other federal and state entities
International Organization		
FAO	Led detailed project design, FAO representatives participated to the inception and validation workshops, as well as the technical meetings Series during the PPG phase. FAO did also ensure that economies of scale are achieved with the LDCF project in North Darfur during project design and implementation.	GEF Implementing Agency. Will support implementation and technical back-stopping.
UNDP	UNDP has implemented/is implementing several projects in Sudan including "Strengthening Targeted National Capacities for Improved Decision Making and Mainstreaming of Global Environmental Obligations", and "Strengthened Protected Areas System and Integrated Ecosystem Management in Sudan"	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices

World Bank	Provided loans and grants through various projects in Sudan, currently implementing the GEF-funded Sudan Sustainable Natural Resources Management / SSNRMP and the Sustainable Natural Resources Management Project -AF	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
IFAD	Implemented various projects in Sudan, currently the GEF implementation Agency for the Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP)	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
UNEP	Implementing a number of projects in Sudan, including Sudan's First State of Environment and Outlook Report 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
AfDB	Provided loans and grants to implement several projects in Sudan including the \$14.96 million 'Accelerating Women's Entrepreneurship and Access to Finance (AWEAF)' project approved in 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices
Academia		
<i>Sudan University of Science & Technology, College of Forestry & Range Sciences (SUST)</i>	<p>The university includes 25 colleges, including the College of Forestry & Range Sciences, offering programs at postgraduate levels (doctorate, masters and higher diplomas) and other degrees at the bachelor's and technical diploma levels, as well as training and continuing studies programs</p> <p>The university offers its programs through traditional methods, by affiliation and via e-learning. Relevant programs include agriculture, veterinary, and forests,</p> <p>It has a number of Institutes and research centres including the Institute for Women and Community Development.</p>	Cooperation to design and deliver the FFFS curricula and training, as well as to mainstream gender into project interventions, and disseminate knowledge generated from the project
<i>National Centre for Research (NCR)</i>	<p>Established in 1991, is affiliated to the Ministry of Higher Education and Scientific Research, and has a similar status to Sudanese universities. Its conducts scientific and applied research for the purpose of economic and social development in Sudan. The NCR has research relations with several national and international institutes.</p> <p>The Centre includes various Research Institutes including on Environment and Natural Resources, as well as an information and documentation centre, and a publication department. Research is carried out by 180 researchers, with facilities available for foreign scientists interested in working in Sudan.</p>	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, as well to conduct the biodiversity and ecosystem assessments under Output 1.1 and the design/implementation of demonstration practices related to NTFPs value chains under Output 2.3

University of Dongola, Faculty of Agricultural Sciences (UofD)	<p>Founded in 1994 and accredited by the Ministry of Higher Education and Scientific Research, the university offers Postgraduate Diploma, Master's Degree, Doctor's Degree, Bachelor's Degree or equivalent.</p> <p>Its Agricultural Sciences Faculty focuses on Crop Production, Horticulture, Agricultural Economics, Agronomy, Animal Husbandry, Food Science, and Agriculture.</p>	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Kudroka riverine landscapes
University of Khartoum, faculty of Forestry (UofK)	Its faculty of Forestry has 4 departments specialized in Forest Management, Forest Products and Industries, Forest Protection and Conservation and well as Forest Silviculture. It also several institutes including the Institute of Environmental Studies and Peace Research the Institute.	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Khartoum's Sunut forest riverine landscapes
University of Gezira, faculty of Forest Science and Technology (UofG)	Gezira University, through its Faculty of Forest Science and Technology, conducts research aimed at solving the problems of forests and the environment, Its areas of expertise include contributing to short and long-term planning of forest resources, strengthening scientific links between the Faculty, Educational, Research and Production Institutions within and outside Sudan, and serving the community, meeting its needs and upholding the spiritual and human values pertaining to forest resources and the environment.	Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Wad Medani, Rufaa, and Haj Abdallah riverine landscapes
University of Bahri, College of Natural Resources and Environmental Studies	Established in 2011 in the University of Juba's Khartoum campus following the secession of South Sudan. Its College of Natural Resources and Environmental Studies, has departments on urban forests, fisheries, environmental studies and wildlife management.	Cooperation to design and deliver the FFFS curricula and training, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in target riverine landscapes
CSOs		

Farmers Associations and Unions	Such as the Farmers Union of the Gezira Scheme, a civil society organization in forestry programmes implementation, which started large scale irrigated plantations to provide its members with fuelwood and building poles. The effort was financed by a statutory allocation of 2% of the net profit of the cotton crop grown annually. Technical assistance was provided by the FNC.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices in Gezira
Gum Arabic Producers Association	Civil society organization that encourages its members to increase production and protect the gum trees	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Rainfed Farmers Association	Civil society organization that established a fund through which several tree shelterbelts and woodlots were created in mechanized farming areas in Gadarif and Blue Nile States	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Sudanese Social Forestry Society	A CSO active in the areas of awareness raising campaigns, campaigning, and advocacy on Social Forestry and the Environment in Sudan	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Sudanese Environmental Conservation Society	CSO working to promote environmental conservation and sustainable development through community participation in Sudan. It targets the public at large with an emphasis on local communities, decision makers, teachers, layers, women, farmers, pastoralists and local leaders. It runs an environmental literacy program with experience in small pilot projects for environmental conservation and poverty alleviation in rural and sub-urban areas.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Sudanese Forestry Society	CSO working on awareness raising, research and publication on forestry related matters	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices

Sudanese Wildlife Society Primary	<p>Established in 2000 as an NGO, SWS works in collaboration with governmental entities in charge of wildlife conservation.</p> <p>It aims to raise awareness about wildlife conservation in Sudan, promote research and cooperation, and support the establishment of zoos.</p>	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices (eco-tourism and wildlife-related interventions in the Sunut forest in Khartoum)
Local associations	Various local CSO's exist within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Livestock producers? associations and unions	Similar to farmers, livestock producers are structured into associations and unions within the target riverine landscapes, working on a wide array of community-related thematics.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Women and youth groups	Various women and youth led groups are structured in local CSO's exist within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices
Private Sector		
Agricultural Cooperatives (agriculture, livestock and fisheries)	Similar to CSOs, farmers, livestock herders, and fishermen are also structured into private for-profit entities such as cooperatives, they provide their members with different services and defend their interests.	Consultations and cooperation to support FFFS trainings and experimentation practices
Private Service providers	These are involved in the procurement and distribution of different goods and services to farmers, livestock herders and fishermen in the riverine landscape, including agricultural inputs and equipment, as well as veterinary products and services.	Consultations and cooperation to support experimentation practices

Private Entrepreneurs	Sudanese women & men are increasingly doing business through digital mediation (using computers and smartphones) through social media platforms, linked to digital communities, to sell typical female consumer goods, such as cosmetics and perfumes.	Consultations and cooperation to support women-led and youth-led start-ups and entrepreneurship along NTFPs value chains at local and national levels
Gezira Scheme	Sudan's Gezira Board (SGB) manages the production of agricultural crops such as cotton and wheat in Gezira State. It supports social development projects.	Consultations and cooperation to support experimentation practices in Gezira
Kenana Sugar Company	Established in 1975, produces 400,000 tonnes of sugar per year as well as ethanol and other by-products. It contributes to forest management and tree planting through Community Forestry Partnerships.	Consultations and cooperation to support community-based forestry partnerships
Eco-tourism companies	A number of eco-tourisms and tour agencies are operating in Sudan offering packages including medieval sites such as Old Dongola. The sector is poised to develop further in line with the Government's ambition to develop ecotourism including in tourist villages along the red sea coast. Popular attractions include Dinder National Park, the Marrah Mountains, and archaeological sites such as the Pyramids of Meroe, tombs at Kerma, and the temple at Soleb.	Consultations and cooperation to valorise the eco-tourism potential of the Sunut forest reserve in Khartoum
Operators of NTFPs value chains	A number of private producers and small companies are operating along local value chains processing biodiversity-derived products such as baobab fruits, juice and power, extracts from aromatic and medicinal plants, and beekeeping products.	Consultations and cooperation to valorise NTFPs, structure local value chains and empower women and youth to generate alternative income
Banks and micro-finance institutions	Such as the Agricultural Bank of Sudan, through its rural finance programs such as the microfinance Initiative (ABSuMI) providing small loans not exceeding SDG 2,000 and oriented towards of entrepreneurs, farmers, pastoralists, herdsmen, and craftsmen from small rural families.	Cooperation to close the last-mile if rural micro-finance to establish micro-financing schemes for incomes generating activities through the valorization of NTFPs, and the introduction of clean energy alternatives to fuelwood

Engagement Methods

The project will be organizing over 100 consultations, focus groups, participatory planning meetings, as well as women and youth empowerment workshops. Methods that will be used to engage and/or consult with each of the stakeholder groups identified include Interviews with stakeholder representatives and key informants; Surveys, polls and questionnaires; Public meetings and/or focus groups with specific groups; Participatory methods; as well as other traditional mechanisms for consultation and decision making.

Methods that will be used to communicate with each of the stakeholder groups identified include Newspapers, posters, radio, television; Information counters and exhibitions, or other visual display; Brochures, leaflets, posters, non-technical summary documents and reports. Also, giving CV-19 limitations, logistical and security related challenges, the project will be using ICTs to receive feedback and to ensure ongoing communications with stakeholders outside of formal consultation meetings.

Mainstreaming gender and conflict sensitivity

Special attention was given to women and vulnerable social groups such as youth, which allowed the project to capture valuable contributions during the HH survey and focus groups discussions to design interventions for the empowerment of rural women and youth as indicated in details in the Gender Mainstreaming Strategy and Action Plan report annexed to the Project Document.

Furthermore, as part of the data analysis process, a clinic approach was used to identify any disgruntled actors and possibly opposing stakeholders who could potentially disrupt the project, in order to address their concerns and ensure their full engagement during project implementation by mainstreaming conflict sensitivity into project design.

Monitoring and Reporting

M&E and reporting milestones	How stakeholders will be involved
PPR	The PPR will be prepared by the PMU, under the lead of the NPC, and the overall oversight of the NPD, by June 30th and December 31st of each implementation year. The PPR will be shared with key relevant stakeholders for their inputs and their comments duly addressed in the final version of the PPRs.

PIR	The PIR will be conducted following an inclusive and participatory approach. At the beginning of each PIR exercise, a participatory workshop will be organized to navigate the requirements and deadlines. Inputs from key relevant stakeholders will be collected by the PMU, in coordination with the NPD/FNC and GEF OFP/HCENR.
MTR	During the MTR exercise, extensive consultations will be facilitated by the PMU to enable the external evaluators assess the progress achieved by the project towards meeting its mid-term targets, identify bottleneck and propose potential corrective measures and management responses to put the project on-track.
TE	Similar to the MTR, during the TE exercise, extensive consultations will be facilitated by the PMU to enable the external evaluators assess the progress achieved by the project towards meeting its end-targets, identify potential successes and failures, codify lessons learned, and recommend management responses to sustain project achievements and results.

STAKEHOLDER ENGAGEMENT MATRIX

Stakeholder	Type	Key function within mandate/activity related to the project	Consultation methodology & date of consultations (PPG)	Expected role in project implementation (Implementation)	Comments
Federal Government					

Forest National Corporation (FNC)	Key	Manages all federal forests in the country and is in charge of technical supervision for forests all over the Sudan; training and qualifying the technical staff in the field of forest and natural resources; dissemination of awareness amongst the officials and citizen in matters relating to forests and natural resources; conducting studies and researches in order to lay out the necessary plans for assessing forests and natural resources all over the Sudan and developing them.	Regular meetings during PPG phase, including PPG inception and validation workshops respectively on Oct 14 th and April 8 th	Lead Executing entity as per the OPIM modality, overall day-to-day project management, leads cross sectoral coordination for decision-making and policy strengthening across the riverine landscapes	NA
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Higher Council for Environment and Natural Resources (HCENR)	Key	The HCENR is the technical arm of the Council of Ministers of the Government of Sudan, under the Chairmanship of the Prime Minister, in charge of formulating environmental policies, legislation and strategic planning for the conservation and sustainable management of Sudan's environmental and natural resources.	Regular meetings during PPG phase, including PPG inception and validation workshops respectively on Oct 14 th and April 8 th	Lead entity for cross sectoral coordination among all relevant Government entities at federal and state levels	NA
General Directorate of Policies, Planning and Environmental Awareness (GDPPEA)				At project inception, the HCENR will organize multilateral consultations involving the FNC and other key technical ministries and departments, to coordinate the policy and technical interventions of the landscape approach that will be implemented inside the forest reserves (FNC led), and outside the forest reserves (Co-led by other federal and state entities)	
General Directorate of Environmental Control (GDEC)					
General Directorate of Sustainable Resource Use and Ecological Balance (GDSRUEB)		GDPPEA supports interventions related to policies and planning, research and information, environmental education and awareness raising		The HCENR will Co-lead the implementation of Output 1.3 and Output 2.3	
General Directorate of Climatic Changes, Natural Disasters and Waste Management (GDCCNDWM)		GDEC is in charge of environmental inspection, environmental and social impact assessments, as well as biosafety related matters			
		GDSRUEB support interventions related to biodiversity conservation, desertification and land degradation control, and marine environmental protection			
		GDCCNDWM			

Ministry of Agriculture and Forestry (MoAF)	Key	In charge of policy formulation, planning and monitoring of developments, research and extension services for agriculture and overall natural resources protection, conservation and development.	Meetings with key federal and state representatives during field missions conducted in the target States (November 29th - December 3rd 2020, 10th of February, and 11th of March, 2021, March 26th - 28th, 2020) as well as during the Training workshops on NCAA on 28 January and 9 March 2021, and during the inception and validation workshops respectively on Oct 14th and April 8th	Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Agricultural extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Ministry of Animal Resources (MoAR)	Key	In charge of policy formulation, planning and monitoring of developments, research and extension services for livestock and rangelands. Has a number of associated research centres at federal and state levels		Support assessments under Output 1.1, spatial planning under output 1.3 as well as policy and technical interventions related to Livestock extension outside the forest reserves (Under the Co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Wildlife Conservation General Administration (WCGA)	Key	It is responsible for implementing the Federal Protection of Hunting and National Parks Law of 1986 related to the biodiversity and habitat conservation in Suda		Support ecosystem assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

Agricultural Research Corporation (ARC)	Primary	It aims to achieve food security, alleviate poverty, generate income, promote agricultural exports and conserve natural resources. It runs 14 research centres (including the Forestry Research Centres), 27 research stations (including in Khartoum area, Dongula, Marwe, and Wad Medani) and employs about 610 staff, out of which more than 300 hold a PhD.	Support forest assessments under Output 1.1, the FFFS trainings under output 2.1 and output 2.2, and the implementation of demonstration practices under Output 2.3 (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Animal Resources Research Corporation (ARRC)	Primary	It has several research centres working on different thematic of livestock-related research.	Support livestock-related assessments, trainings and demonstration practices (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

<i>Wildlife Research Center (WRC)</i>	Primary	<p>Established in 1968, currently affiliated to the MoAR. WRC aims to</p> <p>promote wildlife-related fundamental and applied research and knowledge for wildlife conservation through research, and technology transfer.</p>	Support wildlife-related assessments under Output 1.1, spatial planning under output 1.3 and other policy and technical interventions related to wildlife conservation within and outside the forest reserves (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
General Administration for National Energy Affairs (GANEA)	Key	<p>Working on alternative energies such as solar, wind and hydroelectricity, Biogas, Composting of agricultural waste and Biofuels.</p>	Will facilitate the implementation of demonstration practices related to clean energy alternatives under Output 2.3 to reduce the pressure on forests from fuelwood collection (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

Ministry of Tourism and Wildlife (MoTW)	Key	in charge of setting and implementing the general policies for wildlife protection, protecting wildlife and administering national game reserve parks, promote tourism in Sudan including wildlife-related ecotourism, and developing the standards for issuing hunting permits.		Will facilitate the implementation of demonstration practices related to eco-tourism especially in the Sunut Forest in Khartoum under Output 2.3 to support alternative livelihoods for women and youth from local communities (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Ministry of Irrigation and Water Resources (MoIWR)	Key	in charge of maintaining the national water infrastructures, developing and efficiently using water resources using cost effective best practices in irrigation, It has a Training and Capacity Development Unit in charge of planning and coordinating specialized training programs in all areas related to water resources, including the preparation of a concept and curriculum for training courses.		Will contribute to the FFFS curricula and training, facilitate the implementation of demonstration practices related to water harvesting under Output 2.3, as well as the maintaining of flood-water canals in the riverine landscape (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA

Central Bureau of Statistics (CBS)	Primary	aims to develop a unified and comprehensive up-to-date statistical system, to unite standards and concepts, definitions and statistical terminology into a comprehensive information system which serves as a tool for planning and development in all spheres of life in Sudan.	Will contribute to the assessments under Output 1.1 related to the multiple values of biodiversity and ecosystems services across the riverine landscapes in Sudan, as well as the NCA trainings using FAO's SEEA AFF and B Intact tools (Under the co-lead of the FNC and the HCENR and in cooperation with other federal and state entities)	NA
Ministry of Finance and Economic Planning (MoFEP)	Key	body responsible for managing Sudan's economy, the Ministry aims to invest internal resources and attract external resources towards a sustainable economic pathway in line Sudan's strategic economic and social goals.	Has a key role in mainstreaming biodiversity into national planning to get financing for biodiversity through advocacy based on the figures, data, and value for nature extracted from the NCA assessments under output 1.1	NA
General Directorate of Women and Family Affairs (GDWFA)	Key	in charge of strengthening the capacity of federal and state institutions to deliver specific functions and responsibilities that accounts for gender equality and human rights of women	Will facilitate gender mainstreaming in line with the GAP and the upscaling of gender inclusive practices across productive landscapes in Sudan	NA

Ministry of Higher Education and Scientific Research (MOHE)	Secondary	Aims to provide higher education according to quality and competence standards, to provide students with appropriate knowledge and skills for the job market. It also works to build human resource capacities in various scientific disciplines, develop and disseminate knowledge through scientific research and promote local technology.		Cooperation to design and deliver the FFFS curricula and training, as well as to manage and disseminate the knowledge generated from the project	NA
State and Local Government					
State Ministry of Production and Economic Resources in Northern State (MoPER)	Key	support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Meetings during field mission conducted in Northern State (March 26 th - 28 th , 2020)	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities	NA

State Ministry of Production and Economic Resources in Khartoum State (MoPER)	Key	support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Meetings during field mission conducted in Khartoum State (10th of February, and 11th of March, 2021)	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities	NA
State Ministry of Production and Economic Resources in Gezira State (MoPER)	Key	support the formulation of State land use maps, provide trainings, support the necessary infrastructure and equipment such as roads, irrigation canals, water pumps, improved seeds, veterinary services, valorization and marketing of agricultural products	Meetings during field mission conducted in Gezira State (November 29th - December 3rd 2020)	Will facilitate the implementation of project interventions at State level in close coordination with the HCENR, FNC and other federal and state entities	NA

Rural Councils	Key	intended to have a wide range of responsibilities independent of the central government and to derive their authority from regular local elections	Meetings during field missions conducted in the target States (November 29th - December 3rd 2020, 10th of February, and 11th of March, 2021, March 26th - 28th, 2020)	Will facilitate the implementation of project interventions at local level in close coordination with the HCENR, FNC, the State Ministries of Production and Economic Resources and other federal and state entities	NA
International Organization					
FAO	Key	Led detailed project design, FAO representatives participated to the inception and validation workshops, as well as the technical meetings Series during the PPG phase. FAO did also ensure that economies of scale are achieved with the LDCF project in North Darfur during project design and implementation.	GEF Implementing Agency	GEF Implementing Agency. Will support implementation and technical back-stopping.	NA

UNDP	Primary	UNDP has implemented/is implementing several projects in Sudan including ?Strengthening Targeted National Capacities for Improved Decision Making and Mainstreaming of Global Environmental Obligations?, and ?Strengthened Protected Areas System and Integrated Ecosystem Management in Sudan?	Meetings in Khartoum during exploratory meetings conducted by PPG Team and FAO Sudan	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
World Bank	Primary	Provided loans and grants through various projects in Sudan, currently implementing the GEF-funded Sudan Sustainable Natural Resources Management / SSNRMP and the Sustainable Natural Resources Management Project -AF		Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA

IFAD	Primary	Implemented various projects in Sudan, currently the GEF implementation Agency for the Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP)	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
UNEP	Primary	Implementing a number of projects in Sudan, including Sudan's First State of Environment and Outlook Report 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
AfDB	Primary	Provided loans and grants to implement several projects in Sudan including the \$14.96 million ?Accelerating Women's Entrepreneurship and Access to Finance (AWEAF) project approved in 2020	Exchange of knowledge and lessons learned to maximize synergies and capitalize on good practices	NA
Academia				

Sudan University of Science & Technology, College of Forestry & Range Sciences	Secondary	College of Forestry & Range Sciences offering programs at postgraduate levels (doctorate, masters and higher diplomas) and other degrees at the bachelor's and technical diploma levels, as well as training and continuing studies programs. It has a number of Institutes and research centres including the Institute for Women and Community Development.	Meetings in the 3 target States conducted by the PPG Team including during field missions (November 29th - December 3rd 2020, 10th of February, and 11th of March, 2021, March 26th - 28th, 2020), as well as during the Training workshops on NCAA on 28 January and 9 March 2021,	Cooperation to design and deliver the FFFS curricula and training, as well as to mainstream gender into project interventions, and disseminate knowledge generated from the project	NA
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National Centre for Research (NCR)	Secondary	<p>Its conducts scientific and applied research for the purpose of economic and social development in Sudan. The NCR has research relations with several national and international institutes.</p> <p>The Centre includes various Research Institutes including on Environment and Natural Resources, as well as an information and documentation centre, and a publication department. Research is carried out by 180 researchers, with facilities available for foreign scientists interested in working in Sudan.</p>	and during the inception and validation workshops respectively on Oct 14th and April 8th	Cooperation to design and deliver the FFFS curricula and training, as well to conduct the biodiversity and ecosystem assessments under Output 1.1 and the design/implementation of demonstration practices related to NTFPs value chains under Output 2.3	NA
University of Dongola, Faculty of Agricultural Sciences	Secondary	Its Agricultural Sciences Faculty focuses on Crop Production, Horticulture, Agricultural Economics, Agronomy, Animal Husbandry, Food Science, and Agriculture.		Cooperation to design and deliver the FFFS curricula and training for the Dongola Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Kudroka riverine landscapes	NA

University of Khartoum, faculty of Forestry	Secondary	Its faculty of Forestry has 4 departments specialized in Forest Management, Forest Products and Industries, Forest Protection and Conservation and well as Forest Silviculture. It also several institutes including the Institute of Environmental Studies and Peace Research the Institute.	Cooperation to design and deliver the FFFS curricula and training for the Khartoum Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Khartoum's Sunut forest riverine landscapes	NA
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University of Gezira, faculty of Forest Science and Technology	Secondary	conducts research aimed at solving the problems of forests and the environment, Its areas of expertise include contributing to short and long-term planning of forest resources, strengthening scientific links between the Faculty, Educational, Research and Production Institutions within and outside Sudan, and serving the community, meeting its needs and upholding the spiritual and human values pertaining to forest resources and the environment.		Cooperation to design and deliver the FFFS curricula and training for the Gezira Cohorts, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in Wad Medani, Rufaa, and Haj Abdallah riverine landscapes	NA
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<i>University of Bahri, College of Natural Resources and Environmental Studies</i>	Primary	<p>Established in 2011 in the University of Juba's Khartoum campus following the secession of South Sudan</p> <p>The College of Natural Resources and Environmental Studies, has departments on urban forests, fisheries, environmental studies and wildlife management.</p>		Cooperation to design and deliver the FFFS curricula and training, to conduct biodiversity and ecosystem assessments, and to design/implement demonstration practices related to NTFPs value chains in target riverine landscapes	NA
CSOs					

Farmers Associations and Unions	Primary	Such as the Farmers Union of the Gezira Scheme, a civil society organization in forestry programmes implementation, which started large scale irrigated plantations to provide its members with fuelwood and building poles. The effort was financed by a statutory allocation of 2% of the net profit of the cotton crop grown annually. Technical assistance was provided by the FNC.	Meetings in the 3 target States conducted by the PPG Team including during field missions (November 29th - December 3rd 2020, 10th of February, 11th of March, 2021, and March 26th - 28th, 2020), as well as during the Training workshops on NCAA on 28 January and 9 March 2021, and during the inception and validation workshops respectively on Oct 14th and April 8th	Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices in Gezira	NA
Gum Arabic Producers Association	Secondary	Civil society organization that encourages its members to increase production and protect the gum trees		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Rainfed Farmers Association	Primary	Civil society organization that established a fund through which several tree shelterbelts and woodlots were created in mechanized farming areas in Gadarif and Blue Nile States		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA

Sudanese Social Forestry Society	Primary	A CSO active in the areas of awareness raising campaigns, campaigning, and advocacy on Social Forestry and the Environment in Sudan		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Sudanese Environmental Conservation Society	Primary	CSO working to promote environmental conservation and sustainable development through community participation in Sudan. It targets the public at large with an emphasis on local communities, decision makers, teachers, layers, women, farmers, pastoralists and local leaders. It runs an environmental literacy program with experience in small pilot projects for environmental conservation and poverty alleviation in rural and sub-urban areas.		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Sudanese Forestry Society	Primary	CSO working on awareness raising, research and publication on forestry related matters		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA

Sudanese Wildlife Society	Primary	<p>Established in 2000 as an NGO, SWS works in collaboration with governmental entities in charge of wildlife conservation.</p> <p>It aims to raise awareness about wildlife conservation in Sudan, promote research and cooperation, and support the establishment of zoos.</p>		<p>Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices (eco-tourism and wildlife-related interventions in the Sunut forest in Khartoum)</p>	NA
Local associations	Primary	<p>Various local CSO's exit within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.</p>		<p>Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices</p>	NA
Livestock producers? associations and unions	Primary	<p>Similar to farmers, livestock producers are structured into associations and unions within the target riverine landscapes, working on a wide array of community-related thematics.</p>		<p>Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices</p>	NA

Women and youth groups	Primary	Various women and youth led groups are structured in local CSO's exit within the target riverine landscapes, these are structured into local associations working on a wide array of community-related thematics.		Consultations and cooperation to develop community-inclusive forest co-management plans, deliver FFFS training and demonstration practices	NA
Private Sector					
Agricultural Cooperatives (agriculture, livestock and fisheries)	Primary	Similar to CSOs, farmers, livestock herders, and fishermen are also structured into private for-profit entities such as cooperatives, they provide their members with different services and defend their interests.	Meetings in the 3 target States conducted by the PPG Team including during field missions (November 29th -	Consultations and cooperation to support FFFS trainings and experimentation practices	NA

Private Service providers	Primary	These are involved in the procurement and distribution of different goods and services to farmers, livestock herders and fishermen in the riverine landscape, including agricultural inputs and equipment, as well as veterinary products and services.	December 3rd 2020, 10th of February, 11th of March, 2021, and March 26th - 28th, 2020), as well as during the Training workshops on NCAA on 28 January and 9 March 2021.	Consultations and cooperation to support experimentation practices	NA
Private Entrepreneurs	Primary	Sudanese women & men are increasingly doing business through digital mediation (using computers and smartphones) through social media platforms, linked to digital communities, to sell typical female consumer goods, such as cosmetics and perfumes.		Consultations and cooperation to support women-led and youth-led start-ups and entrepreneurship along NTFPs value chains at local and national levels	NA
Gezira Scheme	Secondary	Sudan's Gezira Board (SGB) manages the production of agricultural crops and supports social development projects.		Consultations and cooperation to support experimentation practices in Gezira	NA

Kenana Sugar Company	Secondary	It contributes to forest management and tree planting through Community Forestry Partnerships.	Consultations and cooperation to support community-based forestry partnerships	NA
Eco-tourism companies	Primary	A number of eco-tourisms and tour agencies are operating in Sudan offering packages including medieval sites such as Old Dongola. The sector is posed to develop further in line with the Government's ambition to develop ecotourism including in tourist villages along the red sea coast. Popular attractions include Dinder National Park, the Marrah Mountains, and archaeological sites such as the Pyramids of Mero?, tombs at Kerma, and the temple at Soleb.	Consultations and cooperation to valorise the eco-tourism potential of the Sunut forest reserve in Khartoum	NA

Operators of NTFPs value chains	Primary	A number of private producers and small companies are operating along local value chains processing biodiversity-derived products such as baobab fruits, juice and power, extracts from aromatic and medicinal plants, and beekeeping products.	Consultations and cooperation to valorise NTFPs, structure local value chains and empower women and youth to generate alternative income	NA
Banks and micro-finance institutions	Primary	Such as the Agricultural Bank of Sudan, through its rural finance programs such as the microfinance Initiative (ABSuMI) providing small loans not exceeding SDG 2,000 and oriented towards of entrepreneurs, farmers, pastoralists, herdsmen, and craftsmen from small rural families.	Cooperation to close the last-mile if rural micro-finance to establish micro-financing schemes for incomes generating activities through the valorization of NTFPs, and the introduction of clean energy alternatives to fuelwood	NA

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; No

Co-financier; Yes

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

1. Please see the Project Document annex for a comprehensive Gender Assessment and Action Plan (also hereby attached)

2. We endeavored in the context of this project to mainstream gender considerations not only into the narrative underpinning the project design but also in the theory of change and the results frameworks. To establish a clear baseline at the PPG phase we have applied gender lenses to understand the underlying gender dynamics according to which men, women and other social groups can be disproportionately affected by the interplay of sex, gender, loss of biodiversity and ecosystem perturbation in the riverine landscapes along the river Nile in Sudan. We emphasize on the importance of equally engaging women and men as part of the incremental solution introduced by the project to advance gender equality as part of the package to generate Global Environmental Benefits.

3. The gender analysis and action plan developed in the PPG phase aims to enable women, men, youth, elderly, vulnerable populations sub-categories and other social groups within the intervention sites in Gezira, Khartoum, and Northern States to equally benefit from its interventions, and not to exacerbate the underlying drivers of gender inequality. In order to do so, sex and gender disaggregated data were extracted from the available literature, and complemented by a field surveys conducted in December 2020 - January 2021 despite COVID-19 challenges using tailored questionnaires and covering a sample of 235 households located in 7 villages within the target riverine landscape in Gezira State, these are namely *Beryab, Elryab, Abaas, Salama, Somtobar, Synga and Wadrahom*. Other field visits were conducted by the PPG team to the targeted riverine landscapes in Khartoum and Northern States in the first quarter of 2021.

4. Gender disaggregated data at the National-level (Sudan) and State-level (Gezira, Khartoum and Northern State) was gathered following a literature review and examined to identify the main trends and data gaps. Additional data was collected at the local level through field investigations within communities living in the vicinity of the riverine forests reserves which were accessible during the PPG phase. A Household Survey was conducted in December 2020 - January 2021 using tailored questionnaires and covering a sample of 235 households located in 7 villages within the target riverine landscape in Gezira State, these are namely *Beryab, Elryab, Abaas, Salama, Somtobar, Synga and Wadrahom*. While the survey could not

be extended to the other state due to COVID-19 related limitations, the PPG team strived to conduct technical field visits to the targeted riverine landscapes in Khartoum and Northern States in the first quarter of 2021, during which consultation through Focus group discussions were conducted including with Government stakeholders, community leaders, farmers, livestock herders and women leaders.

5. As noted, a clinic approach was used to gather expert views and triangulate the findings from the desk review, the HH survey and inputs from experts to draft the Gender Analysis, Gender Action Plan, and mainstream gender aspects into project design and implementation.

6. The GEF policy on gender equality, which was adopted in 2017 highlights an enhanced ambition to investing in gender equality and women's empowerment to deliver the results expected from GEF-funded projects and achieve global environmental benefits. The policy paves the way for GEF projects to go beyond a gender-sensitive 'do-no-harm' approach towards a gender-responsive 'do-good' approach which can ultimately create the enabling environment for gender-transformational change and achieve impact at a larger scale by bringing both men and women as part of the GEF-funded solutions.

7. In its revised gender Policy on Gender Equality 2020-2030, FAO recognizes the persisting inequalities between women and men which limit women's economic potential as economic agents and act as key obstacles to building sustainable and inclusive food systems and peaceful societies. The policy aims to address the root causes of gendered inequalities in agriculture and food systems to unleash the true potential of rural women and girls as part of the solution to eliminate hunger and poverty in the next decade.

8. By empowering women living in farming, pastoral and rural communities in Sudan's riverine landscapes to generate alternative income source including through the valorization of NWFPs, strengthening their skills and facilitating their access to markets, the project is expected to directly contribute to the 3rd objective of FAO's gender policy 'Women and men have equal rights and access to services, markets and decent work and equal control over the resulting income and benefits'. It will also indirectly contribute to objectives 1, 2, and 4 by: 1) enhancing women's participation in decision making using a co-management approach where local communities are more involved in forest management through spatial planning and Community Action Plans , and 2) by challenging overtime the social norms hindering women's access and control over productive assets, as well as by reducing the triple productive, reproductive and community burden shouldered by rural women in the intervention sites, whose situation is further deteriorating in the aftermath of the COVID-19 crisis.

9. Overall, the gender analysis conducted during the PPG shows deeply rooted social and cultural norms, exacerbated by poverty and resource scarcity both driven by conflicts, political instability and by climate change, resulted in a greater subordination of women while strengthening the domination of men within society. It is crucial to understand how the interplay between these factors is driving the socio-economic hardship that disproportionately affects

Sudanese women and children. Gender inequalities can be seen across the spectrum of the Sudanese society in unequal power relations and unjust socio-economic conditions. Women in Sudan still have a long way ahead to enjoy equal access to economic resources and productive assets, to equally participate in politics and to be equally represented in decision making positions.

10. Cultural traditions in Sudan can greatly influence men's and women's behaviors, this is again more pronounced in rural areas, where women may not be able for instance to use bicycles and wheelbarrows as means of transportation. Furthermore, the prevailing social norms and stereotypes are hindering women's control over productive assets such as land, and access to productive inputs, equipment, information, and financial services. Even though women are granted ownership rights over land and the right to inheritance, such rights could be disregarded or challenged by the existing social norms. Even when women own land, they may not be the ones controlling the way it is being used, or making decisions about how the revenues derived from land-use should be allocated. Men resistance to change not to lose the old privileges and cumbersome administrative processes may also discourage women from playing effective roles especially in the rural economy.

11. Women's limited access to markets considering that products marketing is mostly carried out by men, combined with constraints facing women's education to acquire the skills needed to perform qualified jobs, in addition to the triple burden of domestic work, caregiving and women being mostly involved in productive and community activities as unpaid family workers, are some of the major obstacles impeding the graduation of women in pastoral and agropastoral communities into the mainstream livelihood economy. For example, women tend to sell their products in weekly markets in villages while men have a relatively better access to different markets.

12. Gender-based division of labor and decision-making in agro-sylvo-pastoral communities can vary between communities based on several factors including the underlying gender norms, lifestyles, animal species, productive systems, population pressures, and conflicts. Overall, women tend to take care of pregnant, new born and sick animals, process milk and dairy products. Men are generally in charge of herd management, sale and slaughtering of animals, and purchase of feedstuff. The COVID-19 crisis is further impacting this division of workloads thus exacerbating the burden shouldered by women and children.

13. The Household survey shows that women in Gezira for instance, performed 94.5% of the household duties including providing care to children and elderly. These are serious barriers hindering women from improving their productivity and income. At the same time, this highlights the tremendous role played by women in rural Sudan to achieve self-sufficiency at household level such as through the production of subsistence vegetables.

14. Women in Sudan carry out a major portion of agricultural activities and bear almost the entire burden of household work, including water and fuelwood collection and food processing

and preparation. According to the Ministry of Agriculture, in the rainfed traditional sector both men and women participate in land clearance and in the preparation, harvesting, transporting and marketing of crops, while women carry out most of the planting, weeding and food processing. In the livestock sector, men have the primary responsibility for cattle and sheep raising, while women participate in milking and processing milk products. In the agro-forestry sector, women participate in all aspects of the work and have the major responsibility for seedling preparation and weeding. Men and women are sometimes responsible for different types of trees.

15. Although women play a crucial role in the agricultural cycle, they are yet to break the glass ceiling because of the social and cultural norms driving low education levels among women and girls, hindering thus women's ability to acquire the right set of skills to overcome the gender technology gap in agricultural production. The same applies to women's participation in decision-making, access to productive assets, financing and markets.

16. Women in the forestry sector within the rainfed agriculture and in relation to forestry activities contribute directly to preserving and managing forests that provide different services and resources contributing to human and animal food security, fuel and medicine, while men are predominantly responsible for extracting timber and non-timber forest products for commercial purposes (Aguilar et al., 2007). Men and women roles tend to be both involved in forests conservation efforts, although women may contribute less giving their multiple productive, reproductive and community roles.

17. Findings from the field investigations during the PPG phase, suggest that women have limited access to formal banking, this could be explained by the lack of collaterals such as land ownership. In contrast, men do benefit from most funding available in the agricultural sector through loans disbursed on machineries such as tractors. This applies to the target riverine landscapes in Gezira, Northern and Khartoum States, where financing is mostly channeled towards urban activities according to the available information from agricultural banks.

18. At the institutional level, a number of institutions such as the Ministry of Agriculture commissioned gender studies and have some sort of gender mainstreaming strategies and units in place. Nevertheless, women are still facing the glass ceiling and are mostly employed in mid-level or entry level jobs, while most managerial positions are still men-dominated.

19. Out of the surveyed households in Gezira State, 31.1% were women while men accounted for the other 68.9%. Household members were in the 20-86 age categories with an age mean of 48.5 years old. Most of the household heads finished primary education, while only 23.8% and another 6.8% did achieve high school and university education respectively. 72.8% of households reported that girls are going to school. Health conditions in the villages tend to be stable or slightly deteriorating over the last 2 years. The same trend is valid for the state of agriculture productivity which tends to be slight decreasing. More than 75% of the respondents identified themselves as belonging to a specific local or tribal group.

20. While women made 40.3% of the surveyed households, and performed 94.5% of the household duties including providing care to children and elderly, men made 62.1% of family decisions. Most families send their children including girls to school, with is the case for more than 72% of the surveyed families.

21. As household income remains low and is mainly made of free business activities, farming, livestock production, firewood collection, as well as labor and pension income, more than 63% of the participants highlighted their willingness to actively contribute to forest conservation if they can derive benefits from it. Agriculture is dominated by subsistent farming for household consumption, with farmers most selling the surplus on the farm or selling few products to local consumers. In terms of energy alternatives to fuelwood, 77% of the respondents supported cooking gas, followed by improved stoves and solar energy.

22. The main challenges facing the target riverine landscapes in Gezira State as reported during the community consultation include over-cutting forest trees, overgrazing, overhunting, the obstruction and closure of water canals channeling flood waters to *Acacia nilotica* trees, and the lack of community involvement in reforestation and conservation activities.

23. In the Northern State, women play significant roles in wood collection, animal care, weeding, and in crop cultivation and harvesting especially as producers of fennel, *Foeniculum vulgare*. As one study showed, although farmers made profits of about USD1300/ha, there is a need to improve technical skills through extension services and facilitate access to microfinancing. Similar to other parts of Sudan, rural women are facing the triple burden of productive, reproductive and community work, and have to cross long distances between their houses and farmlands. Women's active participation to previous projects showed promising results. Women groups are well organized at village level, are represented at about 40% in local bodies and run women owned small scale enterprises to generate alternative income and provide services such cultivation of vegetables, home nurseries, wood lots nearby the village water source, handcraft making, energy saving and community-based tourism projects.

24. The main benefits from the target riverine landscape in the Northern State, as reported during the community consultation, include providing grazing grounds for small ruminants, provisioning of fire woods mostly collected by women for household use, provisioning of forest fruits, desertification and flood control, as well as being a recreational space for families.

25. In the Sunut riverine landscape in Khartoum, women can benefit from the introduction of improved cookstoves for tea sellers, and the rehabilitation of outskirts of the forest with nurseries to produce biodiversity friendly plants, seedlings and seeds which can play the role of an economic fence thus protecting the forest and creating job opportunities for women and youth.

26. While the Sunut Forest has a huge ecotourism potential, it lacks necessary services for visitors such as benches, catering, toilets, pedestrian and cycling paths, a bird park. Recreational services to promote Nile tourism among Khartoum's inhabitants include playgrounds for children, a Zoo, and a permanent exhibition of NTFPs such as honey to create alternative income sources for forest-dependent local communities.

27. The main gender interventions in the target riverine landscape in Khartoum State, as reported during the community consultation, include providing clean energy alternatives for women from the surrounding communities, to prepare traditional drinks such as Abri or Hilumur, a sweet and sour drink, made out of fermented sorghum. Women raising goats, from the communities around the Sunut forest (this includes Elgooz, Rermailla and lamaab societies inside Khartoum town) can also benefit from equipment to process dairy products.

28. Evidence from IFAD's projects experimenting Women Saving & Credit Groups (SCGs), shows the potential of such innovative approaches in empowering rural women and facilitating their access to financial assets and services. Such approaches can be useful for women having limited access to formal banking in the absence of collaterals such as land ownership.

29. A business case study conducted in 2015 in 9 villages in North and South Kordofan by the Near East Foundation, aiming to empower women through NTFPs value chains in Sudan, proposed a successful model with a high potential for replication and joint action. Interventions included establishing revolving credit funds, building women-led associations, strengthening their managerial and technical capacities, as well as facilitating their access to market. Its results suggest an increase in women's income from NTFPs, improvements in women's decision-making and bargaining power, self-esteem, leadership, economic rights, and role in conflict mitigation, a reduction in resource-based conflicts that disproportionately affect women, a positive trend in forest resources, and an increase in CSO's effectiveness to deliver and sustain pro-poor market development initiatives.

30. Despite a harsh reality of deeply entrenched gender inequalities, Sudanese women proved to be part of the solution to some of Sudan's most challenging issues. Women effectively mediated for peace at local levels and within civil society, they provided for their families during conflicts, and persevered in advocating for equal opportunities through legal reforms and public awareness.

31. Sudanese women do also play a crucial role as the custodians of traditional knowledge related to natural resources and agriculture, in preventing land degradation, adapting to climate change and ensuring food security. In rural Sudan, women are farmers and livestock herders, if empowered they could play a more proactive role as champions of resilience at local, state and national levels. Empowering women to be part of the solution, is an additional step to make in the right direction.

32. The top priority to re-engineer the social contract between forest managers and communities, according to the respondents to the household survey conducted during the PPG phase, is through creating a strong incentive for local communities to be part of the solution towards establishing a co-management approach of the riverine landscape.

33. Doing so entails supporting local communities to generate alternative income streams through the sustainable valorization of biodiversity-based products, with a special focus on women and girls' empowerment. By improving productive practices and enabling a better valorization of natural resources along local value chains, with increased livelihoods and income, the project is expected to have knock-on impacts in terms of economic development and associated increases in employment opportunity.

34. It is thus crucial for the project to ensure that women are fully empowered to play a proactive role in the integrated co-management approach.

35. The proposed interventions and entry points to mainstream gender into project design and implementation are described in details in the Gender Mainstreaming and Action Plan annexed to the Project Document.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

4. Private Sector Engagement

1. Engaging the private sector to more fully mainstream biodiversity conservation within productive practices is a key element of this project. This includes specifically designing project interventions to target, build capacity, and benefit private stakeholders. The project will work with agriculturalists, livestock herders, and foresters at each location. Successful engagement with these private sector actors is critical to the project achieving desired conservation impacts

2. The private sector will be engaged through Component 1 spatial and management planning. This includes supporting the design and implementation of Community Action Plans. The private sector will be engaged through Component 2 directly through FFFS and associated demonstrations. The private sector will be engaged through Component 3 with on-going monitoring and knowledge management activities designed to help inform private sector decision-making and incentivize continued innovation and adoption of sustainable, pro-biodiversity conservation practices.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Section A: Risks to the project

1. The risks to the project have been identified and analyzed during the PPG phase and mitigation measures have been incorporated into the project design (see Table below). With the support and oversight of FAO, the Project's National Steering Committee (NSC) will be responsible for managing these risks as well as the effective implementation of mitigation measures. The Monitoring and Evaluation (M&E) system will serve to monitor outcome and output indicators, risks to the project and mitigation measures. The National Project Steering Committee will also be responsible for monitoring the effectiveness of mitigation measures and adjusting mitigation strategies accordingly, as well as identifying and managing any new risks that have not been identified during Project preparation, in collaboration with Project partners.

2. The six-monthly Project Progress Reports (PPR) are the main tool for risk monitoring and management. The PPRs include a section covering the systematic monitoring of risks and mitigation actions that were identified in the previous PPRs. The PPRs also include a section for the identification of possible new risks or risks that still need to be addressed, risk rating and mitigation actions, as well as those responsible for monitoring such actions and estimated timeframes. FAO will closely monitor project risk management and will support the adjustment and implementation of mitigation strategies. The preparation of risk monitoring reports and their rating will also be part of the Annual Project Implementation Review Report (PIR) prepared by FAO and submitted to the GEF Secretariat.

Description of risk	Impact/Probability Rating (Low: 1 to High: 5)	Mitigation Strategy
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<p>The Government of Sudan does not maintain the momentum and support required to accomplish project interventions within the time-frame.</p>	<p>Impact: 4 Probability: 3</p>	<p>The project relies upon the Government of Sudan to take action and decisions within a set period of time. The project responds to this risk by providing firm time-frames for the completion of activities. This includes requirements for the completion of fundamental tasks such as the elucidation of a land use plan (Component 1) within a set time period. If this land use plan is not completed in a timely manner, the foundations upon which much of the remaining project activities will not be well-aligned and/or directed towards the realization of intended GEBs. The project also requires the creation of a strategic implementation plan during the initial phases of implementation. This strategic implementation plan is designed specifically to guide the process and benchmarks required to be achieved throughout the entire project period. The project will report on progress towards these benchmarks throughout the implementation period. This makes certain that project implementation planning and reporting goes beyond the normal one-year planning process window. This approach ensures that actions are prioritized to make certain fundamentally important ? but challenging ? actions are taken in a timely manner for project success. FNC has decentralized services, and these will be activated to the extent possible in order to bridge episodes of political/social unrest.</p>
<p>Private party stakeholders fail to engage with capacity building efforts related to the uptake of sustainable practices.</p>	<p>Impact: 4 Probability: 3</p>	<p>The project relies upon private enterprises and particularly rural agriculturalists, herders and forest users to engage in capacity building programs (e.g., FFFS) to identify practice improvements. This project will not fully deliver GEB objectives if these private enterprises engage in capacity building and adopt improved practices. The project has addressed this risk in the design and will continue to address this risk during implementation by taking an approach that is responsive to private enterprise needs and generates incentives for private enterprise engagement. This includes making certain that private enterprise is able to visualize and realize tangible economic, environmental and social benefits stemming from the adoption of improved practices.</p>

<p>The project is not able to catalyze coordination and cooperative approaches between divergent Government Agencies.</p>	<p>Impact: 4 Probability: 3</p>	<p>The FNC is only responsible for Forest Reserves. They will need to motivate and engage additional Government Agencies if the project is to reach intended targets. To mitigate this risk, the HCENR has been brought on-board early in the design phase and is fully aware and prepared to provide support. The HCENR is a high-level organization within the Sudanese Government and is able to engage all actors. In addition, each of the critical stakeholders were brought in during the PPG phase and engaged. They are aware and supportive of the project actions. During implementation, the project will generate coordinated responses in order to direct the baseline along with incremental GEF financing to consolidate and strategically align actions to deliver GEBs.</p>
<p>The project's short duration will limit the extent of impacts due to covering only a few growing seasons.</p>	<p>Impact: 4 Probability: 3</p>	<p>The project will have a duration of four years. The first years will be needed to ramp up interventions, including planning, extension capacity, and the establishment of FFFS. This will likely shorten the period that allows for the adoption and monitoring of results stemming from improved practices. The project has addressed this risk by providing very clear benchmarks for the development of foundational work. If the project does not advance efficiently and quickly to reach these benchmarks in a timely manner, the mid-term review will flag issues and allow for modifications. However, the risk will still persist if the Government of Sudan does not quickly support the adoption of foundational work and adequate numbers of producers are not engaged.</p>
<p>Covid-19 adversely impacts the ability to implement project actions in a timely manner.</p>	<p>Impact: 4 Probability: 5</p>	<p>Please see the Covid-19 discussion below for more details. As discussed, the Covid-19 situation is evolving rapidly. The pandemic will very likely impact the project in the short-term with longer-term impacts diminishing over time. FAO at both the national and international levels has designed and adopted a number of Covid-19 coping strategies to make certain projects are able to move forward. Likewise, the GoS feels secure that again impacts will be most prevalent in the short-term and will diminish over-time. During the project design phase, remote working conditions proved to be adequate for most technical support activities. For field-based activities, the project is designed to rely primarily upon Sudanese national staff and government staff. This will limit requirements and constraints associated with international travel.</p>

<p>Natural resource constraints ? including climate change, drought, and food security - impact project ability to achieve intended results.</p>	<p>Impact: 3 Probability: 3</p>	<p>Please see "Environment and Social Risks" section below detailing climate related risks and proposed responses.</p> <p>The project is designed to address and alleviate the current exposure of rural people to natural resource risks, including those related to climate change, drought and food insecurity. Each of the project activities is directed to take an integrated approach to these issues, shifting current unsustainable management/production regimes to sustainable management/production. This includes enhancing the ability of producers to move away from current unsustainable crop, livestock and forest management practices to more integrated approaches that enhance the ecosystem services, including climate change resilience, offered by improved riverine forest conservation.</p>
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Covid-19

3. The COVID-19 situation is on-going and fluid. COVID will likely impact program implementation. However, the extent of this impact is unknown and will depend in part upon global events (e.g., progress with treatment, testing, and inoculation) and decisions made by the Government of Sudan during late 2021 prior to project inception and implementation.

4. Between 3 January 2020 to 24 March 2021, Sudan had approximately 31,282 confirmed cases of Covid-19 with 2,003 related deaths. As of 15 March 2021, a total of 270 vaccine doses have been administered[1]. As part of the response to Covid-19, a federal emergency operating center, a refugee consultation forum, and an IDP camp coordination task force was established.

5. Covid-19 is exacerbating Sudan's vulnerable humanitarian situations by worsening the economic crisis, pushing the health system to its limits and threatening food security as a result of lockdown measures. Containment measures disrupted road and air transportation, limited access to goods and services, disrupted livelihoods and education activities, and increased Gender Based Violence. It negatively affected essential health coverage and efforts to provide medication, immunization and surveillance related to a number of diseases such as polio, Acute Flaccid Paralysis, cholera, measles. Between June and September 2020, 9.6 million people were estimated to be in high acute food insecurity[2], an increase of 65% compared to the same period of 2019[3]. The number of children facing extreme hunger doubled from 521,000 to 1.1 million in the aftermath of the Covid-19 pandemic[4].

6. FAO and Government partners are constantly monitoring the situation and will determine the best approaches to mitigate potential issues as things move forward. The PPG phase has allowed us to consider potential COVID-19 restrictions within the design phase. This includes front-loading the project's components with activities that can more easily be accomplished through remote

technical support and/or by locally placed government staff able to move freely within identified zones. These partners are following the guidance and input of GEF as it evolves. As noted, the use of remote support has been quite effective to date linking international, regional, and national technical staff together.

7. The project will continue to follow the established programming direction and strategies. The project's inception phase will likely be in late 2021. At this time, much more clarity will be in place regarding the COVID-19 situation and associated restrictions. The project at inception will integrate COVID-19 considerations within the implementation strategy and action framework. This will include prioritizing implementation activities and adjusting the timing of these activities to address existing and potential COVID-19 considerations and concerns. This will include an elucidation of such concerns and a well-reasoned strategic response. The approach will integrate these concerns within associated risk analysis, taking into consideration issues such as availability of technical expertise, impacts to stakeholder engagement, effects upon enabling environments, and financing issues.

8. At the same time, the project will consider opportunities for this GEF investment to 'make a difference?'. This may include opportunities to lower environmental impacts and associated health risk exposures to limit the potential impacts of COVID-19. This is particularly pertinent to this project since it is designed to focus upon improving sustainable agriculture across productive landscapes with a direct linkage to improving environmental and human health. The project will also consider and integrate methodologies to monitor and evaluate COVID-19 related impacts to project design and implementation. In this way, the program will contribute to overall GEF capacity to innovate pro-active and effective responses to COVID-19 issues within existing and future programming.

Summary of the Climate Risk Analysis

9. An analysis of climate risks was conducted during the PPG with findings integrated within the final project design. Please see the annex for the complete analysis with key findings summarized here.

10. The Coordinated Regional Climate Downscaling Experiment (CORDEX) data was downloaded from the Earth System Grid Federation (ESGF) node and post-processed with the climate data operators (CDO) to interpolate rotated coordinates to regular latitude and longitude grids. Climatic files were combined to one file per representative concentration pathway (RCPs) from CDO. Future climate scenarios RCP 4.5 and the RCP 8.5 were used, ~550 and ~1000 CO₂ ppm by 2100 respectively. The different climatic variables (temperatures and precipitation) were derived from the latter data sources and visualized in R software. The processed climatic data was processed again in R to visualize average changes and extremes overtime, method developed by the climate risks team at FAO-HQ. Briefly, the R function reads netCDF files (network common data form) and computes 30 by 30-year averages by climatic variable, time period and country/province of interest.

11. Historical trends in maximum and minimum temperature both show a marked increase across all 3 target provinces (Northern, Al Jazirah and Khartoum states) over the period 1989 - 2020 according to data from The European Centre for Medium-Range Weather Forecasts ECMWF, with a more significant increase in minimum temperature when compared to maximum.

12. Rainfall in Sudan occurs mainly during the period June and September. Annual rainfall ranges from 25mm in the northern desert part to less than 800mm at its southern borders. Only a narrow region along the southern borders receives sufficient rainfall of more than 500mm, enough to sustain the growth of crops and pasture, while the greater part of the country is arid or semi-arid. Historical annual precipitation trends in the 3 states over the period 1989-2020 according to data from The European Centre for Medium-Range Weather Forecasts ECMWF show a slight decreasing trend, in particular in Khartoum and Al Jazirah with a relatively stable trend in Northern State. The historical data shows significant interannual variability, suggesting years with extreme dry conditions and others with increased water availability. This trend toward decreasing annual precipitation coupling with rising temperature will result in increasing evapotranspiration and challenges for water availability and productivity in the region.

13. The projections of climate change for Sudan indicate a continued warming trend under both the low (RCP 2.6) and high emission (RCP 8.5) scenarios (Baarsch et al., 2020). As shown in Figure 4, below, the expected mean annual temperature rise under RCP 8.5 by 2050 is 2.8°C. Assessment of maximum temperatures in Northern, Gezira and Khartoum states under RCP8.5 show values up to 46-48°C by the end of the century, approaching to those currently experienced in Mecca, Saudi Arabia, the reputed hottest inhabited city in the world (Burt, 2014). More importantly, in the absence of appropriate adaptation action, these higher temperatures will greatly intensify soil moisture loss through increased potential evapotranspiration, resulting in the removal of an additional 291 mm from the soil annually.

14. A recent climate assessment by IFAD discusses how climate change will likely challenge resources users in Sudan over the coming decades.^[5] Seasonal temperatures will also increase. The Red Sea, River Nile, Northern and North Darfur States will see anticipated highest seasonal variability with increases projected to be greater than 2.5 degrees Celsius. Figures 5 and 6 below highlight projected changes in maximum and minimum temperatures under RCPs 4.5 and 8.5 until the end of the century in Northern, Gezira and Khartoum States.

15. Extreme heat will also increasingly impact land, agriculture, animals and communities as temperatures rise across the region. Extreme temperature can cause detrimental impacts and result in death or forced migration. The figure 7 highlights the number of days that temperature maximum will exceed 40°C over the months June-September under different climate scenarios.

16. The states predicted to have the most seasonal variability in precipitation are the Red Sea, River Nile, Northern, and North Darfur. The precipitation changes in 3 target provinces under RCP4.5 show variable trends in the mid (2040-2070) versus the long-term (2070-2100), with decreases first in southern regions and subsequent increases in the longer term. Under RCP8.5 annual precipitation in particular in Gezira state shows a marked decrease into the future (Figure 7). Figures 8 and 9 below shows the annual precipitation in Northern, Gezira and Khartoum States under RCPs 4.5 and 8.5 until the end of the century for the wet seasons June-September.

17. FAO's analysis carried out in preparing this proposal, the World Food Programme and the UK Met Office showed in their nationwide vulnerability assessment that the potential, slight increase in future precipitation is likely to be dwarfed by the impact of higher temperatures on evaporation, exacerbated by increased surface run-off due to land degradation from inappropriate farming practices and overgrazing (WFP, 2016). Sudan's National Adaptation Plan of Action has forecast that the humid agro-climatic zones are likely to continue shifting southward, rendering areas of the north increasingly unsuitable for agriculture, which in turn will contribute to increasing resource scarcity (RoS, 2007). Sudan's Second Communication under the UNFCCC found that the areas suitable for agriculture are expected to decrease in size with negative impacts for both local incomes and food security (RoS, 2013a). The adverse impacts of climate change may impact some

areas indirectly as agriculture in the drier parts of Sudan become less productive, leading to an exodus of inhabitants, elevating the risk of conflict over resources further south (RoS, 2016). As part of the growing body of evidence on the relationship between climate change and social tensions and violence, studies carried out elsewhere in the Sahel have found that resource scarcity and migration of ethnic groups have in some cases triggered latent conflicts and lead to the emergence of new outbursts of violence over natural resources (Benjaminsen et al., 2012; Homer-Dixon, 1994; 1999).

18. Previous studies (e.g. Conway & Hulme 1996 Strzepek & Yates 1998;) have shown the difficulty in assessing the impact of the climate change on the Nile water resources. While a general consensus exists on the expected increase in tropical rainfall the geographical distribution on such changes differ significantly between models. The net effect of climate change on Nile river flow will be driven by changes in precipitation in Ethiopian highlands and changes in evaporation along the northern part of the Nile. Hulme et al. (2001) highlighted the presence of large disparities between models of rainfall predictions over both the Blue Nile and White Nile and further indicated that various mathematical and hydrological models produced inconsistent results, ranging from a 50% reduction in runoff in the Blue Nile Sub-basin due to a 20% decrease in precipitation, to an increase in water runoff up to the year 2025. If the negative projections prove accurate, the basin is likely to experience profound environmental change with serious security implications.

19. The assessment concludes with the following recommendations each of which has been integrated within the project design and will be carried forward during implementation:

Data Collection and Use

? Support collection and data on groundwater and water resources. There is a clear need for detailed monitoring information in future so as to manage the resources based on sound hydrogeological knowledge especially as groundwater has potential to support adaptation options.

? Enhanced monitoring of forest ecosystems and biodiversity to ensure proactive measures based on evidence for changes in the Nile River flows and forest cover.

? Ensure that climate information is a key aspect of planning activities related to biodiversity to design and implement management plans for native and invasive alien plant species.

Forest Restoration

? Replanting and rehabilitating of vulnerable areas with palatable range species

? Promotion of Assisted Natural Regeneration

? Change of species and genetic management

? Selection of traits and provenances promotes sustainability and biodiversity to enhance resilience to dry conditions.

- ? Enhance resilience to drought by avoiding clear-cut logging and preserving the forest biome
- ? Sustainable forest management for soil and water conservation, preserves water storage properties.

Enhanced Resilience Through Biodiversity Conservation

- ? Promote enhanced genetic and ecosystem diversity. Diverse ecosystems are more efficient carbon sinks; reduce vulnerability to climate-related hazards (e.g. mangroves protect coastal zones from extreme weather events) and ensure the sustainability of essential ecosystem services (food, medicine, material for living, air and water purification, temperature regulation etc.).
- ? Translocate species to most suitable environments depending on physiological and demographic factors.
- ? Increase the number of reserves and new areas for conservation management to ensure protection of key biodiversity areas. Protect large areas and increase reserve size.
- ? Create new buffer zones around reserves, as well as increasing reserve size to promote ecological reserve networks and conservation.
- ? Develop applied remote sensing and modelling for biodiversity monitoring and analysis. Avoid implementing CO2 mitigation activities that negatively affect biodiversity.
- ? Initiate long-term studies of species' responses to climate change.
- ? Incorporate climate topics and early warning systems in the development of training modules and curricula on biodiversity management for local forestry and agricultural extension staff and forest managers, and policy makers.

Water Storage and Use Efficiency

- ? New technologies such as use of efficient irrigation techniques, harvesting equipment, irrigation advisories and climate services.
- ? Introduction of improved drought-resistant varieties/early maturing varieties.
- ? Promotion of Soil and Water Conservation techniques and practices.

Social Measures

- ? Social measures including public awareness and involvement, regional cooperation to optimize the management and utilization of the shared water resources.

Climate-Informed Development Strategies and Policies

? Policy measures such as pricing and limiting the water use to efficient and effective economic and social uses.

? Employ climate compatible development strategies that promote economic growth while reducing risks to the environment. There are lessons to be learned from some countries in the Nile Basin such as Kenya that are already using a low carbon approach to development. The benefits include a reduction on carbon intensity, lower energy costs and general improvements to the environment among others.

[1] <https://covid19.who.int/region/emro/country/sd>

[2] IPC, 2020
https://reliefweb.int/sites/reliefweb.int/files/resources/IPC_Sudan_AcuteFoodInsecurity_2020JuneDec_Snapshot.pdf

[3] OCHA, 2020 bis

[4] <https://www.savethechildren.net/news/number-sudanese-children-facing-extreme-hunger-doubles-11-million-due-impact-covid-19>

[5] IFAD, 2013. Sudan - Environmental and Climate Change Assessment

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

6. Institutional Arrangements and Coordination

6.a Institutional arrangements for project implementation

Executing Agency

-

1. The *Forest National Corporation (FNC)* will have the overall executing and technical responsibility for the project, with FAO providing oversight as GEF Agency as described below. The FNC will act as the lead executing agency and will be responsible for the day-to-day management of project results entrusted to it in full compliance with all terms and conditions of the Operational Partnership Agreement signed with FAO. As Executing Agency of the project, the FNC is responsible and accountable to FAO for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and for effective use of GEF resources for the intended purposes and in line with FAO and GEF policy requirements.

2. The project organization structure is as follows:

Components & Outputs	Lead Agency	Supporting Entities
Component 1: Spatial and management and planning assess, prioritize and mainstream conservation and sustainable production practices		
Output 1.1: Ecological, social and economic assessment and mapping of riverine forest ecosystems	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources Forestry Research Centre, Agricultural Research Corporation General Administration for National Energy Affairs Range and Pasture Administration Ministry of Tourism Ministry of Finance Central Bureau of Statistics Sudan University of Science & Technology, College of Forestry & Range Sciences University of Dongola, Faculty of Agriculture University of Khartoum, Faculty of Forestry University of Bahri, College of Natural Resources and Environmental Studies State Ministries of Production and Economic Development University of Gezira, faculty of Forest Science and Technology
Output 1.2 Forest Reserve management plans updated	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources

Output 1.3: Riverine ecosystem conservation spatial plans designed and implemented	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources Forestry Research Centre, Agricultural Research Corporation, Ministry of Science and Technology General Administration for National Energy Affairs Range and Pasture Administration Ministry of Tourism Ministry of Finance Central Bureau of Statistics Sudan University of Science & Technology, College of Forestry & Range Sciences University of Dongola, faculty of Agriculture University of Khartoum, faculty of Forestry University of Bahri, College of Natural Resources and Environmental Studies State Ministries of Production and Economic Development University of Gezira, faculty of Forest Science and Technology
Component 2: Demonstration of riverine forest biodiversity conservation practices		
Output 2.1: FNC biodiversity conservation training program established	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Forestry Research Centre, Agricultural Research Corporation, Ministry of Science and Technology Sudan University of Science & Technology, College of Forestry & Range Sciences University of Khartoum, faculty of Forestry University of Bahri, College of Natural Resources and Environmental Studies University of Gezira, faculty of Forest Science and Technology University of Dongola, faculty of Agriculture
Output 2.2: Riverine ecosystem agriculture and livestock growers training program established	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources Forestry Research Centre, Agricultural Research Corporation, Ministry of Science and Technology General Administration for National Energy Affairs Range and Pasture Administration Ministry of Tourism State Ministries of Production and Economic Development Sudan University of Science & Technology, College of Forestry & Range Sciences University of Dongola, faculty of Agriculture University of Khartoum, faculty of Forestry University of Bahri, College of Natural Resources and Environmental Studies University of Gezira, faculty of Forest Science and Technology NGOs, CSOs, CBOs, VIOs

Output 2.3: Riverine ecosystem conservation and restoration demonstration program operationalized	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources Forestry Research Centre, Agricultural Research Corporation, Ministry of Science and Technology General Administration for National Energy Affairs Range and Pasture Administration Ministry of Tourism Sudan University of Science & Technology, College of Forestry & Range Sciences NGOs, CSOs, CBOs, VIOs
Component 3: Informed Decision-making and Sustained Impact		
Output 3.1: Ecosystem-based riverine monitoring and knowledge management program	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources Forestry Research Centre, Agricultural Research Corporation, Ministry of Science and Technology General Administration for National Energy Affairs Range and Pasture Administration Ministry of Tourism Sudan University of Science & Technology, College of Forestry & Range Sciences NGOs, CSOs, CBOs, VIOs
Output 3.2: Improved institutional frameworks sustain and amplify project impacts	FNC	Higher Council for Environment and Natural Resources Ministry of Agriculture and Forestry Wildlife Protection General Administration Ministry of Animal Resources Forestry Research Centre, Agricultural Research Corporation, Ministry of Science and Technology General Administration for National Energy Affairs Range and Pasture Administration Ministry of Tourism Ministry of Finance Central Bureau of Statistics Sudan University of Science & Technology, College of Forestry & Range Sciences

National Project Director

3. The government will designate a National Project Director (NPD). Located in the FNC Offices in Khartoum, the NPD will be responsible for coordinating the activities with all the national bodies related to the different project components, as well as with the project partners. He/She will also be responsible for supervising and guiding the Project Coordinator (see below) on the government policies and priorities.

Project Steering Committee

4. The NPD will chair the Project Steering Committee (PSC) which will be the main governing body of the project. The PSC will approve Annual Work Plans and Budgets on a yearly basis and will provide strategic guidance to the Project Management Team and to all executing partners. The PSC will be comprised of representatives from the FNC, HCENR, Ministry of Agriculture and Forestry (including a representative from the Gender Unit), Ministry of Animal Resources, Ministry of Irrigation and Water Resources, Wildlife Conservation General Administration, Ministry of Tourism and Wildlife, General Administration for National Energy Affairs, Ministry of Finance and Economic Planning, Central Bureau of Statistics, State Ministries of Production and Economic Resources in Gezira, Khartoum and Northern States, representative of partner Universities and FAO.

5. The members of the PSC will each assure the role of a Focal Point for the project in their respective agencies. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their agency, the concerned PSC members will: (i) technically oversee activities in their sector; (ii) ensure a fluid two-way exchange of information and knowledge between their agency and the project; (iii) facilitate coordination and links between the project activities and the work plan of their agency; and (iv) facilitate the provision of co-financing to the project.

6. The National Project Coordinator (see below) will be the Secretary to the PSC. The PSC will meet at least twice per year to ensure: i) Oversight and assurance of technical quality of outputs; ii) Close linkages between the project and other ongoing projects and programmes relevant to the project; iii) Timely availability and effectiveness of co-financing support; iv) Sustainability of key project outcomes, including up-scaling and replication; v) Effective coordination of government partner work under this project; vi) Approval of the six-monthly Project Progress and Financial Reports, the Annual Work Plan and Budget; vii) Making by consensus, management decisions when guidance is required by the National Project Coordinator of the PMU.

Proposed Steering Committee Membership	
Organization Represented	Position within Organization
FNC	DG
HCENR	SG
Ministry of Agriculture and Forestry	Under secretary
Ministry of Animal Resources	Under secretary

Ministry of Irrigation and Water Resources	Under secretary
Wildlife Conservation General Administration	DG
Ministry of Tourism and Wildlife	Under secretary
General Administration for National Energy Affairs	DG
Ministry of Finance and Economic Planning	Under secretary
Central Bureau of Statistics	DG
Gezira State Ministry of Production and Economic Resources	DG
Khartoum State Ministry of Production and Economic Resources	DG
Northern State Ministry of Production and Economic Resources	DG
Representative of Partner Universities	Dean
Representative of Partner CSOs	To be selected at project inception
FAO	Assistant FAOR (Programme)

National Project Coordinator

7. The National Project Coordinator (NPC) will oversee daily implementation, management, administration and technical supervision of the project, on behalf of the Operational partner and within the framework delineated by the PSC. S/he will be responsible, among others, for:

- ? Coordination with relevant initiatives;
- ? Ensuring a high level of collaboration among participating institutions and organizations at the national and local levels;
- ? Ensuring compliance with all Operational Partners Agreement (OPA) provisions during the implementation, including on timely reporting and financial management;
- ? Coordination and close monitoring of the implementation of project activities;

- ? Tracking the project's progress and ensuring timely delivery of inputs and outputs;
- ? Providing technical support and assessing the outputs of the project national consultants hired with GEF funds, as well as the products generated in the implementation of the project;
- ? Approving and managing requests for provision of financial resources using provided format in OPA annexes;
- ? Monitoring financial resources and accounting to ensure accuracy and reliability of financial reports;
- ? Ensuring timely preparation and submission of requests for funds, financial and progress reports to FAO as per OPA reporting requirements;
- ? Maintaining documentation and evidence that describes the proper and prudent use of project resources as per OPA provisions, including making available this supporting documentation to FAO and designated auditors when requested;
- ? Implementing and managing the project's monitoring and communications plans;
- ? Ensure adequate gender mainstreaming into project implementation in line with the guidance provided in the Gender Action Plan;
- ? Organizing project workshops and meetings to monitor progress and preparing the Annual Budget and Work Plan;
- ? Submitting the six-monthly Project Progress Reports (PPRs) with the AWP/B to the PSC and FAO;
- ? Preparing the first draft of the Project Implementation Review (PIR);
- ? Supporting the organization of the mid-term and final evaluations in close coordination with the FAO Budget Holder and the FAO Independent Office of Evaluation (OED);
- ? Submitting the OP six-monthly technical and financial reports to FAO and facilitate the information exchange between the OP and FAO, if needed;
- ? Informing the PSC and FAO of any delays and difficulties as they arise during the implementation to ensure timely corrective measure and support.

Project Management Unit

8. A Project Management Unit (PMU) will be co-funded by the GEF and established within the FNC's HQ in Khartoum. The main functions of the PMU, following the guidance of the Project Steering Committee, are to ensure overall efficient management, coordination, implementation and

monitoring of the project through the effective implementation of the annual work plans and budgets (AWP/Bs). The PMU will be composed of a National Project Coordinator (NPC) who will work full-time for the project lifetime. In addition, the PMU will include *the following members*:

Project PMU		
Position	Qualifications & Experience	Responsibilities
National Project Coordinator	<p>Minimum of 10 years of technical and managerial experience dealing with forest management issues in Sudan</p> <p>Minimum of MSc in Environmental or Biological Sciences (Applied Ecology, Forests Management, Biodiversity Conservation, Natural Resources Management, community-based management of natural resources)</p>	Daily implementation, management, administration and technical supervision of the project, on behalf of FNC and within the framework delineated by the PSC
Admin. & Finance Specialist	<p>Minimum of 10 years in Financial Management in Sudan.</p> <p>Minimum of Degree in Finance & Accounting or any other related field.</p>	Responsible for the budget planning, and supports the project management unit by offering insights and financial advice that will allow them to avoid over expenditure.
M&E Specialist	<p>Minimum of 5 years work experience in project monitoring and evaluation.</p> <p>Minimum of Masters-Degree in Project Management, results-based management, development evaluation, or other relevant disciplines.</p>	<p>Design monitoring and reporting tools, support implementation of project's M&E system and ensuring that project are monitored and reported.</p> <p>Will support Knowledge Management, Stakeholder Engagement, and system-wide capacity development.</p>

Gender Specialist	Minimum of 5 years work experience in gender mainstreaming, women empowerment, and other related areas.	In charge of mainstreaming gender considerations as stated in the Gender Action Plan into project interventions, and report on progress achieved to the M&E Specialist
	Minimum of Masters-Degree in gender studies, social sciences, and other relevant disciplines	Will support Knowledge Management, Stakeholder Engagement, and system-wide capacity development.

Implementing Agency: FAO

9. The Food and Agriculture Organization (FAO) will be the GEF Implementing Agency (IA) for the Project, providing project cycle management and support services as established in the GEF Policy. As the GEF IA, FAO holds overall accountability and responsibility to the GEF for delivery of the results. In the IA role, FAO will utilize the GEF fees to deploy three different actors within the organization to support the project (see Annex J for details):

Position	Description	Contact Information
Budget Holder	Usually the most decentralized FAO office, will provide oversight of day-to-day project execution.	FAO Representative in Sudan Mr. Babagana Ahmadu
Lead Technical Officer	Drawn from across FAO will provide oversight/support to the projects technical work in coordination with government representatives participating in the Project Steering Committee.	Hamid, AbdelHamied (FAORNE)

Funding Liaison Officer(s)	Within FAO will monitor and support the project cycle to ensure that the project is being carried out and reporting done in accordance with agreed standards and requirements.	VeyretPicot, Maude (OCB) Bergigui, Mohamed (OCBD) Dottori, Arianna (OCBD)
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10. As the GEF agency FAO responsibilities will generally include:

- ? Administrate funds from GEF in accordance with the rules and procedures of FAO;
- ? Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers, Operational Partners Agreement(s) and other rules and procedures of FAO;
- ? Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- ? Conduct at least one supervision mission per year;
- ? Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, the Mid Term Review, the Terminal Evaluation and the Project Closure Report on project progress; and
- ? Ensure financial reporting to the GEF Trustee.

encouraging other projects within Sudan's GEF project portfolio to actively contribute to relevant knowledge management and communications tools. This will help to ensure alignment, reduced duplication of efforts, efficient use of GEF resources, and build amplification of responses to degradation across higher levels.

Title	Duration, IA/EA, Amount	Description
Resilience of Pastoral and Farming Communities to Climate Change in North Darfur	USD 2,429,680 FAO LDCF 2020 - 2021	Project Objective: To reduce the vulnerability of pastoral and farming communities to climate change along the migratory routes in North Darfur and improve their social protection, food security and nutritional status. Component 1: Participatory sustainable land and resource use planning strategically addresses climate change adaptation and mitigates resource-based conflicts. Private sector agriculture and livestock producers cooperatively and effectively managing shared resources to address climate change impacts and build system resilience. Component 2: Pastoralists and farmers adopt sustainable, climate resilient practices and livelihoods. North Darfur communities adopt and implement climate resilient agriculture and livestock management approaches. 3: Lessons learnt captured, mainstreamed and upscaled. Best climate resilient and adaptive practices are mainstreamed and being applied at local, regional, and national levels.
Sudan Sustainable Natural Resource Management Project (SSNRMP)	USD 33 million World Bank LD/BD	The project aims to increase the adoption of sustainable land and water management (SLWM) practices in targeted landscapes through: i) adoption of improved soil and water management practices; ii) forested ecosystem rehabilitation and rangeland management; iii) creation of sustainable alternative livelihood activities related to natural resource management; and iv) strengthened capacity to implement SLWM and biodiversity conservation. Common topics with this project are represented by biodiversity conservation, rehabilitation and sustainable management of forest ecosystems and rangelands and enhanced community participation in sustainable management
Strengthened Protected Areas System and Integrated Ecosystem Management in Sudan	UNDP (2018-2023) USD 21.5 million BD/LD	The objective of the project is to strengthen the national protected area (PA) system and promote integrated ecosystem management in adjacent areas so as to reduce threats to biodiversity, mitigate land degradation, sustain ecosystem services, and improves people's livelihoods. Despite this FAO project is not focusing on protected areas, the two projects share the objective of enhancing sustainable management of natural resources in the area surrounding the Pas, for UNDP, and the sun forest reserves, for FAO.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

7. Consistency with National Priorities

1. The project is consistent with the following national strategies and plans, and reports to relevant international conventions.

Relevant National Strategy, Plan, Report and/or Assessment	Description of Consistency
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UNCBD	<p>The project is aligned with the National Biodiversity Strategies and Action Plan (NBSAP). The NBSAP takes into consideration the national biodiversity priority needs in terms of conservation, sustainable use of its components and equitable sharing of benefits. The NBSAP will seek to establish awareness campaigns for stakeholders and produce awareness materials on the values of biodiversity and its importance for food security and sustainable development. The NBSAP (2011-2020) addresses rehabilitation of degraded ecosystems and adopt climate-smart farming systems such as agro-forestry and agro-silvo pastoral systems that lead to natural regeneration of native species and rehabilitation of degraded and deforested areas. Perfectly aligned to these objectives, the activities implemented by this project will support Sudan's Government in the implementation of the NBSAP, contributing to the integration of the principles of sustainable development and biodiversity conservation into country policies and programs.</p> <p>The restoration objectives of this project and the aim to reduce the sources or enhance the sinks of greenhouse gases through rehabilitation of degraded land affected by the impacts of unsustainable management and climate changes, are aligned with the above-mentioned national strategies. The National Biodiversity Strategy and Adaptation Plan (NBSAP) (2011-2020) addresses rehabilitation of degraded ecosystems. This project is designed to support Sudan's Government in the implementation of the NBSAP, contributing, among others, to the following priority actions: i) Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources (Aichi Target 4); ii) Rehabilitation and establishment of forest plantations in degraded traditional rain-fed areas (Aichi Target 7); iii) Adopt climate-smart farming systems such as agroforestry and agro-silvo pastoral systems that lead to natural regeneration of native species and rehabilitation of degraded and deforested areas, especially in vulnerable areas (traditional dry land farming) (Aichi Target 15).</p>
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UNFCCC	<p>The 2007 National Adaptation Programme of Action (NAPA) proposes adaptation activities in the agriculture sector (including forests) aligned to the project's activities: i) community-based forest and rangeland management and rehabilitation; iii) protection and/or rehabilitation of rangelands iv) reduction of pressure on local forests; v) land use sustainable conversion; vi) afforestation degraded areas threatened by uncontrolled wood cutting. The NAPA demonstrates the willingness of the Government to address climate variability and sustainable management of natural resources within the context of the country's economic development priorities.</p> <p>The NAPA identified 32 urgent adaptation initiatives to reduce the increasing vulnerability of the rural communities to current and future climatic risks. Some of the key adaptation activities are: i) community-based forest and rangeland management and rehabilitation; ii) reduction of pressure on fragile rangelands; iii) protection and/or rehabilitation of rangelands iv) reduction of pressure on local forests through use alternative energy sources; vi) afforestation of areas denuded of trees for building construction and firewood. The NAPA demonstrates the willingness of the Government to address climate variability and climate change within the context of the country's economic development priorities.</p> <p>The Sudanese Intended Nationally Determined Contributions (INDCs) submitted in 2015 also promotes the implementation of low-carbon development interventions in the three sectors of energy, forestry (afforestation and reforestation, national REDD+ strategy) and waste, in line with Sudan's national development priorities.</p>
UNCCD	<p>The project is aligned to the National Action Plan (NAP) under the UNCCD, as it will implement priority activities including: i) rehabilitation of vegetation cover; ii) rehabilitation of rangelands; iii) conservation of biodiversity. Also, geographically, with the NAP prioritizing the Nile system, alignment is made.</p>

National Quarter-Century Strategy (2007-2031)	<p>Convention priorities are also embedded in the National Quarter-Century Strategy (2007-2031). The project contributes to some of its objectives, including: reconstructing and protecting forest ecological systems; increasing the tree belt; raising environmental awareness and developing the forest industry; and maintaining the ecological balance and biodiversity in production areas while consolidating the environmental factor in all the socioeconomic policies. The initiatives proposed by the project are aligned to these objectives and act as a bridge between all sectors and seeks the involvement of all stakeholders for the benefit of local communities, enhancing the transition to a more sustainable food and land-use system.</p> <p>Prioritizes reconstructing and protecting forests? ecological systems; increasing the tree belt to cover about 20 percent of the country area; raising the environmental awareness and developing the forest industry; maintaining the ecological balance and biodiversity in production areas while consolidating the environmental factor in all the socioeconomic policies.</p>
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8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

8. Knowledge Management

1. Knowledge generation and management will be an essential component of the project. The project integrates a number of tools designed to build and manage knowledge in line with GEF Knowledge Management Guidelines[1]. Knowledge will be created, documented and systematically shared through relevant platforms. This includes gathering, analyzing and disseminating knowledge extracted from the results of project activities as well as capturing best international principles and practices linked to the capacity strengthening and monitoring efforts promoted by the project.

2. Building on the indicators developed during the PPG phase, the project will establish gender-responsive M&E and KM systems, including by capturing good practices and lessons learned from the project. The project will develop a knowledge management and communications strategy to support implementation, replication and scaling of project activities. Under Component 1, the assessments and inventories will generate a fair amount of knowledge which will be codified into the spatial management plans this enabling monitoring and adaptive management in line with the integrated landscape approach for the conservation biodiversity and sustainable management of Sudan's riverine ecosystems. Under Component 2, the FFFS approach will codify internationally recognized good agroforestry practices into training curricula, while also generating lessons learned from the field and home-grown solutions tailored to the specific context of Sudan. The project's overall KM approach will be operationalized through Component 3 through upscaling efforts and by

maintaining the critical flow of information between project partners at local, subnational, national and global levels.

[1] See GEF Approach on Knowledge Management https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.48.07.Rev_.01_KM_Approach_Paper.pdf

9. Monitoring and Evaluation

Describe the budgeted M and E plan

9. Monitoring and Evaluation

1. Project supervision will be carried out by the Project Steering Committee (PSC) and FAO.
2. Supervision will ensure that: (a) project products are produced in accordance with the project results framework and lead to the achievement of project results; (b) the results of the project lead to the achievement of the project objective; (c) the risks are continuously identified and monitored, and appropriate mitigation strategies are applied; and (d) the agreed global environmental benefits of the project are being delivered.
3. FAO will monitor the activities, products and results financed by the GEF to a large extent through annual project implementation reports (PIR), and periodic support and supervision missions.
4. The daily monitoring of the project will be carried out by the Project Management Unit (PMU) and the person responsible for the FAO budget.
5. Project performance will be monitored using the project results matrix, including indicators (baseline and goals), and annual work plans and budgets. At the beginning, the results matrix will be reviewed to finalize the identification of: i) products ii) indicators; and iii) lack of baseline information and goals.
6. A Monitoring and Evaluation (M&E) specialist will develop a detailed M&E plan, which is based on the results matrix and defines the specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis, etc.).
7. The project will design a strategic implementation strategy detailing steps and benchmarks for deliverables covering the entire project period. This implementation strategy will be completed

prior to the inception workshop and will be used to guide and monitor implementation progress in parallel with project impact monitoring and evaluation. The implementation strategy will prioritize and detail implementation actions. This will include firm timelines for the professional completion of deliverables required to realize the intended project objective and associated GEBs.

8. The GEF evaluation policy foresees that all medium and large size projects require a separate terminal evaluation. Such evaluation provides: i) accountability on results, processes, and performance; ii) recommendations to improve the sustainability of the results achieved and iii) lessons learned as an evidence-base for decision-making to be shared with all stakeholders (government, execution agency, other national partners, the GEF and FAO) to improve the performance of future projects.

9. The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED and will be responsible for quality assurance. Independent external evaluators will conduct the terminal evaluation of the project taking into account the "GEF Guidelines for GEF Agencies in Conducting Terminal Evaluation for Full-sized Projects." FAO Office of Evaluation (OED) will provide technical assistance throughout the evaluation process, via the OED Decentralized Evaluation Support team. In particular, it will also give quality assurance feedback on: selection of the external evaluators, Terms of Reference of the evaluation, draft and final report. OED will be responsible for the quality assessment of the terminal evaluation report, including the GEF ratings.

10. After the completion of the terminal evaluation, the BH will be responsible to prepare the management response to the evaluation within 4 weeks and share it with national partners, GEF OFP, OED and the FAO-GEF CU.

Budgeted M&E Plan

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M&E activities	Responsible	Time frame	Budget, USD
Initial Workshop	NPC with NFP support FAO Representation in Sudan	Within three (3) months after the signature of the project document by the country	2,000
Initial Workshop report	NPC with NFP support	Within two (2) weeks following the Initial Workshop	NPC and NFP

M&E activities	Responsible	Time frame	Budget, USD
Annual Work Plan and Budget (AWP/B)	Prepares NPC with support from the LTO, and the BH with support from the National Budget and Operations Officer PMU and Interinstitutional Technical Team contributions PSC approval	Annual; at the beginning of the project and subsequently, every calendar year	National counterpart, NPC and Agency Fee
Support and supervision visits	LTO, PMU	At least once a year	PMU, Agency Fee and specific activities
	M&E Expert	Targeted M&E support during 2 weeks / year over 3 years	6,000
Project Progress Report (PPR)	NPC, LTO, BH	Every six (6) months (June and December)	NPC and Agency Fee
Project Implementation Report (PIR)	Prepares NPC with PMU inputs LTO and BH supervision Approval and submission to the GEF by PSC	Annual	National counterpart, NPC and Agency Fee
Co-financing Report	PMU	Annual (with the PIR)	PMU
Mid-Term Review	External consultants PMU and Interinstitutional Technical Team	At least three (3) months before project closure	30,000
Final Evaluation	The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED.	At least three (3) months before project closure	33,000

M&E activities	Responsible	Time frame	Budget, USD
Final Project Report	Consultant with PMU support LTO and BH supervision Approval and submission to the GEF by PSC	Within two months after project closure	3,000
Specific project budget for M&E activities			74,000

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

10. Benefits

1. The project will directly benefit approximately 20,000 smallholder farmers, livestock herders, and forest users. As noted, these persons are highly reliant upon riverine ecosystems and associated benefits. Intact riverine forests are invaluable in terms of flood and erosion mitigation. These ecosystems are also critical in terms of provisioning fuelwood and NTFPs. Riverine forests provide habitat for a host of species and important nurseries for fisheries upon which many local residents rely for subsistence and commerce. Importantly, riverine ecosystems offer potential to provide local residents and livelihoods to greater resilience to climate change.

2. The livelihoods of these producers are currently at risk and are further threatened by the sustained trend in deforestation, land degradation, decreasing agriculture and livestock productivity, decreasing water availability, climate change, loss of biodiversity and ecosystem services all leading to deteriorating living conditions and wellbeing of local communities. The project will reverse this trend by providing rural smallholders with the opportunities to access knowledge, information, capacity and experience to adopt improved practices. These practices will result in GEBs, but also increased the standards of living, food security, and climate change resiliency of these at-risk rural dwellers.

3. The top priority to re-engineer the social contract between forest managers and communities, according to the respondents to the household survey conducted during the PPG phase, is creating a strong incentive for local communities to be part of the solution towards

establishing a co-management approach of the riverine landscape. Doing so entails supporting local communities to generate alternative income streams through the sustainable valorization of biodiversity-based products, with a special focus on women and girls' empowerment as explained in details in the Gender Action Plan. By improving productive practices and enabling a better valorization of natural resources along local value chains, with increased livelihoods and income, the project is expected to have knock-on impacts in terms of economic development and associated increases in employment opportunity.

4. At the governance level, national benefits will accrue to a variety of agencies. This will include the ability to more efficiently and effectively address deforestation issues. The results of more integrated and collaborative approaches to biodiversity conservation will also increase the cost-effectiveness of current divergent investments in a context of financial scarcity post COVID-19. These investments and associated human resources will be harmonized to directly address degradation and increase synergistic responses. This will include capacity building, limited supply of better equipment, and access to knowledge and capacity based upon best international and regional principles and practices.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Section B: Environmental and Social risks from the project ? ESM Plan

Risk identified	Risk Classification	Mitigation Action (s)	Indicator / Mean(s) of Verification	Progress on mitigation action
Transfer of seeds and/or planting materials for cultivation	Low	Seeds and/or planting materials provided as part of the demonstration practices, will be from endemic and locally adapted crops and varieties that are accepted by farmers and consumers and it will be ensured that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the IPPC	% of endemic and locally adapted seeds and planting materials used in agroforestry demonstration practices in the target riverine landscape	NA
Reforestation intervention in the target demonstration sites	Moderate	The project will undertake demonstrative practice under output 2.3, including through reforestation interventions within the riverine forest reserves, and a complementary set of agroforestry intervention outside the forest reserves, following a landscape approach within the target riverine ecosystems. To do so, the project will adhere to existing national forest policies, forest programmes or equivalent strategies, the project will also observe principles 9, 10, 11 and 12 of the Voluntary Guidelines on Planted Forests.	% of reforestation interventions in line with principles 9, 10, 11 and 12 of the Voluntary Guidelines on Planted Forests	NA

Land and resource tenure issues	Low	The project will contribute, through spatial land planning, community-inclusive management and landscape approaches, to promote clearer land tenure arrangements across the target riverine landscapes	Number of conflicts related to land tenure reportedly hindering implementation of project interventions within target riverine landscapes	NA
Community participation into drafting of policies and regulations	Low	The project will take the necessary measures to enable a wider participation of all stakeholders, including forest-dependent communities, as well as women and youth groups as per the Gender Action Plan, in the process of updating the forest reserves management plans and the development of Community Action plans.	Percentage of policy documents and regulations developed with the participation of local communities, including women and youth groups	NA

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Environmental and Social Risk Certification SUD916GFF (Riverine) June 15	CEO Endorsement ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Annex A1: Project Results Framework [1]

Result Chain	Indicators	Baseline	Mid-Term Milestone	Targets	Means of Verification	Assumptions
Project objective: Restore and maintain critical ecosystem services of globally significant riverine forest landscapes along the	Hectares of riverine forest ecosystems managed to benefit biodiversity and maintain productive value.	0 ha of riverine forest ecosystems managed to benefit biodiversity and maintain productive value.	20,000 hectares of riverine forest ecosystems managed to benefit biodiversity and maintain productive value.	50,878 ha of riverine forest ecosystems managed to benefit biodiversity and maintain productive value.	Semi-annual reports from project emplaced monitoring FNC Reports and Managemen	Capacity built by project to adequately monitor results Strong government and stakeholder

River Nile in Sudan.					t Plans	engagement
	Number of private farmers, livestock herders, and forest users reporting stable or improved standard of living resulting from BD conservation mainstreaming .	0 private producers reporting stable or improved standard of living resulting from BD conservation mainstreaming .	5,000 private producers reporting stable or improved standard of living resulting from BD conservation mainstreaming .	20,000 private agriculturalists , livestock herders, and forest users reporting stable or improved standard of living resulting from BD conservation mainstreaming 50% male 50% female	TAPE Analysis B-Intact Analysis Spatial planning monitoring reports Project reports Producer interviews Field observations	Improved riverine forest management plans and practices adopted
Component 1: Integrated and participatory riverine forest landscape management planning						
Result Chain	Indicators	Baseline	Mid-term Milestone	Targets	Means of Verification	Assumptions

Outcome 1: Spatial and management and planning assess, prioritize and mainstream conservation and sustainable production practices	Number of Forest Reserves implementing revised management plans and regularly monitoring associated biodiversity conservation targets.	0 Forest Reserves implementing revised management plans and regularly monitoring associated biodiversity conservation targets.	15 Forest Reserves implementing revised management plans and regularly monitoring associated biodiversity conservation targets.	33 Forest Reserves implementing revised management plans and regularly monitoring associated biodiversity conservation targets.	Semi-annual reports from project emplaced monitoring	Capacity built by project to adequately monitor results
					FNC Reports and Management Plans	
	Hectares of riverine ecosystems included within Community Action Plans designed to support pro-biodiversity conservation commercial practices.	0 hectares of riverine ecosystems included within Community Action Plans designed to support pro-biodiversity conservation commercial practices.	2,000 hectares of riverine ecosystems included within Community Action Plans designed to support pro-biodiversity conservation commercial practices.	20,000 hectares of riverine ecosystems included within Community Action Plans designed to support pro-biodiversity conservation commercial practices.	TAPE Analysis	
					B-Intact Analysis	Strong government and stakeholder engagement
					Spatial planning monitoring reports	Improved riverine forest management plans and practices adopted
	Hectares of riverine ecosystems managed according to government approved spatial plans that prioritize pro-biodiversity conservation practices with conservation targets monitored.	0 hectares of riverine ecosystems managed according to government approved spatial plans that prioritize pro-biodiversity conservation practices with conservation targets monitored.	25,000 hectares of riverine ecosystems managed according to government approved spatial plans that prioritize pro-biodiversity conservation practices with conservation targets monitored.	50,878 hectares of riverine ecosystems managed according to government approved spatial plans that prioritize pro-biodiversity conservation practices with conservation targets monitored.	Project reports	
					Producer interviews	
					Field observations	

Output 1.1 Ecological, social and economic assessment and mapping of riverine forest ecosystems						
Output 1.2 Forest Reserve management plans updated						
Output 1.3 Riverine ecosystem conservation spatial plans designed and implemented						
Component 2: Demonstration of riverine forest biodiversity conservation practices						
Result Chain	Indicators	Baseline	Mid-term Milestones	Targets	Means of Verification	Assumptions
Outcome 2: Productive practices in riverine forest ecosystems mainstream BD conservation	Hectares of riverine ecosystems inside and outside of Forest Reserves covered by <i>Acacia nilotica</i> forests	Hectares of riverine ecosystems inside and outside of Forest Reserves covered by <i>Acacia nilotica</i> forests.	Hectares of riverine ecosystems inside and outside of Forest Reserves covered by <i>Acacia nilotica</i> forests.	Hectares of riverine ecosystems inside and outside of Forest Reserves with native species forest cover, including <i>Acacia nilotica</i>	Semi-annual reports from project emplaced monitoring	Capacity built by project to adequately monitor results
		Forest Reserves: TBD	Forest Reserves: TBD	Forest Reserves: TBD	FNC Reports and Management Plans	Strong government and stakeholder engagement
		Outside FRs: TBD	Outside FRs: TBD	Outside FRs: TBD	TAPE Analysis	Improved riverine forest management plans and practices adopted
			Target Increase: 5%	Target Increase: 10%	B-Intact Analysis	

	Number of Forest Reserves adopting pro-biodiversity conservation practices and reporting stable or increased revenue generation.	0 Forest Reserves adopting pro-biodiversity conservation practices and reporting stable or increased revenue generation.	15 Forest Reserves adopting pro-biodiversity conservation practices and reporting stable or increased revenue generation.	33 Forest Reserves adopting pro-biodiversity conservation practices and reporting stable or increased revenue generation.	Spatial planning monitoring reports	
					Project reports	
					Producer interviews including women interviewees	
	Number of FNC Forest Reserve managers participating in pro-biodiversity conservation training programs.	0 FNC Forest Reserve managers participating in pro-biodiversity conservation training programs.	15 FNC Forest Reserve managers participating in pro-biodiversity conservation training programs. 50% women 50% men	40 FNC Forest Reserve managers and staff participating in pro-biodiversity conservation training programs 50% women 50% men	Field observations	
	Number of agriculture and livestock growers participating in training	0 agriculture and livestock growers participating in training programs and	5,000 agriculture and livestock growers participating in training	20,000 agriculturalists , livestock herders, and forest users participating		

	programs and adopting ?on-farm? riverine forest biodiversity conservation strategies resulting in stable or increased production values.	adopting ?on-farm? riverine forest biodiversity conservation strategies resulting in stable or increased production values.	programs and adopting ?on-farm? riverine forest biodiversity conservation strategies resulting in stable or increased production values. 50% female 50% male	in training programs and adopting ?on-farm? riverine forest biodiversity conservation strategies resulting in stable or increased production values. 50% female 50% male		
Output 2.1 FNC biodiversity conservation training program established						
Output 2.2 Riverine ecosystem agriculture, livestock growers and forest users training program established						
Output 2.3 Riverine ecosystem conservation and restoration demonstration program operationalized						
Component 3. Biodiversity conservation monitoring, reporting, and knowledge management						
Result Chain	Indicators	Baseline	Mid-term Milestone	Targets	Means of Verification	Assumptions
Outcome 3 Informed decision-making results in riverine ecosystem planning, financing, management , and practice that mainstream pro-	Number of Forest Reserves with rigorous riverine ecosystem monitoring assessing biodiversity conservation effectiveness.	0 Forest Reserves with rigorous riverine ecosystem monitoring assessing biodiversity conservation effectiveness.	15 Forest Reserves with rigorous riverine ecosystem monitoring assessing biodiversity conservation effectiveness.	33 Forest Reserves with rigorous riverine ecosystem monitoring assessing biodiversity conservation effectiveness.	Semi-annual reports from project emplaced monitoring FNC Reports and	Capacity built by project to adequately monitor results Strong government and stakeholder

biodiversity conservation	Hectares of riverine ecosystems monitored annually reflecting increased and/or stable levels of Acacia nilotica tree cover.	0 hectares of riverine ecosystems monitored annually reflecting increased and/or stable levels of Acacia nilotica tree cover.	20,000 hectares of riverine ecosystems monitored annually reflecting increased and/or stable levels of Acacia nilotica tree cover.	50,878 hectares of riverine ecosystems monitored annually reflecting increased and/or stable levels of Acacia nilotica tree cover.	Management Plans TAPE Analysis B-Intact Analysis	engagement Improved riverine forest management plans and practices adopted
	Number of persons subscribed to and receiving monthly project updates and electronic newsletters.	0 persons subscribed to and receiving monthly project updates and electronic newsletters.	500 persons subscribed to and receiving monthly project updates and electronic newsletters. 50% women 50% men	1,000 persons subscribed to and receiving monthly project updates and electronic newsletters 50% women 50% men	Spatial planning monitoring reports Project reports Producer interviews	
	Number of monthly users accessing project generated knowledge management portal.	0 monthly users accessing project generated knowledge management portal.	500 monthly users accessing project generated knowledge management portal. 50% women 50% men	1,000 monthly users accessing project generated knowledge management portal 50% women 50% men	Field observations	

	Number of Forest Reserves outside project target sites on-track to adopt revised pro-biodiversity conservation management plans.	0 Forest Reserves outside project target sites on-track to adopt revised pro-biodiversity conservation management plans.	10 Forest Reserves outside project target sites on-track to adopt revised pro-biodiversity conservation management plans.	20 Forest Reserves outside project target sites on-track to adopt revised pro-biodiversity conservation management plans.		
	Number of Forest Reserves with budget lines allocating adequate financing to continue critical interventions post-project including pro-biodiversity conservation practices, monitoring and reporting.	0 Forest Reserves with budget lines allocating adequate financing to continue critical interventions post-project including pro-biodiversity conservation practices monitoring and reporting.	5 Forest Reserves with budget lines allocating adequate financing to continue critical interventions post-project including pro-biodiversity conservation practices monitoring and reporting.	33 Forest Reserves with budget lines allocating adequate financing to continue critical interventions post-project including pro-biodiversity conservation practices monitoring and reporting.		
Output 3.1 Ecosystem-based riverine monitoring and knowledge management program						
Output 3.2 Improved institutional frameworks sustain and amplify project impacts						

[1] Please note that output based indicators are not mandatory as long as the targets for each output are well defined.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Annex B: Response to Project Reviews

Response to STAP Review

	STAP Comments	Response
STAP Overall Assessment	Minor issues to be considered during project design: STAP welcomes the proposal entitled "Landscape Approach to Riverine Forest Restoration, Biodiversity Conservation and Livelihood Improvement" by FAO. Overall, STAP feels that this proposal is not particularly well-written or researched. The problem statement in particular needs considerable work, with updated information from reliable sources. The text is very unclear and hard to follow in many places. There is considerable lack of clarity around the specifics of certain outputs and how they lead to outcomes. The theory of change is not explicitly set out, but there is an implicit theory of change. Underlying assumptions are not clearly articulated and some are questionable. Nevertheless, despite these weaknesses the proposal overall clearly addresses important problems and the approach taken does follow an inherent logic with a strong chance of addressing key drivers of degradation and securing important global environmental benefits.	During the PPG phase the Project Document was advance with significant inputs from a variety of stakeholders. The Project Document now includes a more clarified problem statement, updated information, theory of change and better articulated assumptions.

<p>Is the objective clearly defined, and consistently related to the problem diagnosis?</p>	<p>The objective is initially stated to be "Restore and sustainably manage globally significant riverine forest landscapes along the River Nile in Sudan in order to maintain critical ecosystem services". More detail on which ecosystem services would make this clearer. But later (p25) it is stated to be "to promote the sustainable and integrated management of Sudanese riverine forest landscapes to restore degraded land, conserve unique biodiversity, promote the integration of different land uses with the active participation of local communities and therefore enhance livelihoods." This should be made consistent.</p>	<p>The project's objective has been made consistent. The objective now reads: <i>Restore and maintain critical ecosystem services of globally significant riverine forest landscapes along the River Nile in Sudan.</i></p> <p>The Project Document also contains more details regarding the ecosystem services provided by riverine forests.</p>
<p>A brief description of the planned activities. Do these support the project's objectives?</p>	<p>These aren't clearly written - it is hard to see how component 2 differs from component 1. If the idea is that component 1 is planning and component 2 is implementation, then the project outcome for component 1 should not be "ecosystem services managed sustainably", as this implies a management outcome.</p>	<p>The components and outputs were re-drafted with substantial detail added. The outcomes are now linked directly with the project's results framework and intended impacts.</p>

Is the problem statement well-defined?

The overall picture is reasonably clear, but this section is very poorly written, hard to follow, and has a lot of unclear or out of date information. This section is poorly referenced and contains statements in relation to fauna lifted directly from other sources.

The "animal biodiversity" section appears to be lifted from the Encyclopedia Britannica entry on "Nile River" (<https://www.britannica.com/place/Nile-River/Plant-and-animal-life>).

There also is a sentence lifted direct, with its references, from Gomiero 2008, (a paper on freshwater ecology in Southeast Brazil with little relevance here) but with its two halves separated by the Britannica text (the original reads "In oligotrophic streams, the terrestrial matter carried into the water supplies an important food resource for fishes; hence, the riparian integrity is extremely important for the survival of these species (Pusey and Arthington, 2003; Melo et al., 2004)."

The following sentence is also lifted direct from Gomiero 2008. This needs completely re-writing with proper updated biodiversity information. Some very unclear text e.g. "The floods basin that provide the main site for Sunut growing in pure stand?" Please explain what "Sunut" is. Are all the riverine forests in reserves? The text seems to imply so. Could some referencing be provided to justify the statement that these riverine forests "comprise some of the world's most productive ecosystems"?

Explanation of "gerf" and "karrab" would be welcome.

What does this sentence mean: "Using information from the Important Bird Areas in Africa book and other sources, particularly national and sub-regional inventories, these wetland riverine forests have been found to qualifying as Ramsar Sites"? "Potential" Ramsar sites? And which riverine forests are we talking about - all of them? And could we have more information on what was found in national/sub-regional inventories? Sudan only seems to have 3 Ramsar sites (<https://www.ramsar.org/wetland/sudan>) and not all of these are on the Nile, so this text is unclear and misleading. (Note 7 potential Ramsar sites in Sudan are identified in this 2002 publication <https://www.birdlife.org/sites/default/files/attachments/Africa-IBAs-%20%26-Ramsar-sites.pdf> but they don't all appear to be in riverine forests either (see map p 116).) 1C (p 18) - which KBA is referred to in the title? These first two paras make no sense - the first does not explain the conclusion in the second. Why would they manage for one species that made up <.1% of the forest?

The comments from STAP regarding the need to improve the problem statement are very well appreciated. The problem statement and relevant sections have been re-written with a deeper analysis of issues. This includes an explanation of relevant terms.

Are the barriers and threats well described, and substantiated by data and references?	<p>No, this is quite weak. p20 on integrated approaches: this basically says lack of integrated approaches is a barrier to adoption of integrated approaches. Needs to specify more clearly what the actual barriers are here - why have these previous approaches been ineffective? Likewise for community involvement - there do seem to be tools, but they are not working - do we know why? This also assumes community involvement will solve the problem of agricultural encroachment/forest degradation - but the rationale for this is not clearly spelt out. Perhaps the key barrier is not lack of community involvement but lack of other sustainable livelihood options?</p> <p>"The lack of tools for community involvement and, consequently, the little private and public financing available for riverine forest landscapes.." The link between these two things is not clear. Why does lack of tools for community involvement lead to lack of financing?</p> <p>"The lack of awareness and knowledge about the importance of riverine forest ecosystems in general and the effects of illegal woodfuel and charcoal production is the main barrier that prevents local communities from choosing legal ways."</p> <p>Why? How is this known? This seems to ignore the whole tragedy of the commons logic - it may be worse for all users if the forest declines, but for any one of them it will still pay to graze their livestock or enroach on the forest. These commons problems are not generally overcome simply with the provision of information, but by building incentives and institutional capacity for collective management.</p>	The components have been re-drafted based upon STAP inputs. Again, barrier and threats issues were clarified with specificity and improved causal reasoning.
	A baseline in terms of what other investments are being made in Sudan land/NRM is set out, although it would be helpful to clarify how this project adds to what is already going on, particularly the large SNRLP project which seems to have a very aligned mandate. It is not made clear what would take place in the absence of this project.	Please see above.
Does it provide a feasible basis for quantifying the project's benefits?	No, not really.	Please see above.
What is the theory of change?	The TOC is implicit rather than explicit, but does makes sense.	The TOC was revised to more fully reflect the causal reasoning.

<p>What is the sequence of events (required or expected) that will lead to the desired outcomes?</p>	<p>It seems to be assumed throughout that participatory, integrated planning will necessarily lead to positive outcomes all round (for biodiversity, ecosystem function, livelihoods) - but there may be fundamental trade-offs between these, and there is no guarantee they can all be fully satisfied. How will such tradeoffs and potential conflicts be managed? In component one, the governance aspects are quite unclear - much is said about including communities, but are they to actually share power, or will the FNC retain all actual decision-making management authority? These are critical questions for likely sustainability and durability of outcomes, including with respect to the likelihood of illegal encroachment etc continuing.</p> <p>Likewise, component 2 refers to "community-based management", but what is meant by this? Issues around who makes decisions and how (i.e. governance) are not specified here. Failure to devolve meaningful management rights, plus the capacity and resources to exercise those rights, would undermine the approach taken here.</p>	<p>These comments regarding the sequence of events are very well appreciated. During the PPG phase, it was determined that the drivers of biodiversity loss would not be well addressed in the Sudanese context by applying a full-fledged community-based natural resource management (CBNRM) approach. Rather, as is explained in the Project Document, the core issue is the absence of adaptive management approaches to ecosystem-based management at a landscape level that integrate assessment, planning, practice, monitoring and informed decision-making. This approach is based in part upon community engagement at all levels along with building the management capacity of government agencies both within and outside of Forest Reserve boundaries.</p>
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Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?	For key assumption see above	Please see above.
Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?	Not explicitly.	The recognition of adaptations required during implementation have been taken on board and are reflected in the adaptive management approach.
Are indicators, or methodologies, provided to demonstrate how the global environmental benefits will be measured and monitored during project implementation?	No, this is not clear.	The results framework was revised to include GEBs along with a much stronger approach to monitoring achievement.
Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?	The proposal states "The project's innovation lies in the enhanced role for and engagement of local communities and producers in the management of unique riverine forest reserves and their buffering production land". However, the form of this enhanced role remains quite unclear - particularly whether there is to be some form of community or co-management or whether they are just being consulted. Introducing NCAA is innovative in this context, although what exact use of NC accounts and how they will affect decisionmaking is not very clear. The proposal also says "finally, innovative land management practices will be introduced integrating sometimes competing land uses (agroforestry, silvo-pastoral and agro-sylvopastoral systems)," but again, what this integration actually looks like in practice, and how any trade-offs and conflicts are overcome in this process, is hard to see.	Again, this insight is very much appreciated. The project's innovativeness comes from several angles. This represents a first for landscape level conservation of riverine forests inclusive of both Forest Reserves and surrounding environs.

	<p>Please provide georeferenced information and map where the project interventions will take place.</p> <p>A clearer map would be helpful, if possible - very blurry.</p>	<p>Maps and coordinates are now included.</p>
<p>Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers?</p>	<p>Identification of stakeholders appears sound and adequate but specification of their roles in the project is quite unclear. The proposal says "The project includes the involvement of associations, local cooperatives and unions at different levels and stages to plan management interventions and monitor progress and biodiversity status.", but there is little further detail throughout the proposal regarding what this means in practice.</p>	<p>The project document now contains a comprehensive stakeholder engagement strategy.</p>
<p>Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project's control? What are the stakeholders? roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?</p>	<p>see above. With respect to private sector engagement, the added value of engagement is very unclear. The proposal states "The involvement of private nurseries can enhance the awareness about the current status of forest reserves and at the same time increase the interest of local private sector representative", but it is hard to understand what this means.</p>	<p>Please see above.</p>
<p>Risks</p>	<p>Most risks appear to be identified, although the project does seem to operate on the assumption (as outlined above) that all uses of forests can be reconciled adequately.</p>	<p>The risk table was thoroughly revised and updated based upon inputs of relevant, experienced stakeholders.</p>

How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?	The proposal makes the valid point that it is aimed at increasing resilience to climate change. Beyond this it simply states "In addition the situation will be monitored and the project approach adapted as necessary". It may be helpful to specifically consider the likely impacts of climate change on e.g. forest structure/composition/productivity.	A climate risk assessment was completed during the PPG phase with findings reflected in the approach.
Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?	See above.	Please see above. Climate risk has been integrated within the components, including assessment, planning, practice, monitoring and informed decision-making.
Is there adequate recognition of previous projects and the learning derived from them?	There is little specific learning from previous projects reflected here, and it would be helpful to see more of this.	During the PPG phase, relevant projects and activities were reviewed. Importantly, substantive discussions were held with a variety of stakeholders to make certain the final project design reflects past experiences and lessons learned.

What overall approach will be taken, and what knowledge management indicators and metrics will be used?	This lacks much detail.	The project design now includes a much more substantive description of KM, including indicators and metrics. The project's component 3 in particular is designed to generate knowledge and create pathways to make certain this knowledge is being applied to inform decision-making.
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ANNEX C: Status of Utilization of Project Preparation Grant (PPG).
(Provide detailed funding amount of the PPG activities financing status
in the table below:

Annex C: Status of Utilization of Project Preparation Grant (PPG)

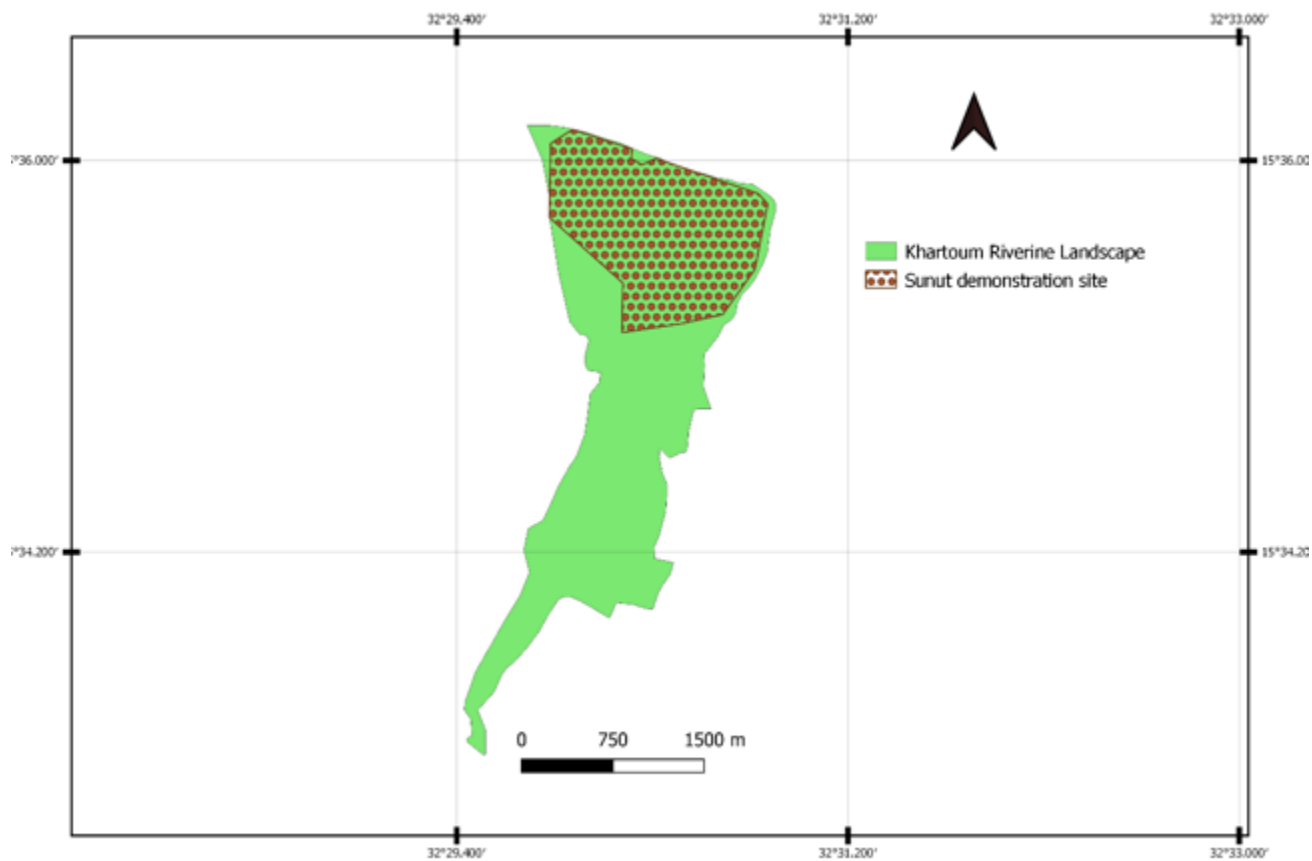
(Provide detailed funding amount of the PPG activities financing status in the table below:

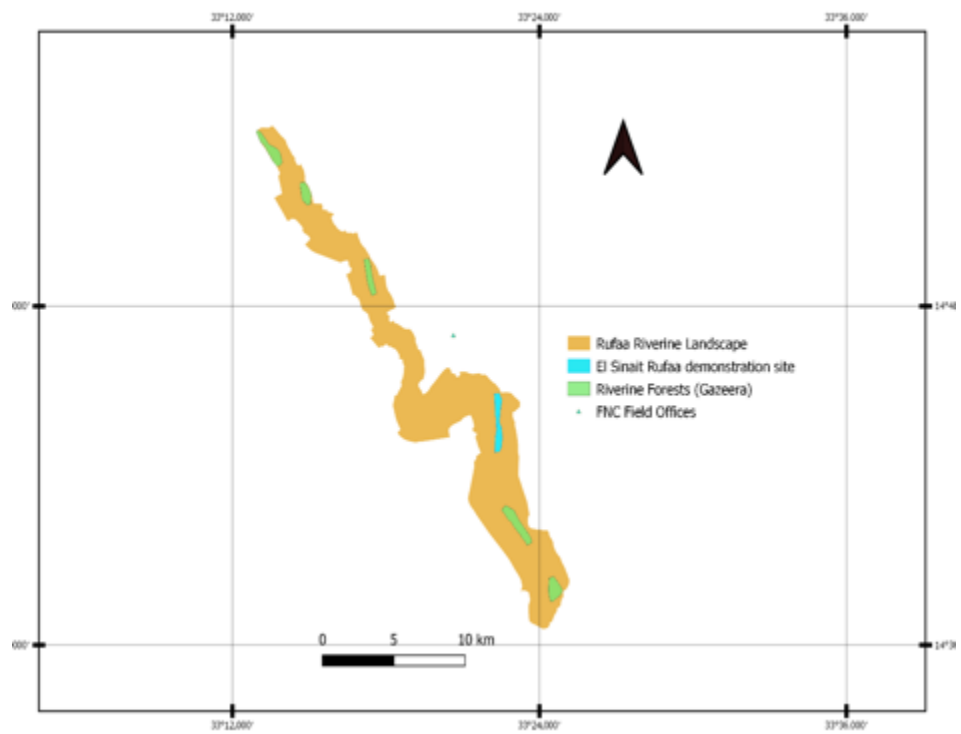
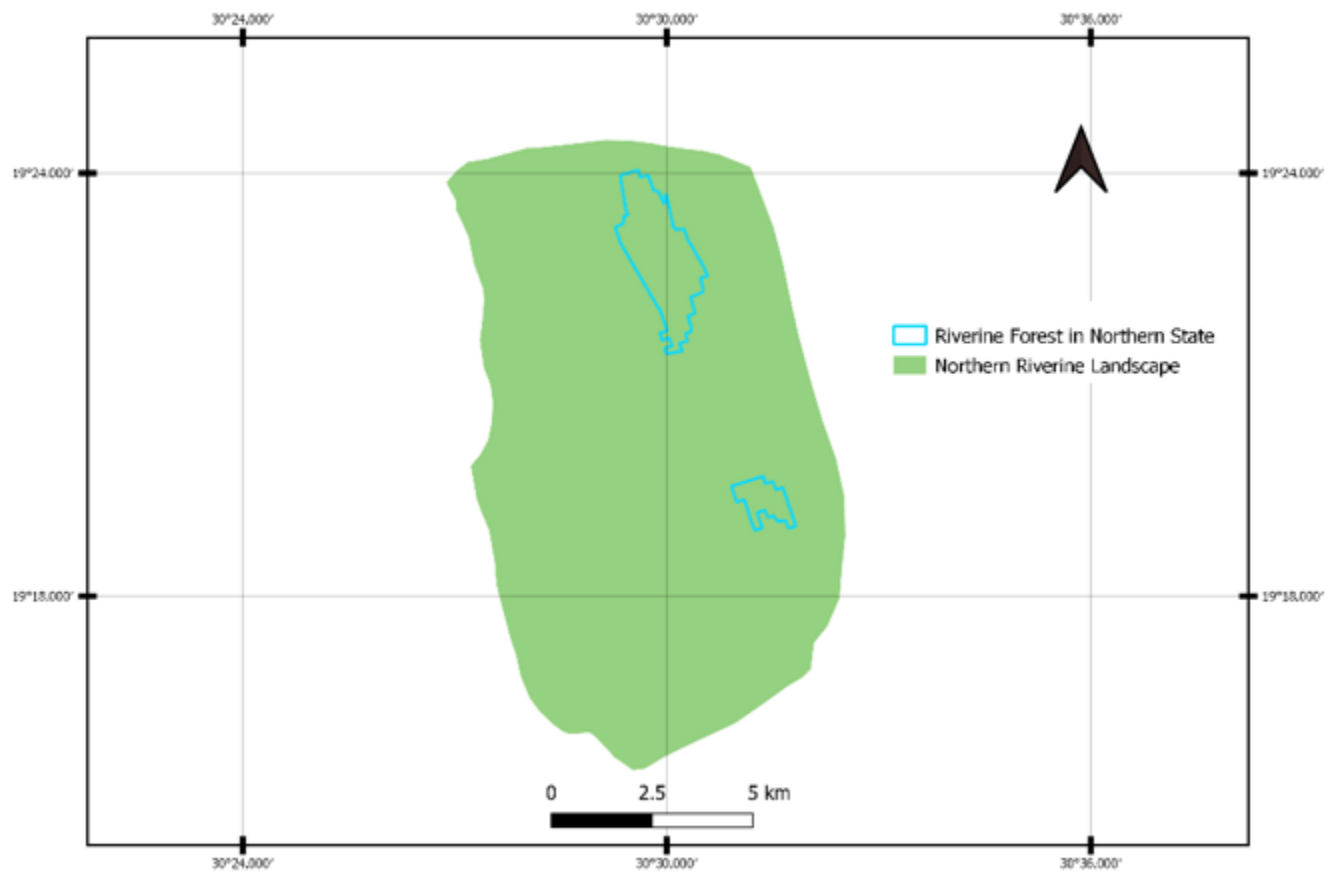
PPG Grant Approved at PIF: 150,000			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent to date</i>	<i>Amount Committed</i>
(5011) Salaries Professional	7,000	0	
(5013) Consultants	81,000	68,516	
(5014) Contracts	30,000	38,814	
(5021) Travel	15,000	240	
(5023) Training	16,000	0	
(5028) General Operating Expenses	1,000	136	
Total	150,000	107,706	42,294

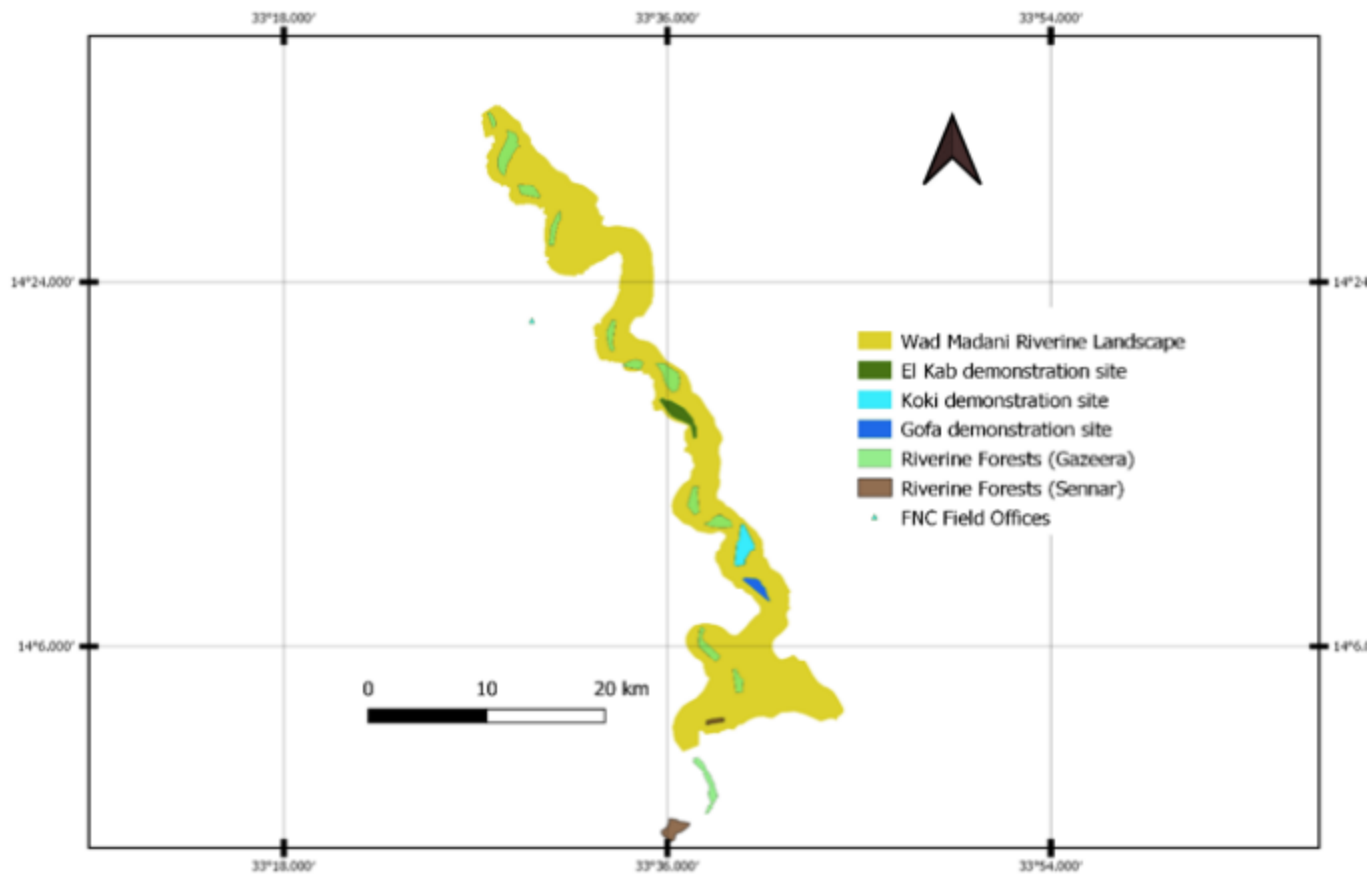
If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake exclusively preparation activities (including workshops and finalization of baseline, when needed) up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date. Agencies should report closing of PPG to Trustee in its Quarterly Report.

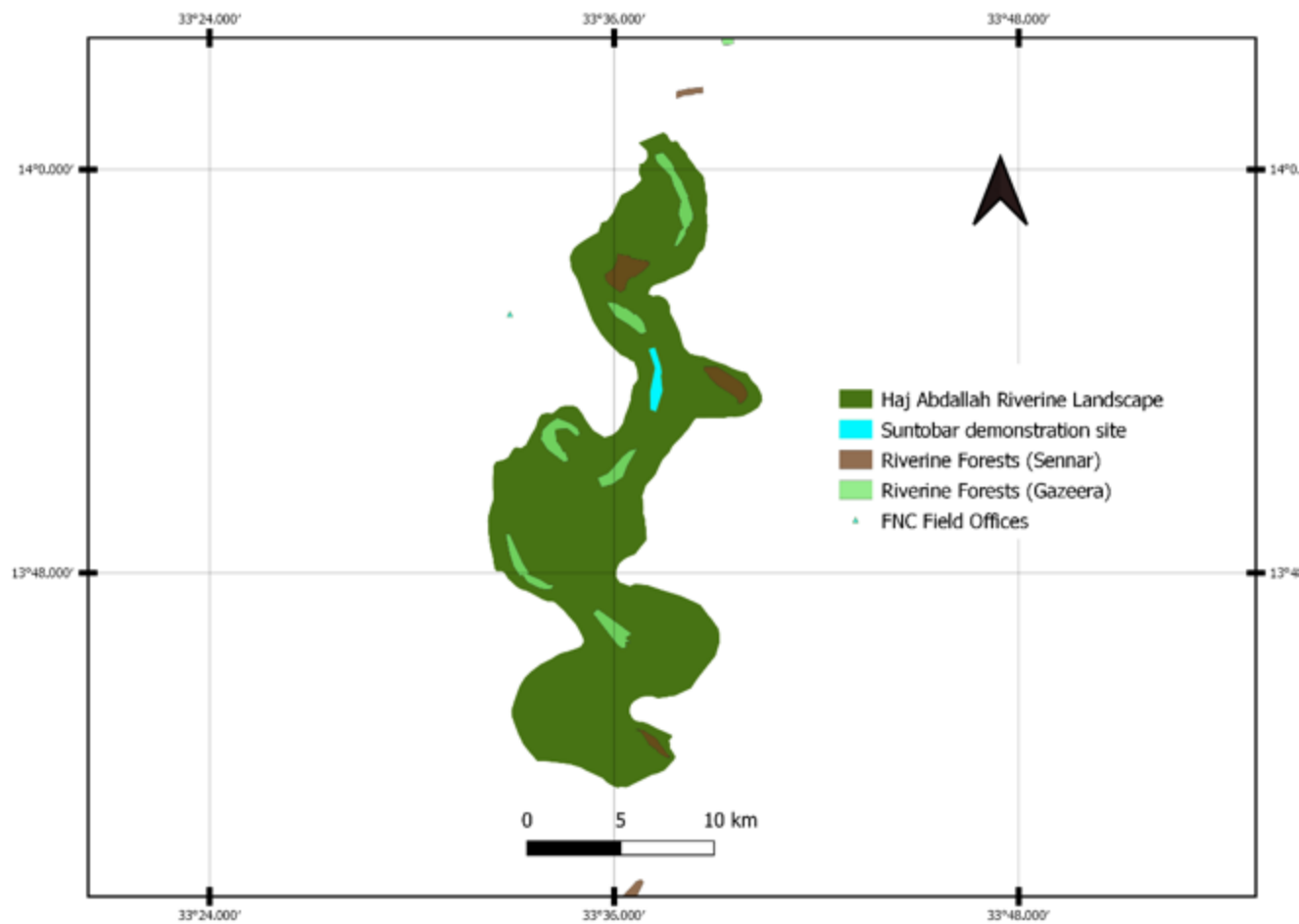
ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.









ANNEX E: Project Budget Table

Please attach a project budget table.

	FAO Cost Categories	Component 1: Planning	Component 2: Scaling Best Practices	Component 3: informed DM	M&E	PMC
1	Conservation Land Use Planning Expert: Responsible for Component 1 Activities	\$87,500	\$0	\$0	\$0	\$0
2	Sustainable Practices Expert: Responsible for Component 2 Activities	\$87,500	\$0	\$0	\$0	\$0
3	KM/Monitoring Expert: Responsible for Component 3 Activities	\$0	\$0	\$87,500	\$0	\$0
	Sub-total international Consultants	\$175,000	\$0	\$87,500	\$0	\$0
	National consultants					
4	National Project Coordinator	\$0	\$0	\$0	\$0	\$36,000
5	Administrative and Financial Manager	\$0	\$0	\$0	\$0	\$29,750
6	M&E Expert	\$0	\$0	\$0	\$6,000	\$0
7	Conservation Land Use Planning Expert: Responsible for Component 1 Activities	\$150,000	\$0	\$0	\$0	\$0
8	Sustainable Practices Expert: Responsible for Component 2 Activities	\$0	\$150,000	\$0	\$0	\$0
9	KM/Monitoring Expert: Responsible for Component 3 Activities	\$0	\$0	\$150,000	\$0	\$0

10	Gender Expert	\$8,000	\$8,000	\$8,000	\$0	\$0
11	Technical Field Assistants 3X	\$16,000	\$16,000	\$16,000	\$0	\$0
	Sub-total national Consultants	\$174,000	\$174,000	\$174,000	\$6,000	\$65,750
	5013 Sub-total consultants	\$349,000	\$174,000	\$261,500	\$6,000	\$65,750
	5650 Contracts					
12	Spatial and Management Planning Program Activities: Component 1	\$200,000	\$0	\$0	\$0	\$0
13	Sustainable Practices Program Activities: Component 2	\$0	\$218,904	\$0	\$0	\$0
14	Communications and KM: Implementation of Communications Strategy (Component 3)	\$0	\$0	\$80,000	\$0	\$0
15	Impact monitoring and reporting: Implementation of monitoring framework to support informed decision-making... across components.	\$33,333	\$33,333	\$33,333	\$0	\$0
16	Mid-Term Evaluation	\$0	\$0	\$0	\$30,000	\$0
17	Final Evaluation	\$0	\$0	\$0	\$33,000	\$0
18	Spot Checks	\$0	\$0	\$0	\$0	\$33,000
19	Terminal Reports	\$0	\$0	\$0	\$3,000	\$0
20	Audits	\$0	\$0	\$0	\$0	\$17,136
	5650 Sub-total Contracts	\$233,333	\$252,237	\$113,333	\$66,000	\$50,136

	5021 Travel					
21	International Travel	\$16,667	\$16,667	\$16,667	\$0	\$0
22	National Travel	\$25,000	\$25,000	\$25,000	\$0	\$0
	5021 Sub-total travel	\$41,667	\$41,667	\$41,667	\$0	\$0
	5023 Training and workshops					
23	Inception, Mid-term, Hand-Over Technical Design Workshops	\$5,000	\$5,000	\$5,000	\$0	\$0
24	PSC Meetings	\$4,333	\$4,333	\$4,333	\$2,000	\$0
25	Component 1: Land Use Planning Workshops	\$50,000	\$0	\$0	\$0	\$0
26	Component 2: FFS Training Workshops	\$0	\$65,000	\$0	\$0	\$0
27	Component 3: Informed Decision- Making Workshops	\$0	\$0	\$50,000	\$0	\$0
	5023 Sub-total training	\$59,333	\$74,333	\$59,333	\$2,000	\$0
	5024 Expendable procurement					
28	Component 1: Land Use Management Systems - GIS, Remote Sensing, Etc.	\$75,000	\$0	\$0	\$0	\$0
29	Component 2: Practice demonstration and FFFS - Items required to implement FFFS programming	\$0	\$239,410	\$0	\$0	\$0
30	Component 3: Informed DM - Items required for upscaling and informed DM	\$0	\$0	\$75,000	\$0	\$0
31	Communications materials (Phone/internet subscriptions,	\$0	\$17,676		\$0	\$0

	5024 Sub-total expendable procurement	\$75,000	\$257,086	\$75,000	\$0	\$0
	6100 Non-expendable procurement					
32	Component 1: Land Use Planning equipment	\$50,000	\$0	\$0	\$0	\$0
33	Component 2: Equipment to support mainstreaming demonstrations	\$0	\$87,916	\$0	\$0	\$0
33	Component 2: Equipment to support mainstreaming demonstrations (Vehicles)	\$0	\$90,000	\$0	\$0	\$0
33	Component 2: Equipment to support mainstreaming demonstrations (Motorbikes)	\$0	\$6,000	\$0	\$0	\$0
34	Component 3: Equipment for communications (computers, printers, and other required equipment)	\$0	\$0	\$50,000	\$0	\$0
	6100 Sub-total non-expendable procurement	\$50,000	\$183,916	\$50,000	\$0	\$0
	6300 General Operating Expenses budget					
35	Communication expenses (internet/phone subscriptions)	\$0	\$0	\$0	\$0	\$7,434
	6300 Sub-total GOE budget	\$0	\$0	\$0	\$0	\$7,434
	TOTAL	\$808,333	\$983,239	\$600,833	\$74,000	\$123,320

Component 2: Equipment to support mainstreaming demonstrations including 2 vehicles @45k/each and 3 motorbikes @2,000/each. Transportation means are needed to implement project interventions mainly demonstrative practices under Component 2, two vehicles are included to cover a wide geographical area across the 3 target States, and 3 motorbikes were also including to enable the technical project assistants located in each of the 3 target states provide technical backstopping and support to project interventions at local level on a daily basis.

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat

or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).