LAND AND NATURAL RESOURCE DEGRADATION NEUTRALITY AND COMMUNITY VULNERABILITY REDUCTION IN SELECTED MIOMBO AND MOPANE ECOREGIONS OF ANGOLA (OKAVANGO AND CUNENE RIVER BASIN)

Part I: Project Information

Name of Parent Program

Sustainable Forest Management Impact Program on Dryland Sustainable Landscapes

GEF ID

10256

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

☐CBIT

☐NGI

Project Title

Land and natural resource degradation neutrality and community vulnerability reduction in selected Miombo and Mopane Ecoregions of Angola (Okavango and Cunene river basin)

Countries

Angola

Agency(ies)

FAO

Other Executing Partner(s)

Ministry of EnvironmeMinistry of Culture, Tourism and Environment (MCTA) of Angolant

Executing Partner Type

Government

GEF Focal Area
Multi Focal Area

Taxonomy
Focal Areas, Forest, Drylands, Land Degradation, Sustainable Land Management, Improved Soil and Water Management Techniques, Drought Mitigation, Restoration and Rehabilitation of Degraded Lands, Income Generating Activities, Sustainable Fire Management, Ecosystem Approach, Sustainable Livelihoods, Community-Based Natural Resource Management, Sustainable Agriculture, Sustainable Forest, Integrated and Cross-sectoral approach, Sustainable Pasture Management, Land Degradation Neutrality, Land Cover and Land cover change, Carbon stocks above or below ground, Land Productivity, Influencing models, Demonstrate innovative approache, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Stakeholders, Communications, Awareness Raising, Education, Local Communities, Private Sector, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, Civil Society, Non-Governmental Organization, Community Based Organization, Type of Engagement, Participation, Information Dissemination, Consultation, Beneficiaries, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender results areas, Access and control over natural resources, Capacity Development, Capacity, Knowledge and Research, Knowledge Exchange, Enabling Activities, Knowledge Generation

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 2

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
12/13/2020

Expected Implementation Start
5/1/2021

Expected Completion Date
4/30/2026

Duration
60In Months

Agency Fee($)
482,367.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
IP SFM Drylands	Degradation, desertification, and deforestation of land and ecosystems in drylands avoided, reduced and further reversed through an integrated and sustainable management of production landscapes IP SFM Drylands [GEF-7 Impact Program: Sustainable Forest Management, Dryland Sustainable Landscapes (DSL)]	GET	5,359,633.00	34,500,000.00
		Total Project Cost($)	**5,359,633.00**	**34,500,000.00**

B. Project description summary

Project Objective

Project Objective: To initiate a transformational shift towards sustainable, integrated management of multi-use dryland landscapes in the Miombo-Mopane ecoregions of Angola (Okavango and Cunene river basins) based on Land Degradation Neutrality principles

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Enabling frameworks for Land Degradation Neutrality at national and landscape levels	Technical Assistance	1.1 Strengthened policy-regulatory and decision-making frameworks for LDN at national and sub-national levels	1.1.1 LDN stakeholder participatory structures and processes at national level strengthened/established, with vertical integration to landscape level multi-sectoral working groups 1.1.2 Policy and regulatory frameworks relevant to land-use planning and management reviewed and revised for effectively applying LDN principles and mainstreaming SLM/SFM interventions	GET	410,745.00	8,448,600.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
2.Strengthening implementation and replicating SLM and SFM practices	Technical Assistance	TA 2.1 Landscapes in southern Angola under Integrated Land-Use Planning (ILUP) for LDN TA 2.2 Landscape management enhanced by innovative, gender-sensitive investments in land user production capacity and resilience INV 2.3 Sustainable harvesting of dryland products from target landscapes enhanced by green value chains	2.1.1 Land Management Units and respective interventions selected, landscape assessments expanded and deepened using ILAM, and LDN balance sheet prepared 2.1.2 Integrated Land-Use Plans developed for LMUs in each target landscape, based on consultation processes and mechanisms outlined in respective Stakeholder Engagement Plans 2.1.3 Integrated Land-Use Plans under implementation in target landscapes 2.1.4 Capacity Development Program on integrated land-use planning, management and investment designed and delivered 2.2.1 Gender sensitive SLM/SFM practices identified/developed and promoted in target landscapes, and further enhanced by strengthening Farmer/Agro-Pastoral Field Schools network 2.2.2 Land users? resilience and production capacity enhanced by Forest-Farm Facility investments in communal assets 2.3.1 Drylands Green Value Chain Strategy developed for southern Angola	GET	3,289,283.00	17,760,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3.Strengthening knowledge, learning and collaboration to support progress towards achieving national LDN targets	Technical Assistance	TA 3.1 National land information framework strengthened to inform LDN-related policy, planning and management at national and global leve TA 3.2 Knowledge and awareness to support progress towards achieving national LDN targets enhanced TA 3.3 National and sub-national measures to deliver LDN enhanced through improved regional and global opportunities for collaboration, exchange and learning lessons	3.1.1 National and sub-national LDN assessment, monitoring and reporting systems and tools, including LDN knowledge platform developed and operational, with relevant reporting to global level 3.1.2 Capacity development for key stakeholder individuals and institutions at national and sub-national levels on: (i) LDN approaches that support integration of LDN targets into multi-sector policy, planning and management; and (ii) assessment, monitoring and analysis tools to support national LDN reporting, designed and delivered. 3.2.1 Project knowledge management, communication and dissemination framework, and strategy developed and implemented 3.2.2 Project M&E framework, supporting lesson learning and adaptive management, developed and operational from national through to community levels 3.3.1 Actions, collaboration and investments identified to address transboundary land and environmental degradation priorities in Miombo-Mopane ecoregion and bi-	GET	1,153,134.00	7,148,600.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
M&E				GET	251,250.00	
				Sub Total ($)	**5,104,412.00**	**33,357,200.00**

Project Management Cost (PMC)

GET	255,221.00	1,142,800.00
Sub Total($)	**255,221.00**	**1,142,800.00**
Total Project Cost($)	**5,359,633.00**	**34,500,000.00**

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($)
Recipient Country Government	Ministry of Culture, Tourism and Environment (MCTA) through the National Development Program # 2.4.1 (Climate Change)	Public Investment	Investment mobilized	21,247,200.00
Recipient Country Government	Ministry of Culture, Tourism and Environment (MCTA)	In-kind	Recurrent expenditures	252,800.00
Recipient Country Government	Ministry of Agriculture and Fishery (MINAGRIP) through the National Development Programs # 2.3.2 (Promoting Agricultural Production) and # 2.3.4 (Promoting the Sustainable Use and Management of Forest Resources)	Public Investment	Investment mobilized	10,210,000.00
Recipient Country Government	Ministry of Agriculture and Fishery (MINAGRIP)	In-kind	Recurrent expenditures	490,000.00
Recipient Country Government	Ministry of Agriculture and Fishery (MINAGRIP) through the IFAD founded (Loan) SREP - Smallholder Resilience Enhancement Project	Public Investment	Investment mobilized	1,800,000.00
GEF Agency	FAO	Grant	Investment mobilized	100,000.00
GEF Agency	FAO	In-kind	Recurrent expenditures	400,000.00
			Total Co-Financing($)	**34,500,000.00**

Describe how any "Investment Mobilized" was identified

Description on how any ?Investment Mobilized? was identified: Most of the programs, projects and initiatives that comprise the financial baseline and co-financing for this project are from public investments programs (with incorporated PMC contribution) planned by the Government of Angola and expected to be realized during the project implementation period. They are investments allocated through the Central State

Budget (OGE) that will be managed by the Ministry of Culture, Tourism and Environment (MCTA)and Ministry of Agriculture and Fishery (MINAGRIP). The official identification of the programs is cited in the 2018-2022 National Development Program (PND). The financial assessment includes a conservative extrapolation of the named allocations for the project duration (2025 at least). The following selected sectoral programs under the PND were considered relevant to the project: ? Program # 2.4.1) Climate Change, 100% relevant, managed by MCTA through its Directorate of Environment and Climate Action (DNAAC) and related entities; ? Program # 2.3.2) Promoting Agricultural Production, 30% relevant, managed by MINAGRIP through its National Directorate for Agriculture and Livestock and related entities; ? Program # 2.3.4) Promoting the Sustainable Use and Management of Forest Resources, 30% relevant, managed by MINAGRIP through its National Directorate for Forests and related entities; ? Program # 4.3.2) Decentralization and implementation of local governments, 50% relevant, including projects under it that are either managed by the Municipalities Cuchi, Cahama and surroundings, or which benefit these (currently included only in baseline finance calculus, but was not as co-financing). Funding from the above-mentioned governmental programs excludes by default recurrent expenditure ? meaning that 100% of the baseline and co-financing amounts from Government correspond to public investments, as currently prioritized in the PND and included in the OGE, and which will be mobilized throughout project implementation. The following method was applied to calculate public investments from the PND, as shown in the above Table C: ? Government programs were selected on the basis of their thematic and geographic relevance vis-?-vis the subject matter of the project. ? The baseline calculus for each individual program was initially based on budgetary figures in the national currency (Angolan Kwanzas AOA) for the relevant programs, as published in the Central States Budget (OGE) for 2019. ? Amounts in AOA were converted into USD and extrapolated for the duration of the project, using conservative rates and coefficients, so as to discount future uncertainties. Such uncertainties include possible currency devaluations and the non-realization of investment. ? By discounting the future in the baseline calculus in bulk and also, by extension, in the project?s co-financing, the possibility of mobilizing additional investments during implementation is enhanced. While the above assumptions and calculus of both baseline and co-financing are generally defensible, they were based on official figures available in late-2019/early-2020. However, the calculus pre-dates the COVID-19 pandemic, meaning that the potential impact of the pandemic on public investments in Angola or on the global economy has yet been taken into account. The detailed application of this exercise is presented Annex A3. IFAD SREP - Smallholder Resilience Enhancement Project will also cofinance the GEF intervention based in common synergies and AFDB Agricultural Value Chains ? Support to Sustainable. Development & Growthmakes part of the baseline of the project FAO will provide $500,000 as co-financing, leveraged from its own sources in order strengthen project management activities by securing essential operational expenses. It is expected that the COVID-19 pandemic will have serious impacts on the Angolan economy, especially since it has indirectly impacted the global demand for oil. Royalties and taxation linked to the oil and gas sectors are the main source of revenue for the Angolan State. Macro-economic predictions for Angola will need to be revised and, along with it, government planning. This revised planning exercise by the Angolan State has not yet taken place. In spite of the likely negative impact of the pandemic on public investment in Angola, for the purposes of CEO Endorsement Request the figures herein presented remain sufficiently accurate for validating the solidity of project?s baseline and co-financing for two main reasons: (1) Government

projects, programs and initiatives that were selected as baseline and co-financing to the project were subject to robust, selective and conservative criteria in the assessment. (2) Although the COVID-19 pandemic and its impacts bring about uncertainty and price volatility, the currency conversion rate, the discount rate and the extrapolation methods have already taken a good degree of uncertainty into consideration. This was done in order to avoid the non-realization of the proposed co-financing and to facilitate the potential mobilization of additional co-financing during project implementation. The mobilization of investments will be pursued through a closer alignment between government initiatives and the Child Project during implementation. As shown in Table 1, USD 690.000 will be an in-kind PMC contribution by the relevant co-financiers. The management costs of the project that will be covered by co-financing comprises of: (i) the use of office facilities at Luanda as well as in the two provinces, municipalities and communes for project offices (PMU staff and regional facilitators), meetings and trainings during 5 years: USD 240.000, (ii) contribution to expendables in project offices for 5 years: USD 40.000, (iii) contribution to mobility at field level and the capital during 5 years: USD 170.000, and (iv) staff time of public institutions: directors and authorities, technicians and support staff (drivers, admin) during 5 years: $ 240.000

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	Angola	Climate Change	CC STAR Allocation	1,777,700	159,993
FAO	GET	Angola	Land Degradation	LD STAR Allocation	1,813,077	163,177
FAO	GET	Angola	Multi Focal Area	IP SFM Drylands Set-Aside	1,768,856	159,197
				Total Grant Resources($)	**5,359,633.00**	**482,367.00**

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

☐

PPG Amount ($)

200,000

PPG Agency Fee ($)

18,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
FAO	GET	Angola	Land Degradation	LD STAR Allocation	67,656	6,089
FAO	GET	Angola	Climate Change	CC STAR Allocation	66,337	5,970
FAO	GET	Angola	Multi Focal Area	IP SFM Drylands Set-Aside	66,007	5,941
				Total Project Costs($)	**200,000.00**	**18,000.00**

Please provide justification

FAO intends to use the same baseline assessment methodology for all the six Miombo countries in a harmonized manner. The latter also comprises of a comprehensive and representative household survey to be conducted in the (quite large) project intervention areas using the SHARP resilience tool (which is in line with the STAP?s recommendation to follow key steps of the RAPTA framework). We will link the (georeferenced) household survey results to the remote sensing data and maps (land use/land use change assessment). Angola is one of the most expensive countries in SSA and despite government?s commitment to support the PPG (mostly in kind) we will depend on a requested increase (USD 50,000) to be able to accommodate the baseline work (e.g. Angola has second highest fuel prices in SSA ? ranked second after Nigeria. Luanda is the most expensive city in Africa). The GEF OFP is aware and in agreement with this request.

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	9288.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	4,900.00		

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	4,388.00		

Indicator 3.3 Area of natural grass and shrublands restored

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

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

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

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)
0.00	623900.00	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)
	52,000.00		

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)
	569,900.00		

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)
	2,000.00		

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

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	0	1047911	0	0
Expected metric tons of CO?e (indirect)	0	209582	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)		1,047,911		

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (indirect)		209,582		
Anticipated start year of accounting		2021		
Duration of accounting		20		

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

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		6,500		
Male		3,500		
Total	0	10000	0	0

Part II. Project Justification

1a. Project Description

1.a Project Description

Impact Programme Context

This project is part of the global Sustainable Forest Management Impact Program on Dryland Sustainable Landscapes (DSL IP), approved by the GEF in 2019 and distributed across 11 countries in Africa and Asia through Child Projects. The goal of the Program is to avoid, reduce, and reverse further degradation, desertification, and deforestation of dryland ecosystems through the sustainable management of production systems in concert with enhancing the integrity and connectivity of existing protected dryland forests through an *integrated* landscape approach.

Among the 11 DSL IP countries, seven are part of the so-called ?Miombo Cluster?: Angola, Namibia, Botswana, Zimbabwe, Malawi, Mozambique, and Tanzania.[3] Countries within the Miombo Cluster not only share similar ecosystems unique to Southern Africa?Miombo-Mopane Woodlands?but face common challenges, including transfrontier ones, with respect to land management. Countries participating in Child Projects of the ?Miombo Cluster? will seek strategic and conceptual cohesion through regional collaboration and peer learning opportunities to help address these common challenges and, with support from regional bodies and partners, devise solutions that can be shared across Southern Africa. The shared interests of Miombo Cluster countries will add perspective to DSL IP processes and initiatives at the global level.

The Angola DSL IP Child Project is designed to strengthen the enabling environment for land-use planning and management for Land Degradation Neutrality in targeted landscapes of Miombo-Mopane Woodland in the country?s southern region by mainstreaming the LDN response hierarchy of avoiding, reducing and reversing land degradation across of land-use planning and management at landscape scales. To generate multiple benefits and secure tangible change within managed landscapes, the project will adopt a barrier-removal approach based on a thorough and contextualized analysis of conditions and processes at landscape and national levels. Technical assistance to land users and market-based mechanisms will be among the strategies used to facilitate their adoption of sustainable land/forest management (SLM/SFM) practices on the ground. Angola?s participation in regional and global exchange mechanisms is intended to enhance coordination among countries and mutual learning across the Miombo cluster and beyond.

1.1 National Context for Sustainable Use of Miombo-Mopane Ecosystems in Angola

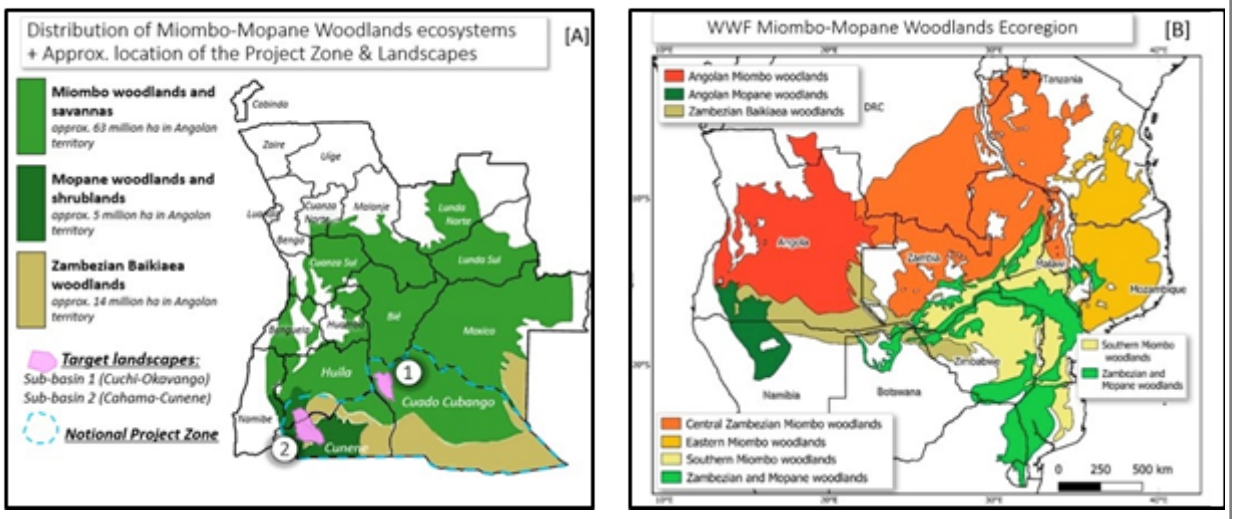
Angola is the third largest country in sub-Saharan Africa with an area of 1,246,700 sq. km. The country is rich natural resources, notably oil, gas, and minerals, as well as land, water and diverse ecosystems. The economy depends on oil and gas exports, creating economic fragility and resulting in limited investments in sectors such as agriculture, despite its large potential. Angola is a post-conflict Least Developed Country (LDC), with all the inherent challenges linked to this status, but currently scheduled to graduate to Developing Country in 2021[4].

According to the 2014 Demographic Census, the resident population is 25.7 million: 52% are female and 65% are under the age of 24. Urban areas account for 63% of the population, including 6 million in the capital, Luanda, and 37% live in rural ones.[5].

Angola?s climate is tropical to sub-tropical, with warm humid summers and mild dry winters. Along much of the coast and in the extreme south, the climate is hot semi-arid (BSh); and in the southeast it is hot desert (BWh). Rich in **water resources**, with over a dozen major river basins, Angola has a broad range of vegetation, soil types and impressive biological diversity. Both climate and vegetation are influenced by altitude, latitude and the effects of the Atlantic Ocean on geophysical parameters.

Vegetation. Terrestrial ecosystems in Angola range from the desert biome in the southwest to the humid and sub-humid forests of Cabinda, Zaire and other northern provinces. The country is rich in **forest-resources** and harbors varied forest types within its territory. Besides the northern rainforests, there are vast dry forests, which include Mopane woodlands and shrublands ecosystem in the south and abutting Zambezian Baikiaea woodlands to the east. Part of the varied Miombo woodlands and savannas ecosystems, which cover half the country, are also considered or presumed drylands (Figure 1A).

Figure 1. Distribution of Miombo-Mopane woodland ecosystems and ecoregion in Angola [A] and across Southern Africa [B], respectively[6]

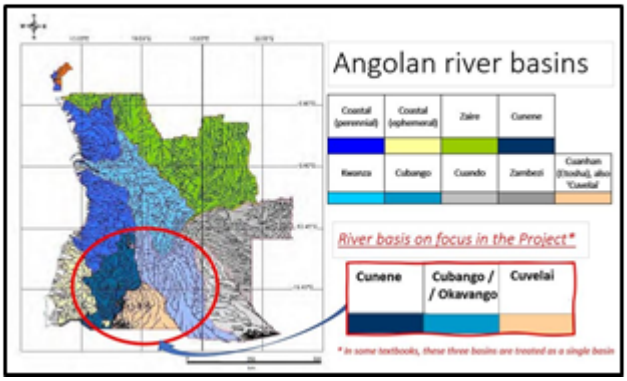


NOTES: Authorities define the distribution of Miombo-Mopane landscapes in different ways. Figure 1A shows the distribution of Miombo-Mopane woodlands in Angola and location of the two project sites within the notional Project Zone. The distribution of the Miombo-Mopane ecoregion, based on WWF?s classification of the world?s ecoregions and adopted by the DSL IP, is shown in Figure 1B. Refer to: https://www.worldwildlife.org/ecoregions/at0724 for a more detailed description of Miombo-Mopane woodlands in Angola.

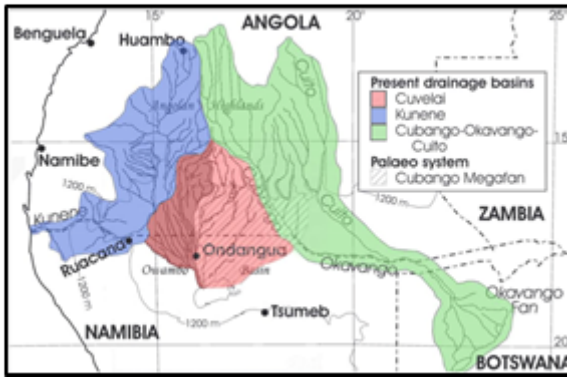
Biodiversity: The Miombo and Mopane woodlands are the most predominant type of vegetation in Southern Africa, covering ca. 3 million square kilometers, stretching from Angola, Namibia, Botswana, Democratic Republic of the Congo, Zambia, Zimbabwe, Malawi, Mozambique and Tanzania. Together with Amazonia, Congo Basin, New Guinea and the North American deserts, the Miombo and Mopane woodlands are considered wilderness areas of global conservation significance as they concentrate the majority of plant and vertebrate species endemic to individual wildernesses. These woodlands are the main ecosystems of the ?Zambezian? region of Africa, distinct in terms of mammals, birds, amphibians, reptiles and plants, with high levels of diversity and endemism. The Miombo and Mopane Ecoregion has an estimated diversity of 8,500 flowering plant species, of which ca. 54% are endemic. Within the Afrotropical realm, the Angolan part of the ?Miombo-Mopane Woodlands Ecoregion? falls within the Zambezian Regional Center of Endemism, as outlined by White (1993), covering up to 63% of Angola?s land surface (Figure 1). The ecoregion lies mainly in the Cubango-Zambezi Basin, which is an extensive area of undulating hills drained by rivers that flow eastwards into the Zambezi River. It is also drained

by the endorheic Cuando-Cubango system and the Cunene River. In the targeted southeastern part of Angola, these forests constitute the western portion of ?wetter Zambezian miombo woodland?. 1. The landscapes include ?mosaics of *Brachystegia bakerana* thicket and edaphic grassland,? sharing similar faunal patterns with the Miombo and Mopane woodlands7 (Figure 1B). Baikiaea woodlands dominate large parts of southern Angola along the border with Namibia and fall within the definition used for ?Miombo-Mopane Woodlands of southern Angola? that constitutes the ?project zone?.

Figure 2. River basins of Angola [A] and their Southern Africa context [B]



[A] ***The project area partly covers three subregional river basins, all of which originate in Angola and underpin local livelihoods: Cunene, Cuvelai (known as Cahama-Etosha on the Namibia side) and Okavango.***



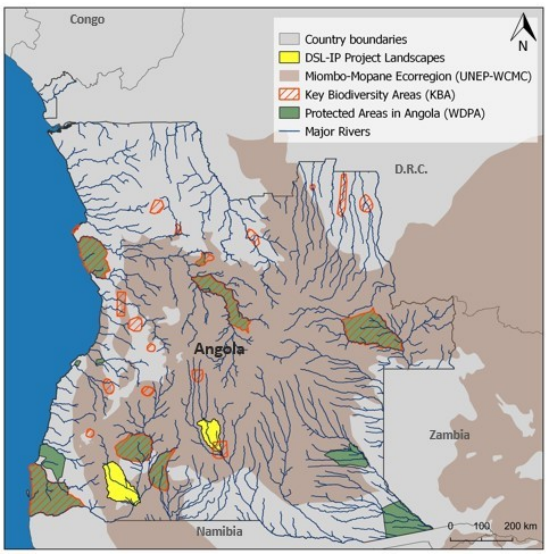
[B] ***Southern Angola is a vast area dominated by transboundary river basins that include the Cunene, Cahama-Etosha, Okavango and, as part of the greater Zambezi river basin, Cuando Cubango.***

Eco-system services: The remaining Miombo-Mopane woodlands provide vital ecosystem services (including water, food, nutrition, shelter, medicine and fiber). Healthy woodlands provide game, timber and a variety of non-timber forest products (NTFPs), including honey, edible mushrooms and various wild protein sources (e.g. mopane worms, now popular in Angola). Woodfuel provides both required energy for cooking daily meals (firewood8) as well as an income- generating activity for an increasing number of predominantly rural poor that engage in charcoal production. Hence, safeguarding the continuity of ecosystem services from Miombo-Mopane woodlands is essential for the livelihoods of local communities in southern Angola. If local habitats are managed sustainably, multiple livelihood objectives can be achieved and land degradation counteracted. Over 1.0 million people are estimated to live in the Miombo-Mopane dominated rural areas of Cunene and Cuando Cubango provinces. Another 1.8 million live in the rural areas of Hu?la Province, which is Angola?s ?Miombo heartland?, together with Bi? and Moxico provinces (Figure 1A). Miombo-Mopane woodland ecosystems are naturally resilient and may recover from disturbances ? if land is managed sustainably and landscapes maintained productive, with parts dedicated to conservation.

Biodiversity conservation: Within the context of Angola?s biodiversity, including its ecosystems that provide culturally, socially and economically valuable goods and services, globally important hotspots of key biodiversity (KBAs) have been identified under the KBA Partnership and these are shown in Figure 3A in relation to the two target sub-basins, Cuchi-Okavango (1) and Cahama-Cunene (2). Sub-basin 1 partly overlaps Kulei KBA, which is under direct pressure from this production landscape from

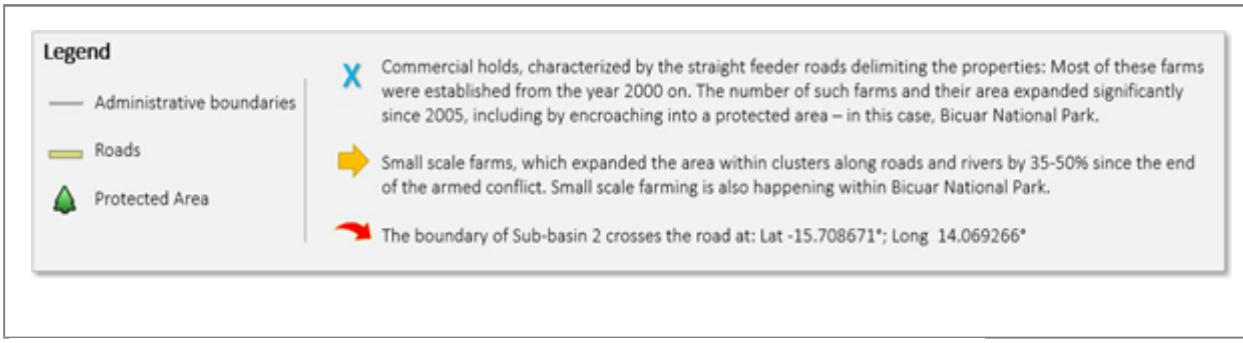
such threats as upstream pollutants (e.g. sediment, fertilizers, pesticides) entering the river that flows through the KBA, encroachment and colonization of exotic and/or invasive plants. Examples of encroachment are all too evident, as shown in Figure 3B, and examined further in Section 1.2 under of forest fragmentation. In the case of Sub-basin 2, catchments on either side include several protected KBAs (ie. national parks). Here pressures on these KBAs from production systems are better contained by topography and the challenge concerns maintaining or restoring opportunities for genetic exchange between populations of wild plants and animals in isolated protected areas through buffers, ecological corridors and stepping stones. Thus, both target areas provide major opportunities for demonstrating how pressures and threats on neighbouring refuges of biodiversity can be contained and reduced through SLM/SFM practices. The future integrity of the PAs system in Angola, comprising 14 sites (87,507 km2) and covering just 7% of the country (terrestrial), will depend increasingly on sustainable landscape management approaches, even with modest expansion of the PAs system. Hence, the vital importance of demonstrating how this can be achieved in these target landscapes, where replication post-project will be equally vital.

Figure?3. Key Biodiversity Areas, protected areas [A] and encroachment [B]



3A. (left) Angola?s network of 23 KBAs: 26% of their coverage Is included in its national PAs system. Sub-basin 2 is positioned between 3 protected KBAs (Mupa, Bicuari and Iona national parks) and a fourth PA; and Sub-basin 1 lies in a catchment that flows into an overlapping KBA (Culei).

3B. (right) Encroachment from expansion of small farms along roads and rivers (yellow arrows) and into?Bicuari?National Park?,north?of?Sub-basin 2, following the end of the Civil War in 2002.



Angola?s agrarian sector, which technically includes forestry, accounted for 80% of the population and 44% of formal employment in 2017 but contributed only 10% of the country?s GDP, remaining grossly underdeveloped.[7] In spite of its extensive arable land (57.6 million ha, 46.2% of total land area) and sizable forest reserves, the sector is not able to feed the country: only 5.7% of arable land is used; planting, harvesting, processing and storage technologies and processing facilities are largely lacking; and limited irrigation are among the key issues. According to FAO, food imports represented $2.7 billion in 2018, which contrasts starkly with food exports of only $19 million. Up to 90% of the farming population are smallholders, many of whom lack basic means for improving productivity of their land, so they resort to practices that degrade land and forest resources, including land clearance. Food production systems in Angola face acute challenges, hence modernization of the agrarian sector is a national priority, elaborated further in Annex W-3 with respect to *Angola?s Mid-Term Plan for the Agrarian Sector*.

Overall, Angola faces important **food security and climate resilience and vulnerability challenges**, in spite of recent progress towards SDGs[8]. According to FAO?s 2018 flagship global overview on *The State of Food Security and Nutrition*, the prevalence of stunting in children under 5 years old has actually increased in Angola from 29.2% to 37.6% between 2012 and 2017. This is a worrisome indicator, especially given that the prevalence of undernourishment in the general population has been reduced by over half in the last decade, from 54.8% in 2004-06 to 23.9% in 2015-17).[9]

The same FAO report highlights the vulnerability of Angola?s agricultural systems to climatic shocks, classifying agricultural production and yields as ?climate-sensitive? on account of the country being prone to dry spells and low rainfall. A 2018 USAID publication on Angola and climate change mentions:

> *?The effect of changes in rainfall will depend on location; however, throughout the country, temperature increases can reduce soil moisture, impacting both rainfed and irrigated crops. Some climate scenarios project a reduction in crop yields by 2030. Climate change will also impact livestock, which are an important asset in southern provinces such as Hu?la and Cunene, where more than two-thirds of cattle are located.?*

Small farmers and traditional livestock herders are particularly vulnerable to climate shocks and lack adaptive capacity, for example lacking information on markets and often relying on outdated agrarian production technologies. Furthermore, both large and small land users in rural southern Angola have limited access to rural extension services. A review of climate change considerations from selected studies is provided in Box 15 of Annex X-3

Gender. In southern Angola, farmers, forest users and livestock herders are key stakeholders in the complex process of integrating management of Miombo-Mopane woodland landscapes. Their land use and production techniques have important implications for land degradation and the resilience of natural assets upon which they rely. According to the 2014 Census, 38% of households in Angola are headed by women[10] and household size on average is more numerous in the

south than elsewhere in the country.[11] Understanding decision-making processes that influence the outcome for Miombo-Mopane woodland landscapes at household and community levels is vital, as is the need to realise the gender gap and potential role of women in sustainably managing these landscapes. Gender equality is addressed in 1.b 3

1.2 Threats, Root Causes, Drivers and Barriers

Main Processes that lead to Land Degradation

The Miombo woodlands? biodiversity and ecosystem services are increasingly threatened, mainly by uncontrolled land-use changes. Forest resources are generally regarded as open access and have been converted into either grassland or cropland at an accelerated pace without any form of land-use planning; and uncontrolled wildfires are common during the dry season, often linked with land clearings (fire has recently devastated parts of?Cuando?Cubango). This?creates?additional hardship for local communities on top of challenges linked to the 2019 drought.[9]?

Habitat fragmentation has also a major effect in biodiversity loss, preventing the connection between small populations of the same species and destroying fundamental corridors for the movement of large mammal species.

A detailed multi-scale threat analysis undertaken for this project is included in Annex W-4. It starts at the macro level (i.e. national and provincial), then zooms into the target landscapes (two sub-basins) and thereafter focuses on a Land Degradation PPG Assessment[12] of Baseline Sites #1 and #2. The study concludes that the most important ***direct causes of land degradation*** **within the project zone** are:

Land-use change/land conversion: Land clearings are the main drivers of land-use change/land conversion for both small-scale and large commercial-scale crop farming. As seen in many cases, land-use change in the project zone has not resulted in land improvement over the years.

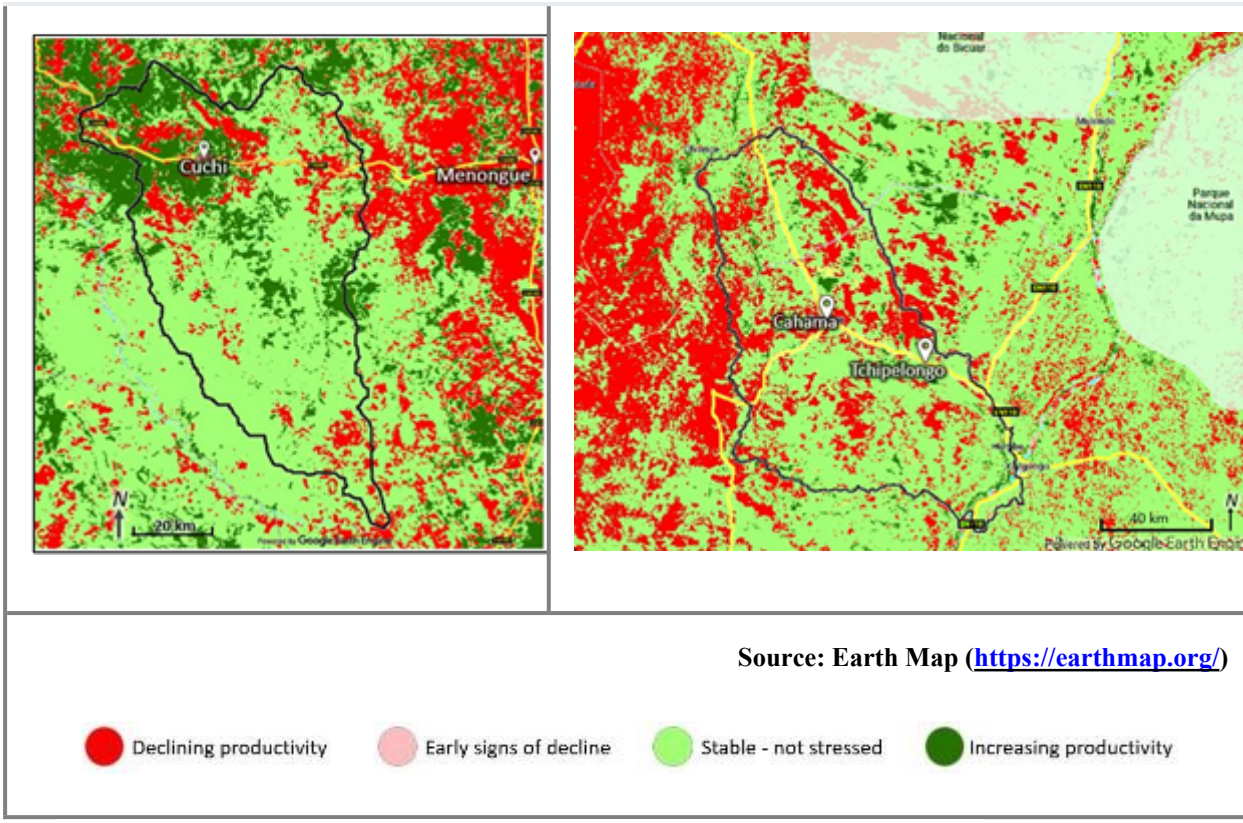
Removal of woody biomass from the vegetation is primarily linked to the harvesting of woody biomass mainly for commercial charcoal production (to be sold in urban centers). None of the prevailing practices within the project?s landscapes include any form of previous resource assessment, planned harvest, rotation, replanting, or even tracking offtake.[13] Woody biomass removal affects Landscape #1 (Cuchi-Okavango) more than #2 (Cahama-Cunene).

Maladaptive and unsustainable production practices refer to those techniques, technologies and practices commonly applied to production landscapes that either result in or contribute to erosion, soil impoverishment and loss of biomass (over tillage, slash-and-burn, fires for clearing, monoculture, etc.). Unless such practices are improved, adapted or even stopped, depending on the local context, their persistence will degrade land degradation. Drivers that apply to specific land-use systems (LUS) are considered

The causes and effects of landscape degradation can be mutually reinforcing: The decline in land productivity in the targeted landscapes is shown and described in Figure 4. Together, the removal of woody biomass from a landscapes followed by land clearings can increase the incidence of fire, leading to reduced land productivity unless countered by land improvement measures. Where small scale farming predominates under a common property regime[14], access by individual farmers to additional parcels of land is theoretically ?unhindered?. Natural population growth in such an area will lead to the expansion of agricultural land at the expense of woodland ecosystems. This process happens over decades but evidence suggests that it is accelerating in certain parts of Angola as the population grows and to the extent that it remains rural, requiring land and drawing on ecosystem services for their livelihoods.

Figure 4. Land productivity within target landscapes

Sub-Basin 1 (Cuchi-Okavango)	Sub-Basin 2 (Cahama-Cunene)



Source: Earth Map (https://earthmap.org/)

Climate risks and threats will affect natural assets and livelihoods within the project zone. Major sectors likely to be affected by climate change include agriculture and food security, forests and biodiversity, and water resources according to the Angolan NAPA (2011). The NAPA stressed that Prevailing climatic scenarios for Angola in first half of the 21st century pose an added risk to the economy and to local communities? resilience. Some of the Miombo and Mopane belts in southern Angola fall within a water scarce region that undoubtedly would be classified globally as a dryland (aridity index ? 0.65). [15] More specifically, climate change will impact people and their livelihoods in southern Angola in ways that are only beginning to be assessed. IFAD?s CRA[16] indicates that large parts of Cuando Cubango and Cunene provinces will likely experience water stress and potentially conflict over water resources during periods of drought. Moreover, temperature and precipitation anomalies could make the cultivation of certain crops, notably cassava and maize ? both staples, unviable in both provinces under mid-century climate change scenarios. Further details are summarized in Box 15 (Annex X-3). The SHARP results indicate that those living in the project zone under baseline conditions display low levels of resilience and limited adaptive capacity with respect to crops, water conservation, pest management, etc.

Root Causes and Drivers of Land Degradation at Landscape Levels

Land-use change is the most important process that affects **natural and semi-natural vegetation**, and leads to land degradation within the Miombo-Mopane woodlands landscapes of southern Angola**.** The processes are different for **productive lands**, which for purposes of this project are defined as landscapes that comprise *croplands, rangelands and/or production forests/woodlands*.Within these productive lands, a suite of **unsustainable agricultural, pastoral and forest management practices** are common place and considered to be the main threats to ecosystem services, to the extent that the prevailing land-use systems result in land degradation.

The **contextual drivers** behind degradation processes include:

Widespread use of slash-and-burn techniques in subsistence farming systems;

New commercial holdings established in vast tracts of land through land clearing and fire;

Excessive use of secondary forests for charcoal; and

Poorly monitored timber exploitation in forest fragments beyond sustainable regeneration rates (primarily affecting Cuando Cubango but considered a minor driver compared to others).

Other root causes and drivers acting in the background include: population increase and poverty, leading to increased demands for land and natural resources. All applicable threats are considered to be exacerbated by climate change. In the Barrier Analysis (Section 2.1), **policy, institutional capacity and market drivers** (plus ?incentives? for change) are more specifically analyzed. Currently, non-climatic shocks such as the effects of the COVID-19 pandemic on the economy, rural livelihoods and food security in Angola may soon be added to the causal analysis. For now, the exact impacts of the pandemic are speculative, but the risks to the project should not be underestimated.

Drivers in Specific Land-Use Systems

The main causes of land degradation in the **different LUSs predominant in the project zone** are briefly described below:

In Croplands slash-and-burn (shifting cultivation) system is the most common system used for cultivating food crops in small plots within drylands. The practice becomes unsustainable with increased competition for land and resources, pushing the whole system beyond sustainability limits for soil, water and biomass. The practice involves the use of fire to clear and enrich the land; and plot rotation, so that land can recover naturally during a minimal fallow period.[17] In particular the clearance of dense woodland patches (Baikiaea-Burkea woodland) for agriculture has substantially increased as the dense woodlands are favoured by the farmers because of the higher soil content (silt, clay and potassium), higher woody biomass, and more abundant soft litter leading to better (short-term) yields. In addition, the closed canopy of the surrounding woodland creates a cooler and more humid microclimate. With population pressure and food insecurity (exacerbated by poverty and/or drought), the necessary fallow periods may become too short and soil protection measures neglected; and with changes in the climate and/or the fire regime, land may not recover naturally. Soil nutrients such as nitrogen, phosphorus and organic carbon can be negatively impacted by fire. Cooler fires can facilitate the release of certain nutrients from plant matter into the soil[18], which is why they are often used to clear land. However, many land users do not master fire control techniques.

Grasslands/Rangelands: Areas classified as rangeland are among the most affected by land degradation. Overgrazing, lack of sustainable grazing rotations, and inadequate grazing calendar, are among the principal unsustainable practice in grasslands/rangelands; these practices may leave the land bare, compact the soil, cause erosion and reduce other ecosystem functions. Livestock dung may contribute to soil enrichment but it depends on the availability of moisture in the soil and other conditions. Cunene and Huila have the highest livestock concentrations in the country, with 75-100 animals per sq. km. Locally it may reach even higher concentrations and land degradation becomes inevitable. Many grasslands are being converted to cropland, particularly in Cunene, creating adding pressure on existing rangelands.

Forests/woodlands: Protection of existing forest fragments that remain relatively intact within the project zone is lacking. On the other hand, the two national parks (Bicuar and Mupa) near Sub-basin 2 (Cahama-Cunene), that do enjoy formal protection are both under threat from the expansion of settlements. For example, encroachment across Bicuar?s demarcated frontier is particularly serious, as evident in Figure 3. Forest fragments within the project landscapes are becoming increasingly denuded yet some still have conservation value. Currently in Angola, there is no real distinction between what constitutes a *?production forest?* and a *?natural forest?* (or woodland) within a given landscapes; and legal protection designation does not allow for offtake.

Drivers according to Geographic and Landscape Management Priorities

PPG assessments have shown that land-use change is accelerating within the landscapes, especially in the north of Cuando Cubango Province along main roads. Tree cover loss is most accentuated near roads, along riverbanks and where fire frequency is significantly higher than in other areas. This is especially visible in Landscape #1 within Cuando Cubango, where land-use change and forest loss have been significant over the past decade. Additionally, there is a **notable reduction in rangelands** that were traditionally used as an open access resource for grazing due to the expansion of private enclosures for livestock production and agriculture. This is an important but localized driver of land degradation that applies primarily to Landscape #2. Stakeholders reported during PPG consultations that land access and land-use conflicts between farmers and livestock keepers will likely be exacerbated by land degradation and climate change, if they remain unaddressed. More specific details about drivers are given below:

In Sub-basin 1 (Cuchi-Okavango), croplands are showing signs of land degradation in parts of the landscape where access is easy from roads or permanent rivers. The expansion of cropland into previously forested areas around Cuchi village has been especially rapid compared to other zones with less access. Because population growth in the Cuchi area has not been particularly fast[19], population pressure alone does not explain the rate of forest loss. It appears to be linked to demand for firewood and charcoal, the latter for supplying the provincial capital Menongue and also Cuchi Town. Additionally, there is evidence (verified during PPG missions) that the rapid loss of forest is linked to the establishment of large-scale cattle farms south of Cuchi town?s center. These farms may or may not be currently productive. In the near future, it is expected that the installation of a pig-iron smelting plant in the Cutato area (one of the communes within Cuchi Municipality) will result in industrial demands for charcoal from the landscape?s woodlands, threatening remaining forest fragments within it ? unless land-use planning can bring a more rational and conciliatory solution to the problem.

In Sub-basin 2 (Cahana-Cunene) tree cover is naturally thinner in than in Cuando Cubango. Cropland has expanded at the expense of forests and grasslands. The latter is the original vegetation type that was naturally predominant. Unsustainable use of both rangelands and croplands has generally resulted in land degradation. Overstocking was reported to the PPG team as exceeding 100 animals per sq. km. It is the second highest concentration of livestock in the country after f Luanda Province. Currently, the pressure for finding fresh, palatable grasses for livestock may even be threatening the integrity of Bicuar National Park, where neither grazing nor the cultivation are allowed but are visibly happening (Figure 3).

In summary, the main causes and drivers of land degradation within the project zone are linked to the expansion of the agricultural frontier, resulting in the multiplication of clearings to establish both small-holdings and commercial farms, charcoal production and overgrazing. These are accelerated by population pressure, driven to a certain extent by market forces, which have increased demands for food and other land-based ecosystem services. The process is visible through the rapid expansion of settlements and the loss of vegetation cover. According to remote sensing data, there has been little to no visible land improvement within the landscape. Finally, climate change poses an additional challenge to local communities? vulnerability and requires due consideration in the design of land-use management measures for the target landscapes.

[redacted]

A. Baseline Scenario Summary

Assessments undertaken during the preparatory phase (PPG) of this project show that the overall availability of land-based resources is dwindling across much of the targeted landscapes, including carbon, water and fertile soil. With it, the valuable flow of ecosystem services is under threat. Similar patterns across the wider landscape have resulted, over the years, in the large-scale degradation of Miombo-Mopane Woodlands in southern Angola. **Land productivity is currently declining** in the region, not least as a result of historical patterns of land-use change.

The main environmental problem to be addressed by this project is linked to the unsustainable use of Miombo-Mopane Woodlands in southern Angola. Valuable ecosystem services are being lost at an accelerating pace in the region as a result of land degradation. National frameworks for managing landscapes in an integrated and sustainable way are not yet in place; and the national capacity to do so remains underdeveloped.

Land degradation and associated processes undermines Angola?s development gains; it aggravates the country?s food security challenges and its climatic vulnerability, exacerbating the current status of rural poverty and deprivation, including its inherent gender gap. Southern Angola is more affected by these problems than other parts of the country. The climate tends towards aridity and the risks of soil erosion caused by water runoff are greater than elsewhere in the country. Water-driven soil erosion is corroborated by the fact that the alluvial plains of southern Angola harbour a tight mesh of rivers and tributaries. Among them are a few international rivers that are crucially important to both Angola and its neighbours in the sub-region. Local conditions of land use have also influenced the patterns of settlement and associated processes such as forest clearance and rangeland utilization, as well as the conditions for sustainability within productive landscapes. How land degradation affects various biophysical processes in southern Angola is summarized in Box 1.

An important conclusion from the implications of the above finding for the project relate to the importance of early detection of degradation (anticipated loss) and of strategies that avoid degradation. Besides careful monitoring of land-use change within landscapes, many of the degradation avoidance strategies must include fire management, as a minimum, and the negotiated control of ?selective land/forest use?.

The project?s general scope considers a Project zone in southern Angola straddling over parts of Cuando Cubando, Cunene and Huila provinces (Figure 1A). Within this zone, Miombo and Mopane landscapes in Angola are threatened, along with their associated ecosystem services. Deforestation, uncontrolled wildfires and other unsustainable uses of natural resources are putting pressure on the tenuous balance that maintains Miombo-Mopane woodlands productive across the Okavango, Cunene and Cuvelai river basins. Given the transboundary character of these river basins, the strategy will need to consider land and water use in an integrated manner.

Two Miombo- Mopane landscapes in southern Angola will be targeted in view of operationalizing viable solutions to the project?s core problem: Sub-basin 1 (Cuchi-Okavango), with 485,413 hectares, which features Miombo landscapes, and Sub-basin 2 (Cahama-Cunene), with 880,046 hectares, featuring Mopane landscapes. Together, the land surface of the two landscapes sums approximately 1.37 million hectares and harbor a population that is currently estimated at 125,000 people: 45,000 in Sub-basin 1 and 81,000 in Sub-basin 2. Both are multi-use landscapes, where cropland, forests and grasslands co-exist side-by-side, either as distinct or as mixed land-use systems (LUS). The landscapes? approximate location is shown in Figure 1A.

The remote sensing analysis[20], which shows part of the project?s Landscape 1, concludes that degradation occurs more commonly in cultivated areas, which are usually established along roads or in close proximity to already existing fields, or alongside river banks. Schneibel et al. also noted that degradation is occurring in closed forest areas, away from any infrastructure or settlements. They assumed that such areas are: *?either very early fields (before the observation period) or were selectively used and are thus more susceptible to recurring fires.?*

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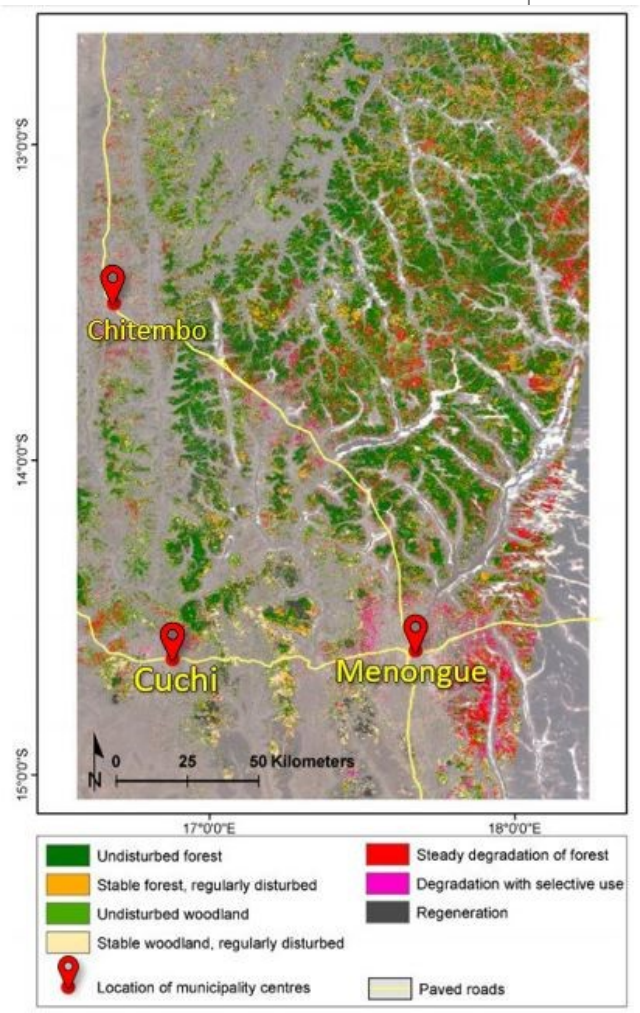
Box 1. How land degradation is manifested in southern Angola

In the project zone, disturbances are happening even below the canopy of closed forests.
This opens up the way for wild fires.

In the project zone, land degradation is primarily manifested through the physical degradation of the soil and the biological degradation of ecosystems, affecting woodlands, grasslands, croplands and water resources.
The vegetation has a protective role against soil erosion: once removed, the topsoil becomes denuded and at risk from exacerbated erosion (i.e. in excess of the natural erosion of soils). Land can then become degraded. The presence of erosion gullies near non-permanent water courses detected on site during PPG missions are obvious signs of advanced degradation.
In shrublands, woodlands and grasslands, loss of vegetative cover is caused either by land conversion or runaway fires - and land conversion often involves the use of fire to remove vegetation. In croplands, degradation is caused by improper land care, or because land has been abandoned without soil protection measures. The latter is typical of slash-and-burn/shifting cultivation systems. Soil erosion, loss of biomass and degradation of biological resources are all interrelated, mutually reinforcing processes.
Other related processes include the loss biocarbon above and below ground, along with disturbances to the water cycle, and are general consequences of the above-mentioned processes.
Over time, degraded landscapes lose their ability to withhold moisture in the soil, transport water and to make water available through percolation. Soils can become quite compacted in places, making cultivation and natural regeneration challenging. In other places, the soil layers may collapse and form gullies. With widespread loss of topsoil, due to land-use change and improper land care, rivers can also become loaded with sediment. Ever larger landscapes and entire watersheds will eventually be



Determining and defining land/forest degradation is complex: as revealed in this independent study on the detection of degradation processes in dry forest, which incidentally focused on the Cuchi-Menongue area (partly in Sub-basin 1).
[Linear regression analysis was used to group land-use classes as ?stable?, ?degradation?, or ?regeneration? areas.]

Trends in land use. Conditions within the landscapes of southern Angola vary significantly according to scale and location. The climate is more arid and more variable towards the southwest and the soils sandier. Hence, Sub-basin #2 is more **naturally prone to land degradation** than Sub-basin #1. The natural drivers of land degradation in this case are mild, however, when compared to the anthropic ones.

Of all the processes that cause land degradation within the project zone, **land-use change** (or conversion of land use) is the most widespread degrading process. It causes the strongest impact within the landscapes at large ? and beyond them. Understanding land-use change patterns and the drivers behind them across different locations and scales is essential in the fight against land degradation. The two sub-basins that serve as ?target landscapes? in the project are in many respects quite different from each other. Together they offer a sound combination of representative conditions and challenges vis-?-vis land degradation.

Poverty, low productivity of land and low resilience are prevalent conditions within the project zone. PPG results showed that local communities within the targeted landscapes are particularly challenged by these conditions. This is consistent with background data: the provinces concerned (Cunene and Cuando Cubango) display a lower HDI than the national average.[21] Land tenure is insecure among small-holders, who tend to be loosely organized around productive activities, as confirmed by SHARP results. Some areas within the landscapes are known for harbouring land tenure conflicts[22].

When consulted during the PPG on the causes and effects of land degradation, local stakeholders identified the collection of firewood, often with the purpose of producing charcoal, as one of the main reasons why forests are being thinned. Not only do these processes lead quickly to land degradation, but they are accelerated by the gradual decrease in land productivity, causing -- and caused by -- land degradation. This creates a vicious cycle of poverty, low resilience and land degradation, which requires positive management interventions at the landscape level.

B. Legal, Policy *and Institutional Frameworks*

LDN Policy, Land-use Planning & Management

Land degradation affects both natural ecosystems and production sytsems. The project will explore ways of addressing land degradation at the landscape level, targeting two landscapes insouthern Angola that comprise a complex mosaic of productive and non-productive land-use systems arising from past land clearances due to changes in land use or land conversion, overharvesting, unsustainable production practices and wildfires, exacerbated by climate change anomalies.

The concept of **Land Degradation Neutrality (LDN) is central to the design of the project,** which is expected to make a transformational contribution to Angola?s efforts to operationalize its commitments under UNCCD and achieve its LDN targets, as summarized in Box 2. Alongside LDN and UNCCD, the project?s interventions are equally well-aligned to **related national goals under UNFCCC,** notably with respect to organic carbon emissions/sequestration based on Angola?s Intended Nationally Determined Contribution (INDC) in the framework of its National Strategy for the Implementation of UNFCCC and the Kyoto Protocol.[23] Angola?s ?INDC for

Mitigation? purposes includes both unconditional measures to reduce GHG emissions by up to 35%, as compared to the Business-As-Usual (BAU) scenario (base year 2005), and a conditional mitigation scenario to deliver an additional 15% reduction below BAU emission levels by 2030. The country is committed to stabilize its emissions and contribute to climate change mitigation by 2030 through targeting: (i) reforestation and (ii) power generation from renewable resources, at an overall cost in excess of USD 14.7 billion.

The national LDN target for Angola was established in late 2018 and mainstreamed into the main development planning framework - Angola?s **National Development Program 2018-2022 (PND)**; and its official adoption communicated to UNCCD in 2019 has precipitated the definition of long-term land-use management goals for the country. Importantly, the **National Action Program for the Fight against Desertification (PANCOD)**[24] approved by Government five years poreviously in 2014 policy document provides a comprehensive policy framework for addressing land degradation, drought, and desertification

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Box 2. Project?s alignment with Angola?s LD status (2001-2015) and LDN targets

tant concept coined by the UNCCD and defined as: ?a state whereby quality of land resources necessary to support ecosystem function and nance food security remain stable or increase within specified temporal s and ecosystems?.[25] Furthermore, according to the UNCCD, ?[t]he of LDN requires multi-stakeholder engagement and planning across scales and sectors, supported by national-scale coordination that utilizes existing local and regional governance structures.?

LDN Policy Relevance and Alignment withProject	
LDN Target	***Relevance and Project Contribution***

Angola?s LDN target relates directly to SDG 15 *?Life on Land?* and more specifically to SDG target 15.13 on LDN at the global level.*

The national LDN target represents measurable goals for sustainable land management, which will be achieved by promoting a dual approach of measures to avoid or reduce land degradation, combined with measures to reverse past degradation. Angola?s LDN target of 8 goals (below) was consolidated in December 2018; and UNCCD was officially informed of Angola?s commitment to the target in 2019.**

The minimum objective of pursuing a national LDN target is that ?losses? can be balanced by gains, so that a position of no net loss of healthy and productive land is achieved.

National voluntary LDN target for Angola:

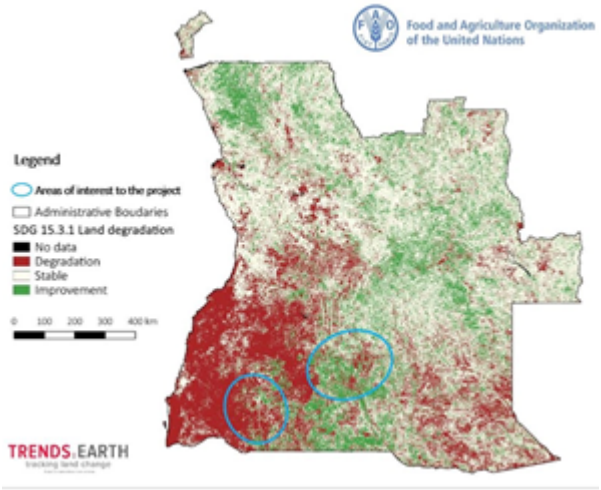
- **Reduction of severe land degradation by around 50% (UNCCD reporting process compared to the 2015 reference year) for current agricultural land;**
- **Restoration of 50% of ecosystems currently degraded by irregular land-use practices;**
- **Increase content of soil organic carbon by 30% in all 3 land classes and contribute to halving (0.4%) current rate of deforestation throughout the country;**
- **Reinforcement of information and awareness of good land-use practices including sustainable agriculture/conservation for 80% of rural families;**
- **Increase by 30% availability of water in poor areas of transhumance triangle (Cunene, Huila**

Project strategy:

LDN-conducive targets will be pursued through the management of targeted landscapes considering the local context and the predominant land-use systems: - forest, cropland and grassland.

The project will contribute to the national LDN targets by improving land management across two sub-basins (landscapes) in southern Angola. Landscape management strategies that combine both protection- and production-oriented interventions will be applied in line with the land-use systems in place at the intervention sites:

Land Use System	Area covered by ILUPs (ha)
Forest	107,722
Cropland	217,056
Grassland	141,200
Watershed: Forest / Cropland	167,300
Total	633,278



National LDN status map (2001-2015) with project areas

33,Note that the GHG emissions goal in the LDN target (above) originates from Angola?s 2015 INDC (Intended Nationally Determined Contribution) to UNFCCC. Thus, by default, the GEF project?s strategy also contributes to goals relating to organic carbon, including above- and below-ground biomass, within the targeted landscapes over a 20-year timeframe (refer to Annex F), based on the intervention sites to be placed under different regimes of improved management.

***SDG 15 promotes ?Life on Land? and SDG target 15.3 states: *?By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation - neutral world.?*Refer to: Angola -- Overview of LDN Targets: https://knowledge.unccd.int/home/country-information/countries-having-set-voluntary-ldn-targets/angola.**

****See also this link: https://knowledge.unccd.int/sites/default/files/ldn_targets/2019-11/Republic%20of%20Angola%20LDN%20Country%20Commitments.pdf**

Page Break

that is well aligned with UNCCD goals and LDN principles; and its framework is seen as an emerging mechanism for implementing the Convention in the country. Subsequent tangible progress includes a national GIS-based assessment of LDN in 2019, with FAO?s support using global data, from which a national map was generated showing the distribution of land degradation hot, stable and improved spots (Box 2).

PANCOD is as much convention-compliance mechanism for Angola, as it is an instrument for implementing national policies and actions aimed at controlling and combatting land degradation and desertification, as well as achieve a social impact on the importance of SLM. It is aimed at the Economic and Social Development Programs elaborated and implemented annually or bi-annually by government. Actions envisaged in the Program to combat desertification are multi-sectoral and delivered at different scales (local, municipal, provincial, regional and national).

An important short-coming highlighted in the PANCOD concerns the lack of key data for assessing land use and levels of degradation across landscapes with sufficient accuracy. This is important for the project, which is designed around the LDN principles and due to operationalize a model for applying the LND response hierarchy to the management of landscapes.

In terms of sub-regional frameworks, three aspects are worth noting: (i) Angola is in the process of aligning its LDN-related efforts with other relevant frameworks, including the recent SADC-orchestrated **Great Green Wall Initiative of Southern Africa (GGWI-S)**; and (ii) Angola?s participation in the Sub-Regional Action Program on Drought and Desertification (SRAP), another SADC initiative and also a lasting policy support platform maintained by IUCN since the early 2000s.

The national LDN target, due to be achieved by 2030, is benchmarked on the status of the three LDN composite indicators in the year 2015. More specifically, Angola?s LDN agenda is focused on significantly reducing the degradation of farmland and ecosystems, alongside a significant reduction in the deforestation rate and GHG emissions from the AFOLU sector (Agriculture, Forestry, and Other Land Use). Angola?s current LDN agenda and related frameworks have created the need for coordinating relevant sectoral policies in the realms of agriculture, forest management, land-use planning and environmental management, and also for raising the bar for national standards of land-use planning and management. Landscapes managed for LDN require careful and inclusive muli-sectoral planning, which needs to be prepared and implemented through a multi-stakeholder process in order to secure consensus

and ownership. **All of this agenda is embedded in the backbone to the design of this GEF-7 projec**t.

Contributions to the **SDGs** and to **Vision 2030** are equally important and taken into account in the project?s policy alignment section.[26] Similarly, **climatic vulnerability** is considered in the project design.

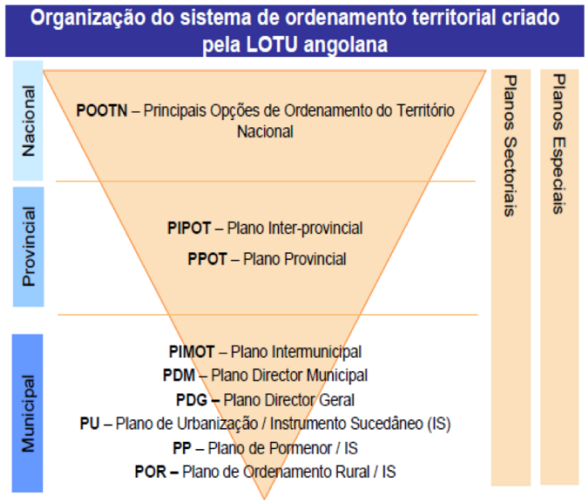
Provincial-Level Spatial Management Plans (PPOTs) and **Municipal Master Plans (PDMs)** are multi-sectoral planning processes at provincial and municipal administrative levels, respectively that have considerable influence on land-use decision-making on the ground. Further details on spatial and land-use policy at municipal and local levels is provided in Box 3). Various sectoral policies and regulations have a bearing on the LDN process and frameworks in Angola: the relevant policy and legislation includes *inter alia* the country?s Land Law (09/04), Territorial Planning Law (03/04), Agrarian Development Law (15/05), Environmental Law (5/98) and the Law on Forest (6/17).

Land use-/spatially- based plans in view of disseminating SLM/SMF techniques and approaches in rural Angola through this project would likely to fit under the POR and/or POA category, but considering their practicality in implementation as a hybrid plan for a geographical area, whose limits are those of a sub-basin. Currently, the GoA has a backlog of PDMs to prepare. Most of those prepared to date pertain to urban areas. Many of the PORs have so far failed to materialize as a functional tool for spatial planning in rural areas. Currently, none of the plans prepared under the LOTU have been made accessible online.

Box 3. Frameworks for municipal and local level spatial and land-use planning

According to Spatial Planning Law LOTU (3/04) Articles #31, #32 and #33, there are different spatially-based planning frameworks at sub-national level, as shown in the diagram below and explained in the text.

Municipal Master Plan ? PDM (*Plano Director Municipal*): covers the entire municipality with the dual function of regulating both urban and rural areas. PDMs provide generic strategic guidelines intended to eradicate territorial asymmetries between the urban and rural area, taking into account national and



regional options that impact on the municipal area. Environmental Land-Use Plan ? POA (*Plano de Ordenamento Ambi ental*) is a regulatory plan that defines land use rules for the protection of natural and environmental assets, as well as the rules governing land use in natural reserves. Rural Land-Use Plan ? POR (*Plano de Ordenamento Rural*) is also a regulatory plan that establishes the rules of occupation and use of rural areas in a municipality. Models for the preservation and development of spatial, natural and human organization are set out, namely: potential areas for mineral exploration, agricultural land according to their suitability or types of crop, as well as other economic, natural, landscape and social aspects of rural spatial planning in order to provide better living conditions for citizens.	**Special Plans (PE) concern a specific and well-delimited geographical area. Their focus depends on the specific purposes of the proposed land use and settlement in the context of the surrounding area, e.g. coastal zone, agriculture, tourism, industry and nature protection. Such plans, as well as Sectoral Plans (e.g. development of the national road network), cut across jurisdictional boundaries but they have rarely been effective in Angola.**
Source: Adapted from Ministe?rio do Urbanismo e Habita?a?o (2013): *Relato?rio de Identifica?a?o e Diagno?stico dos Planos Territoriais,* In (D.G. Martins, F. (2016): *The Spatial planning in Angola: A work in progresso and Future challenge.* Master Thesis, Coimbra University, Portugal. [Link]	

National and Sub-National Institutional Frameworks

Regarding land-use management in rural areas, three ministries are particularly relevant for operationalizing land-use planning and management within the target landscapes, as follows:

The **Ministry of Culture, Tourism and Environment (MCTA)**[27] is mandated to develop and implement culture, tourism and environmental policies, including

the management of protected areas. It is responsible for the coordination, development, implementation, and monitoring of environmental policies, particularly in the areas of biodiversity, environmental technologies, impact assessment and prevention, and environmental education. Responsibilities are distributed throughout its central executive services: National Directorate for Culture and Art, National Directorate for Communities and Institutions of Local Power, National Directorate for Infrastructure and Tourism Products and the **National Directorate for Environment and Climate Action**?.

In 2011, former Ministry of Environment established the **Multisectoral Commission for the Environment (CMA)** to coordinate and streamline activities that target the protection and sustainable use of natural resources throughout the country. CMA?s objective is to promote dialogue between government departments, academic institutions, scientific research and civil society, ensuring public participation in environmental management.

The National Committee on Climate Change and Biodiversity, coordinated by MCTA, was created to: harmonize programs and policies for implementation of the National Strategy on Climate Change and Biodiversity Preservation; facilitate implementation of the National Plan against Climate Change and development of a National Plan for investments related to climate change; and to create centers of excellence in order to carry out research and provide systematic observations on natural disasters climate. DNACC is also the national focal point for UNCCD, including LDN-related matters.

The **Ministry of Agriculture and Fishery (MINAGRIP)**[28] is responsible for agricultural and fishery policies, as well as for management of forest reserves under the **Institute for Forestry Development (IDF)**[31] the rural Land Cadastre and [31]and food security under National Directorate for Agriculture and Livestock **(DNAP)**[31]. Various technical institutes are associated with MINAGRIP, including: (a) Agricultural Research Unit (IIA), (b) Veterinary Research Unit (IIV), (c) Institute of Agrarian Development (IDA), (d) Institute of Forestry Development (IDF), and (e) Institute of Veterinary Services (ISV). IDA?s mandate for provision of extension services and support to small farmers is especially important for this GEF-7 project.

The **Ministry of Energy and Waters (MINEA)** hosts the **National Institute of Water Resources (INRH)**[29] and **Office for the Management of the Cunene, Okavango and Cuvelai Hydrographical Basins (GABHIC)**[32]. INRH is responsible nationally for the strategic management of water resources[30], while GABHIC has a specific mandate within Southern and Southwestern Angola with respect to the Cunene, Okavango and Cuvelai river basins (Figure 2). More specifically, GABHIC is tasked with providing technical and administrative support to the Angolan representatives the respective international technical commissions responsible for the management of the three shared river basins to which Angola is a Party.[31] GABHIC was created by presidential decree in 2015[32] to advise the Government on all matters concerning international river basins.

Other ministries relevant to the project are:

The **Ministry of Territorial Administration (MAT)**[33] has a role in local governance, providing guidance and training to local authorities.

The **Ministry of Public Works and Spatial Planning (MINOPOT**[34], together with MAT, has a central role in statutory commissions responsible for land use and spatial planning (?*ordenamento do territorio*?). MINOPOT hosts the [37] and the **Geodesic and Cartographic Institute of Angola (IGCA**[37]. Both institutes are mandated with

providing technical services linked, respectively, to the delimitation of land tenure and to cadastral registration.

At sub-national levels the provincial and local Governments have broad responsibilities, including subsidiary representation of sectoral institutions at decentralized levels:

At Provincial level four of the afore-mentioned ministries (MCTA, MINAGRIP, MINEA and MINOPOT) have provincial directorates. Most relevant for land-use management is the Provincial Directorate for Environment under MCTA and Spatial Planning and Urban Development (DPOPOT[35]) under MINOPOT. The Provincial Directorate for Agriculture, Livestock and Fishery (DPAPP[36]) under MINAGRIP has one of the strongest presences at decentralized level and is represented by its associated Department of Agrarian Development, Department of Forestry Development, Department of Rural Planning, and Department of Fisheries and Veterinarian Services. IDA is also represented at provincial level. According to Angolan legislation (Presidential Decree. no. 2/07), provincial goverments have a competences in the licensing procedures to grant land tenure legalization claims of less than 1000 Ha, both collectively from communities and also from individual citizens.

Municipalities, in addition to a Municipal Administrator and Deputy Municipal Administrator, have a team with the usual technical competences and a **Council for Social Consultation and Concertation (CACS)**[37]. The same structure is replicated at commune level. The CACS usually includes **community authorities** (*Sobas*), local associations and NGOs, religious authorities, people of social and economic importance, and companies. Working through municipal or communal administration to support the CACS to play a pro-active role in land-use management. In the development of the country?s planning system, municipalities have a duty to develop municipal planning instruments in the form of Municipal Master Plans (PDMs) and Rural Land-Use Plans (PORs).

Legislative reform is under public consultation, notably to change the way municipalities function politically from municipal administrators being appointed by provincial authorities to being democratically elected. A Commune Secretary, replacing the current Commune Administrator, will still be appointed to head the Municipality and the CACS will be replaced by a Municipal Council.

Rural Communities: The traditional administrative authorities of villages or communities are the *Sobas* (traditional chiefs), who either inherit the position or, in some cases, are appointed by the Commune Administrator after consulting the community elders. Decisions and deliberations take place at the ?*Jango*?, a community council that traditionally included only the village elders but has recently become more open to the participation of women and other community members.

All other stakeholders with vested interests will be involved in the process of land-use planning and implementation. **A thorough analysis of stakeholders** is included in Section 1.b2 and further detail is provided in Annex I2. **Gender mainstreaming** is addressed in Section 1.b3.

Land Tenure Policies and Practices

Addressing land claims and stabilizing settlements is a key issue for GoA in the country?s post-conflict recovery period, given the high number of internally displaced people in need of livelihoods as a result of the war. Access to land, land entitlements and reconciling land tenure rights are important part of the project?s scope because a large percentage of Angola?s rural population is directly dependent on agriculture and related activities. Hence, this brief summary of relevant land tenure policies and practices.

Patterns of human settlement and land use in southern Angola reflect successive historical processes, including the long-lasting conflict that ended in 2002. During war-times, access to land was both difficult and unregulated. Insouthern Angola and under the prevailing agro-ecological conditions, a number of small rural communities have mushroomed in a largely

unplanned fashion, both during and after the end of the conflict. Many inhabitants remained settled in the alluvial plains of major river basins after the war, often because roads were scarce and not always safe. Also during the conflict, the boundaries of protected areas were a legacy from colonial times and not actively enforced, resulting in irregular settlement inside and adjacent to national parks such as Bicuar (Figure 3), Mupaand Qui?ama.

Furthermore, some nomadic groups from southern Angola have had to settle because rules of access to traditional grazing areas and local forests were hardly enforced, neither by the State nor by local leaders; and access to small plots of farmland by local family farmers was mostly informally decided by local traditional leaders. Thus, the conflict period in Angola has had major repercussions on human setttlement patterns and land entitlement and, in the case of drylands with a limited resource base, ever-increasing human population pressures can quickly result in land degradation.

Article 15 of Angola?s Constitution (2010) states: ?land is originally the property of the State, and may be passed to singular or collective persons for their rational and effective use?; and ?recognizes the right of communities to have access and use of land?, without prejudice to the ?possibility of expropriation for public utility, through fair compensation?. Such provisions regarding land rights are reinforced by the Land Law (Presidential Decree 9/04) and National Policy for Concession of Land Rights (Presidential Decree 216/11). In 2018 an inter-ministerial commission was created for Rural Land Registration in favour of Local Communities (Presidential Decree 14/18). This commission, led by Minister of State, has a two-year mandate to help in the identification and legalization of local communities? rural lands.

Additionally, the 2004 Land Law accorded customary rural land tenure to local communities interested in asserting those rights, so that they are able to manage the land that they traditionally inhabit, according to their customs and traditions. A participatory process for asserting customary land tenure is established in the Land Law and related regulations. It prescribes highly consultative one-off community-level processes to be carried out to define (and at times demarcate) the boundaries of the community?s land, and asserting a customary and common tenure right over that land. This right is asserted with regard to neighbouring communities and others (?investors?) who may have a current or future interest in the same land. Under a customary, traditional and common property regime, the process may be important for communities in terms of securing their exclusive access to hunting grounds, production forests or water courses.

Although land tenuere is not a major problem for farmers in the project area (with exceptions in the Gambos Municipality, where private farms occupies extensive and most productive pieces of land, the foreseen expansion of Agriculture claims to reinforce community land protection. Current Land Law 09/04 allows community land delimitation based on customary rights and several communities have recognized based in this right. In 2019, the Government of Angola launched ?Minha Terra? programa which aims building capacities in local institutions to carry out community land delimitation and carring out community land delimitations all along the country.

Critics of Angola?s land tenure policies and practices claim that there is little social equity in Angola?s Law and its application and that it helps perpetuate gender inequality in land access practices. This is because key decisions on land access and allocation are ultimately made and reversed by traditional authorities at local level, according to their will, preferences and tribal traditions. The overwhelming majority of traditional leaders are men, as highlighted in several reports (Box 4).

Box 4. Quotes on gender inequality and land tenure patterns in Angola

AfDB 2008 Report: ANGOLA, COUNTRY GENDER PROFILE
?Land Tenure: Legal rights to land are a basic requirement in any agricultural development plan. In post-war Angola, land rights represent a challenging legal and social issue both in rural and urban areas. For the agricultural sector, there are different categories of land tenure and land rights. At present, Angola has publicly owned land - Soba ? the unit of communal land that is managed by the local village elder, distributed by him to all adults of the community according to the villagers? needs and the availability of labor. Each adult member has at least two pieces of land, one for use in the rainy season, one for the dry season. Women?s land-use rights are allocated through their husbands. However, there are exceptions. Widowed women might inherit land in trust for their sons which are then allocated to the sons upon marriage. Women that are single or divorced, and widows who have lost all their sons, are forced to return to their families, and might be given a small area to farm. They might have to negotiate use of land for every season. The high number of female-headed households in rural areas also indicates that women are vulnerable in the process of getting access to land. Limited information is available on how the land rights and access to land favor or disfavor women in practice.? [1]
FAO?s Country Profile on ?Gender and Land Rights Database?
?At the local authority level, the division between men and women in leadership positions shows a significant difference: among the Grand Sobas, there are seven women and 1,890 men; among the Sobas there are 98 women and 9,567 men; for Soba's position, women are 62 and men, 14,885.?

[1]*Agricultural & Agro-industry Department North - East & South Regions (OSAN) August 2008*
https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/ADB-BD-IF-2008-210-EN-ANGOLA-COUNTRY-GENDER-PROFILE.PDF
[2]**http://www.fao.org/gender-landrights-database/country-profiles/countries-list/civilsocietyorganizations/pt/?country_iso3=AGO**

Management of International River Basins and the Importance of the Regional Perspective

The two targeted landscapes for this Project are nested within two international river basins: The Okavango River Basin (or ?Cubango? in Angola) and the Cunene River Basin (also spelt ?Kunene? in Namibia). River Basin Management Plans? (or their equivalent) have been developed for both the Okavango and Cunene based on economic, environmental and social criteria. The plans attempt to balance economic development amongst SADC Member States, following the regional body?s guidance. Standard instruments were developed over 15 years ago,including primarily the Regional Indicative Strategic Development Plan (RISDP) and Regional Strategic Action Plan (RSAP). However, there are gaps in joint planning and implementation for both river basins.

For the Cunene River Basin, Angola and Namibia signed a Revised Protocol on Shared Watercourses in 2000. The two countries maintain an open dialogue through the Angola-Namibia Joint Permanent Technical Commission on the Kunene River Basin (the PJTC). A major priority within the PJTC has been the development of a small and large hydroelectric power schemes along the river basin. Due to pressure from civil society groups and lack of stakeholder agreement, successive plans for building dams have been shelved. The lack of collaborative implementation of the Kunene River Master Plan from the early 2000s onwards has highlighted the difficulties in reaching agreement among stakeholders on the management of shared water resources. The same barriers are thought to apply to land-use management.

For the Cubango river, the Okavango Basin Steering Committee (OBSC) provides the governance framework at ministerial level, supported by The Permanent Okavango River Basin Water Commission (OKACOM) in its technical implementation role. The Angolan portion of the basin provides 94.5% of the total water runoff in the catchment. In 2011, the Strategic Action Program (SAP) for the Sustainable Development and Management of the Cubango-Okavango Basin was developed, with support from UNDP and FAO, and subsequently approved by the member states (Angola, Namibia and Botswana). It represents an important joint management instrument for the Okavango, from which National Action Programs (NAPs) were developed and approved. In the Cubango River NAP for Angola (2011), planning under ?Land Management? (Thematic Area #3) given a 10-year timeframe to address the following actions: (i) zoning community areas and acknowledgement of customary law; (ii) development of land-use master plans in the basin municipalities; and (iii) reforestation of perimeters and tree planting along the basin with local species. Ten years have elapsed and implementation is reported to be limited in actions and investments.

Climate Risks and Resilience

Climate Change is a key element of the project being one of the Focal Areas through which GEF funding is accessed. Its importance is closely allied with Land Degradation, another of the thre focal areas, given the project?s strategic focus on achieving LDN targets that embrace both LD and CC mitigation. This synergy has already been elaborated in Box 2 and the accompanying text; and the carbon emissions reduction benefits are provided in Part I Table F, detailed in Annex F and calculated in Annex X-2.6.

The Government of Angola has taken steps to establish policies and regulations to address climate change adaptation, and in 2008 it approved a National Implementation Strategy for the United Nations Framework Convention on Climate Change (UNFCCC). This was followed by Angola?s participation in the Kyoto Protocol (including a few CDM projects) and, more recently, the country?s adherence to the Paris Agreement on Climate Change. Progress in identifying climate change scenarios/impacts, planning responses and commiting to actions over the last 10 years is summarized in Box 5, along with their relevance to this GEF-7 project.

Angola has been actively accessing adaptation and mitigation funding through the GEF and other mechanisms, some examples of which are summarized in Table 9. As explained previously under the role of **MCTA**, both **DNAAC** and the **CMA** have a role in harmonizing programs and policies to implement climate change strategies and to mobilize investments for climate change, biodiversity and desertification.

Box 5. Angola?s IPCC scenario and national commitments and interventions to UNFCCC

Summary and Relevance for the Project

IPCC scenarios for Angola included in the INC and NAPA projected a 1.2-3.2?C increase in mean annual temperatures by the 2060s. The main climate models predicted more extreme weather events, an expansion of semi-arid regions, seasonal shifts in rainfall and increased wildfires. This is highly relevant for drylands and presumed drylands in the project zone and includes the following scenarios:

- **Water stress: Much of the miombo and mopane belts in southern Angola fall within a water scarce region that is globally classified as drylands, where the aridity index is normally less than 0.65, requiring targeted sustainable interventions in terms of landscape management.**
- **Climatic variability trends: Remaining miombo and mopane ecosystems, both in Angola and in neighbouring countries, are located in areas that may experience negative changes in aridity under a high greenhouse gas emission scenarios ? e.g. from semi-arid to arid or hyper-arid.**
- **Impacts. This process will necessarily lead to declines in biodiversity, ecosystem functioning and degradation of carbon stocks, as well as significant increases in social stress due in large part to production pressures and food insecurity.**

Angola conducted its first GHG inventory in 2011 and listed priorities for mitigation. Emissions were assessed back then as coming primarily from the energy sector. The GHG inventory highlighted a 195% increase in Angola?s GHGs from Land?Use, Land-Use Change?and?Forestry (LULUCF) sector between 2000 and 2005.

In 2012, Angola?s NAPA identified sectors that would be most affected by climate change and prioritized the top five for adaptation and resilience building: (i) agriculture and food security; (ii) forestry and biodiversity; (iii) fisheries; (iv) water resources; and (v) human health. The NAPA also stressed the need to promote sustainable land management across the country and to increase agricultural yields as a response to climate change.

In 2015, Angola committed to stabilizing its emissions, and contributing to climate change mitigation by 2030 through the INDC, both conditionally and unconditionally (refer toParagraph 42 for details). Reforestation is one of two main INDC goals identified for targeting, which is very relevant to this project along with some other interventions mentioned in the INDC:

- **Stabilization of GHG emissions from agricultural production sectors, in which GHC emission stem mostly from animal production and wildfires; and**
- **Positive change in the Land Use, Land-use change and Forestry sectors (LULUCF), whereby: the role of technical assistance in the agricultural, livestock and forest sectors is stressed, deforestation is recognized as a matter of concern, and access to woody biomass and practicing ?logging? are acknowledged as economically and socially essential.**

Concerning the LULUCF sectors in the INDC, the nationally adopted stratification of ?forests? assumes that forests cover 89.8% of Angola?s 59 million ha land surface is classified as follows:

- **2% comprises dense, humid, high productivity forests, that are very rich in biodiversity;**
- **47.1% includes a mosaic of forest and savannah areas;**
- **45.4% comprises woodland (miombo); and**
- **5.3% is occupied by steppe, mangrove and wetlands.**

GoA had proposed numerous LULUCF mitigation projects involving biomass through the INDC, including a few afforestation and reforestation projects. One of them is in Cuando Cubango, covering 60,000 ha with Eucalyptus plantation but without additional details. This is of potential interest to the project.

Directly relevant to the project is a tailored assessment of ?resilience? carried out during the PPG phase using SHARP. It covers climatic resilience through household level assessments, which can be extrapolated to the level of landscapes. SHARP results are summarized in Box 7 and the main report is appended to Annex X-2.4.

Sources: unfccc.int and ?USAID?s 2018 Climate Profile?[38]. For additional content, refer to: Annex X-3.

A number of recent studies are also relevant to this project: USAID?s 2018 Climate Profile for Angola; the on-going IFAD-funded Climate Risk Assessment of Angola?s Agricultural Sector (previously referred to in Paragraph 22); and SARUA?s ?Climate Change Counts? mapping study of Angola. Further details of these are provided in Annex X-3.

C. Baseline Initiatives

Various projects and programs compose the baseline for this project, to the extent that they are well aligned with the Project?s objective and can provide a platform for collaboration, technical integration and co-financing, in particular with respect to the LDN agenda at the national level and the pursuit of SLM and SFM best practices as key delivery mechanisms in the project landscapes.

Table 1 provides a summary of co-financing interventions that are scheduled to be delivered during the life of this GEF-7 project by government programs and other projects. It is based on a much more detailed assessment of Angola?s National Development Program for 2018-2022, IFAD Smallholder Resilience Enhancement Project and FAO?s in country interventions in Annex A3. The latter includes details on the activities and identifies their relevance to the GEF-7 project, potential synergies and opportunities for collaboration, all of which provides a transparent justification for inclusion as co-financing. Note that in the case of PND programs the co-financing amounts in Annex A3 are generated from table in Annex A3, where the calculations are presented in the last column.

Table 1. Co-financing Summary ? baselines and budgets (all initiatives)

#	Baseline Project / Program / Initiative	Relevant Project Comp	Baseline Calculus Total (US$ M)	BASELINE			Co-financing from Baseline Total (US $M)	Co-financing from Baseli			
				C1	C2	C3		C1	C2	C3	PM
1	MCTA (DNAAC) / PND Program # 2.4.1: Climate Change	1,2, 3	36.6	12.2	12.2	12.2	21.5	7.1236	7	7.1236	0.2
2	MINAGRIP / PND Program # 2.3.2: Promoting Agricultural Production	2	48.4	0.0	48.4	0.0	10.0	0.0	9.81	0.0	0.
3	MINAGRIP (DNF) / PND Program # 2.3.4: Promoting the Sustainable Use and Management of Forest Resources	1	2.2	2.2	0.0	0.0	0.5	0.4	0.0	0.0	0

4	Municipalities, more specifically of Cuchi, Cahama and surroundings, PND Program # 4.3.2: Decentralization and implementation of local governments / PND	2	7.9	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0
5	IFAD SREP - Smallholder Resilience Enhancement Project	1,2	12.0	6.0	6.0	0.0	2.0	0.9	0.9	0.0	0
6	AFDB Agricultural Value Chains ? Support to Sustainable. Development. & Growth	2	12.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0
7	FAO	1,2,3	3,7	0.35	$3 M	0.3 5	0.5	0.025	0.05	0.025	0
Totals (US $M)			**122.8**	**24.8 7**	**81. 5**	**16. 5**	**34.5**	**8.448 6**	**17.7 6**	**7.148 6**	**1.**

Description on how any ?Investment Mobilized? was identified:

Most of the programs, projects and initiatives that comprise the financial baseline and co-financing for this project are from public investments programs planned by the Government of Angola and expected to be realized during the project implementation period. They are investments allocated through the Central State Budget (OGE) that will be managed by the Ministry of Culture, Tourism and Environment (MCTA)and Ministry of Agriculture and Fishery (MINAGRIP). The official identification of the programs is cited in the 2018-2022 National Development Program (PND). The financial assessment includes a conservative extrapolation of the named allocations for the project duration (2025 at least). The following selected sectoral programs under the PND were considered relevant to the project:

Program # 2.4.1) Climate Change, 100% relevant, managed by MCTA through its Directorate of Environment and Climate Action (DNAAC) and related entities;

Program # 2.3.2) Promoting Agricultural Production, 30% relevant, managed by MINAGRIP through its National Directorate for Agriculture and Livestock and related entities;

Program # 2.3.4) Promoting the Sustainable Use and Management of Forest Resources, 30% relevant, managed by MINAGRIP through its National Directorate for Forests and related entities;

Program # 4.3.2) Decentralization and implementation of local governments, 50% relevant, including projects under it that are either managed by the Municipalities Cuchi, Cahama and surroundings, or which benefit these (currently included only in baseline finance calculus, but was not as co-financing).

Funding from the above-mentioned governmental programs excludes by default recurrent expenditure ? meaning that 100% of the baseline and co-financing amounts from Government correspond to public investments, as currently prioritized in the PND and included in the OGE, and which will be mobilized throughout project implementation.

The following method was applied to calculate public investments from the PND, as shown in the above Table C:

- Government programs were selected on the basis of their thematic and geographic relevance vis-?-vis the subject matter of the project.
- The baseline calculus for each individual program was initially based on budgetary figures in the national currency (Angolan Kwanzas AOA) for the relevant programs, as published in the Central States Budget (OGE) for 2019.
- Amounts in AOA were converted into USD and extrapolated for the duration of the project, using conservative rates and coefficients, so as to discount future uncertainties. Such uncertainties include possible currency devaluations and the non-realization of investment.
- By discounting the future in the baseline calculus in bulk and also, by extension, in the project?s co-financing, the possibility of mobilizing additional investments during implementation is enhanced.

While the above assumptions and calculus of both baseline and co-financing are generally defensible, they were based on official figures available in late-2019/early-2020. However, the calculus pre-dates the COVID-19 pandemic, meaning that the potential impact of the pandemic on public investments in Angola or on the global economy has yet been taken into account. The detailed application of this exercise is presented Annex A3.

IFAD SREP - Smallholder Resilience Enhancement Project will also cofinance the GEF intervention based in common synergies and AFDB Agricultural Value Chains ? Support to Sustainable. Development & Growthmakes part of the baseline of the project FAO will provide $500,000 as co-financing, leveraged from its own sources in order strengthen project management activities by securing essential operational expenses.

As shown in Table 1, USD 1.142.800 will be an in-kind PMC contribution by the relevant co-financiers. The management costs of the project that will be covered by co-financing comprises of: (i) the use of office facilities at Luanda as well as in the two provinces, municipalities and communes for project offices (PMU staff and regional facilitators), meetings and trainings during 5 years: USD 340.000, (ii) contribution to expendables in project offices for 5 years: USD 60.000, (iii) contribution to mobility at field level and the capital during 5 years: USD 270.000, and (iv) staff time of public institutions: directors and authorities, technicians and support staff including drivers during 5 years: $ 472.800

It is expected that the COVID-19 pandemic will have serious impacts on the Angolan economy, especially since it has indirectly impacted the global demand for oil. Royalties and taxation linked to the oil and gas sectors are the main source of revenue for the Angolan State. Macro-economic predictions for Angola will need to be revised and, along with it, government planning. This revised planning exercise by the Angolan State has not yet taken place.

In spite of the likely negative impact of the pandemic on public investment in Angola, for the purposes of CEO Endorsement Request the figures herein presented remain sufficiently accurate for validating the solidity of project?s baseline and co-financing for two main reasons:

- Government projects, programs and initiatives that were selected as baseline and co-financing to the project were subject to robust, selective and conservative criteria in the assessment.
- Although the COVID-19 pandemic and its impacts bring about uncertainty and price volatility, the currency conversion rate, the discount rate and the extrapolation methods have already taken a good degree of uncertainty into consideration. This was done in order to avoid the non-realization of the proposed co-financing and to facilitate the potential mobilization of additional co-financing during project implementation.

The mobilization of investments will be pursued through a closer alignment between government initiatives and the Child Project during implementation.

D. Project Intervention Areas

General Overview of Project Zone

The project zone comprises dryland landscapes in southern Angola harbouring Miombo, Mopane and Baikiaea woodlands. Two landscapes, covering some 1.3 million hectares were selected, of which at least 633,278 ha are targeted to be covered by ILUPs, and where 35,742 ha covering different land use systems were selected for direct interventions within 18 pre-selected sites. Their boundaries correspond to those of two small watersheds (or sub-basins) of the greater Okavango (or Cubango) River Basin (Sub-basin #1) and Cunene River Basin (Sub-basin #1). The latter landscape is in close proximity to the north-western limits of the Cuvelai River Basin - in fact 17,600 ha of the landscape is technically within the Cuveli Basin. It is located only 40 km away from the knickpoint Calueque Dam, which diverts some waters from the Cunene River to the Cuvelai Basin. The dam and other water infrastructures in Angola and Namibia have either a similar or a reverse function, in view of regulating the direction and flow of waters between the two basins. All three river basins that are relevant for the project?s landscapes?the Okavango,Cunene and Cuvelai?are internationally shared between Angola and its neighbouring countries.

Local Conditions in Southern Angola and Targeted Landscapes

Climate: is harsh In Cunene and Cuando Cubango provinces, is harsh and much of the soil in the vast alluvial plains of the Okavango, Cunene and Cuvelai river basins is susceptible to erosion. Within these river basins ? and in areas where Miombo, Mopane and Baikiaea Woodland vegetation predominates (Figure 1) ? the climate varies from 'hot semi-arid (Bsh)? towards the southwest to 'sub-tropical highland (Cwb)? in the south-central part. Towards the south-east, it includes a swath of sub-climates classified as 'monsoon-influenced humid subtropical (Cwa)'.[39] Average temperatures in the project zone range from 22?C to 25?C; and mean annual precipitation from 600mm to 800mm. Rainfall patterns in southern Angola naturally display significant variability, including a relatively strong interannual variability. These patterns accord to the landscapes in question being classified as ?drylands? (or presumed drylands).

Water, food and nutrition: At least 1.7 million of Angola?s 30 million people inhabit the provinces of Cunene, Cuando Cubango and Hu?la in areas dominated by Miombo-Mopane vegetation and where the project landscapes are located. Of these, 1.5 million are rural dwellers, who rely heavily on the resilience of dryland landscapes for their livelihoods. High levels of food insecurity and dietary deprivation were reported by the households within the project zone,surveyed during the PPG phase. As shown in Box 7, low household dietary diversity score (HDDS) is prevalent in 41% of households surveyed.[40] Water is a highly valued commodity in dryland landscapes and its availability an essential ecosystem service. The woodlands and river basins targeted by this project sustain food production, livelihoods and produce hydro-powered energy, playing an important role in Angola?s economy and ecology. The landscapes are also being impacted by shocks, including recurrent drought, land degradation, climate change and economic hardship more generally.

Infrastructure and social utility services are to a large extent dilapidated (roads, clinics, schools) but many still function. Rural extension is a scarce and insufficient service. Levels of social organization around production and household access to improved means of production and markets are limited with respect to availability of agro-processing facilities, machinery, abattoirs, silos and warehouses. As a region, southern Angola accumulated under-investment in public infrastructure and social services over many years.[41] Most of such investments in the post-conflict period were directed to Luanda and surroundings, and to urban centers. Market forces and the private sector have yet to fill this gap within the project zone.

Significant challenges faced by residents in rural southern Angola are linked to poverty, low levels of literacy, reliance on subsistence agriculture and limited access to social services and capacity building opportunities. The poor state of the road network and limited investments in agricultural productivity are major constraints to the agrarian sector in particular and to the development potential of the rural economy more widely, including comparison with other provinces such as Huambo. At the same time, proximity to Namibia is an important economic driver for cross-border trade.

Overview of Targeted Landscapes

Table 2. Target landscapes, defined as sub-basins, and their stakeholders within the respective administrative divisions in the Project Zone[42]

Landscapes	Provinces	Municipalities	Communes	Localities *(non-exhaustive list)* [43]	Nearby places and salient geographic features
Sub-basin 1 (Cuchi-Okavango)	**Cuando Cubango**	**Cuchi**	**Cuchi Chinguanja Vissei**	**Cuchi Town Cangongo Liunda Mocuva Dejunga Mangumbo Liabela**	**Menongue (the provincial capital) Capelongo: Upper Cub ango River Cuchi River Cacuchi Ri ver Plant for the pig iron factory owned by the Compa nia Sider?r gica do Cuchi Mo?amedes Railway crossing Cuchi**

Sub-basin 2 (Cahama-Cunene)	**Cunene**	**Cahama Ombadja**	**Cahama Otchinjau Ombadja H umbe Otchinjau Mukope**	**Cahama Tchipelongo Chicusse Nhique-Nhique Edivia Bela-Bela Techango**	**Xangoro: Mupa Natio nal Part Calueque D am on the Cunene River Across the border in Namibia: Ruacana, a medium sized rural town and a lively trading post across the Cunene river**
	Hu?la	**Gambos**	**Chiange Chimbemba**	**Chimbemba Chicula Queulo Capunda Onguar?**	**Bicuar National Park Large scale commercial agricultural projects in southern H u?la Pocuaque R iver**

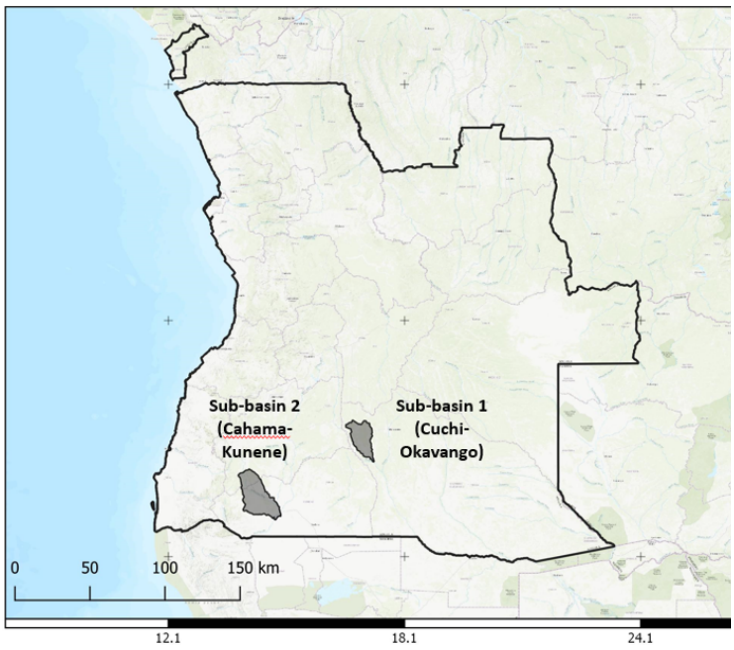
Note: Target landscapes are defined as sub-basins and they cut across provinces, municipalities and communes, hence the importance of vertical and horizontal integration of stakeholder engagement structures at landscape levels.)

The location of the target landscapes, key features and an analysis of land use/cover are highlighted in Box 6. Note that complementary maps are provided in Annex E; and more detailed maps with the intervention sites in Figure 7 and Figure 8.

Box 6. Target landscapes in the project zone: location and key features

General introduction	**[A]**

Smaller and larger rivers flow across the watersheds of the Wider Landscapes, eventually joining either the Cubango (Okavango) River (Landscape/Sub-basin 1) or the Cunene (Landscape/Sub-basin 2). Total area of both landscapes: = 1.3 million hectares



Location of and features of targeted landscapes

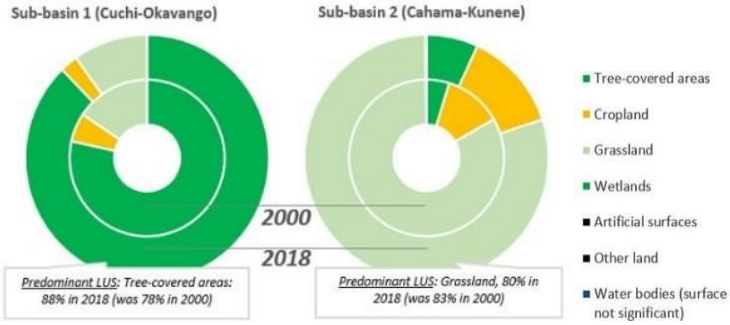
[Landscape 1]
Sub-basin 1 (Cuchi-Okavango)

Area	**485,413 ha**
Predominant LUS	**Tree covered area**
Main town	**Cuchi**
Approx. beneficiary population	**Approx. 3,750 people (in ~ 820 households, or 8% of the total population in sites)**

[Landscape 2]
Sub-basin 2 (Cahama-Cunene)

Area	**880,046 ha**
Predominant LUS	**Grassland**
Main towns	**Cahama, Tchipelonga**
Approx. beneficiary population	**6,250 people (in ~ 1,180 households, or 8% of the total population in sites)**

Remote Sensing (RS) analysis applied to the above landscapes combines global data embedded in the Open Foris / Collect Earth platform by Google[44] with other contextual data. Trends and indicators, such as land cover, tree cover loss, cropland extent and fire frequency, were analyzed in detail alongside land-use change and human settlement patterns. Below is a summary of the land-use and land-use change analysis for the two sites.



Refer to Annex E for the more detailed landscapes? profiles and maps, including complements B and C to this Box.

Summary SHARP (Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists) results are provided in Box 7, albeit they are limited to a single assessment due to the onset of COVID-19 restrictions that prohibited further field work.

Box 7. SHARP results for Cuchi (Cuando Cubango Province) and Tchipelongo (Cunene Province)[45]

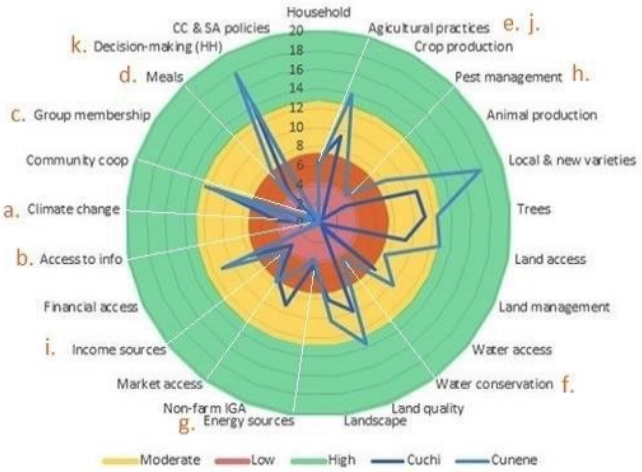
SHARP baseline assessment ? Summary Results, 2019
Note: It would have been necessary to complement the SHARP Assessment in at least one of the sites, preferably in both, in early 2020 in order to reach a minimum level of survey representativeness. Due to COVID-19 risks, circumstance did not allow further assessment in 2020. FAO is aware of this shortfall gap and 2019 results are being treated with caution. The data should be treated as preliminary and will need to be reinforced during project inception.

No. of HH interviewed: 61 (62% women and 38% men)
Main income?sources: Crop production (Cuchi)?and livestock production (Cunene). Reliance on local varieties and breeds.
Ethnic groups:?Luvotua,?Mundimba,?Ngangelas, Chokwe and?Kanhama.
Land tenure: 77% of producers with access to long-term leased land (I.e. with secure tenure); 51% own less than 3 ha.
Land management practices:? Some of the LMP used by 27% of HH (manuring and agroforestry) All farmers acknowledged the presence of degradation processes.
Crop production system: Limited diversification of crop production, including presence of perennials (only 24% plant these). Post-harvest practices to increase the market value of the produce are uncommon. 80% of farmers produce their own seeds. 65% of farmers have been seriously affected by pests but only 45% took any measure to manage these.
Type of livestock system: 56% has nomadic systems; 28% smallholder animal farm; 14% seasonal/transhumant, only 3% market-oriented livestock systems.
Access to markets: 38% of farmers did not manage to sell any agricultural produce in local markets, being the lack of surplus the main barrier. Product certification does not exist in the area.
Trees:? 97% has natural or planted trees on farmland and 92% has access to forests. 87% mentioned forests are degraded. Main use of forest trees: Charcoal extraction (80%), timber collection (45%), honey (40%).
Energy sources: Fuelwood/charcoal?(92% for HH and 39% for agriculture),?manure (20% for HH and 33% for agriculture), diesel (21% for both HH and agriculture).
Shocks: Droughts (93%), animal diseases (91%).?
- **Main impacts: food shortage and declined water availability**
- **Coping strategies: change in production practices (8%), no action taken by 89% of HH**

Nutrition: low HDDS in 41% of HH (1 to 3 food items consumed in the last 24 hrs).
- **Cereal banks (community): 23% of HH with access?**
- **Granaries (HH):? 48% of HH with granaries at home, only 33% of farmers managed to stock food, for at least a part of year (e.g. right after the harvesting season).**

Education: Almost three quarter of people reported that they cannot afford to pay or send kids to school regularly.

Spider graph of household resilience: Aspects displaying LOW RESILIENCE are highlighted
(Refer to Annex X-2.4 for full report)



Resilience indicators:

Inadequate access to information on weather and adaptation practices?

Lack of awareness of government policies and programs on climate change and sustainable agriculture

Limited participation in CBOs

Non-diversified diet

High exposure to shocks and limited capacity to respond and adapt?

Limited implementation on water conservation practices

Need for diversification of energy sources, high reliance on fuel wood

Limited adoption of pest management practices?

Income sources

Need for crop diversification?

Household (low human capital levels)

Localized challenges emerged from analysis of field data generated from the SHARP methodology to assess households within pre-selected intervention sites with respect to their resilience and livelihoods, as measured by a range of indicators. Scores were zero with respect to 'access to information' and ?group membership?; and low for ?land management?, ?agricultural practices?, ?pest management?, ?water conservation?, ?energy sources?, ?market access?,

?income sources?, ?climate change? and ?meals?. Focus Group consultations were also held and stakeholders identified land degradation as a major hindrance to local development. These results are shown diagrammatically in Box 7.

2.1 Remaining Barriers to Address

The current ?Baseline Scenario? points out to a strong commitment from the government and partners towards supporting SLM/SFM actions in different ways, both directly and indirectly. However, there are visible gaps in the status quo. **Eight barriers** block the realization of long-term goals outlined in government policies that relate to SLM/SFM and which could potentially generate both national and global environmental benefits for land-based ecosystem services. The ?barrier analysis?, upon which the project?s Theory of Change - ToC) is based, follows.

Barriers #1, #2 and #3)

Five themes are particularly important in the first group of barriers for this project, which relate to the ?enabling environment? for LDN (Component 1):

Governance frameworks for LDN, including the governance of land tenure (which require a specific approach and analysis);

Institutional aspects, including the capacity of both institutions and stakeholders for contributing to LDN and applying the necessary frameworks;

Engagement and participation of stakeholders (inclusiveness) and collaboration among them, and well as across sectors and administrative scales, for achieving LDN;

Adequate systems, tools and capacity for data handling to help deliver effective and efficient land-use planning, management and monitoring of indicators; and

Gender equality mainstreamed across LDN frameworks and processes.

Barrier Statement #1) *LDN governance frameworks (policy, regulatory, cross-sectoral coordination, decision-making tools and finance) are inadequate, ineffective and consultation processes not fully inclusive.*

Barrier Statement #2) *Institutional mandates for land-use decision-making, capacity to engage stakeholders in collaborative and integrated management of landscapes are inadequate to deliver LDN.*

Barrier Statement #3) *Ineffective land tenure governance creates disincentives for land improvement and reinforces social inequalities, including gender.*

the level that can influence the outcome for land use. Governance of land tenure is a key issue meriting special attention.

Decision-making tools concerning land use also have gaps, notably access to accurate land information, without which the development of robust, coordinated systems to capture LDN relevant data is possible.

Access to finance for realizing the LDN target may also be a gap (or barrier). While baseline finance levels were assessed in connection with the project, there are uncertainties and the financial needs for LDN have not yet been assessed.

GoA?s concerns about the ?enabling environment? for LDN, and how its development can be articulated into actionable measures is evident in the PANCOD, which refers to gaps and challenges linked to policies, regulations, capacities and finance. Thus, the frameworks for LDN, as stated for Barrier #1, focuses on the basic ?building blocks? that need to be in place for implementation.

In order to address these barriers more precisely reference is made to the **LND Checklist** in Annex W-1 and the **pre-conditions for delivering LDN through land-use planning and management** in Figure 4. Both the LDN Checklist and the contents of Figure 4 reflect the **golden standard for LDN and its implementation frameworks,** as currently adopted by UNCCD. They refer more broadly to various ?governance frameworks? that are fundamental for implementation, in particular legal, policy, and institutional capacity frameworks for LDN. The gaps in Angola refer to the need for mainstreaming SLM/SFM and LDN across sector policies, legislation and regulations, such as agriculture, forestry, water, NRM and, of couse, land management (among others). National

institutional capacity has many limitations. Directorate of Environment and Climate Action (DNAAC) is limited to a few technical staff, dedicated to implementation in the provinces with respect to climate change and land degradation matters.

The **LDN Checklist** specifically refers to Transformative Projects and Programmes (LDN TPP). It was used to screen the project strategy during the PPG phase. Key gaps to be addressed by the project are the needs to strengthen the fundamentals to LND and to promote responsible and inclusive governance, in addition to delivering multiple benefits. The results of the screening exercise are summarized below:[46]

LDN Checklist: Features' Groups A through F	*Assessment of LDN Checklist: Summary scoring at the baseline*	% and Icon
A. Features that are fundamental to LDN	7 out of 13 applicable features	54%
B. Features that deliver multiple benefits	5 out of 9 applicable features	56%
C. Features that promote responsible and inclusive governance	3 out of 7 applicable features	43%
D. Features that promote the scale out and up of what works	3 out of 4 applicable features	75%
E. Features that enhance (sub)national ownership and capacities	3 out of 3 applicable features	100%
F. Features that leverage innovative finance (especially private sector)	1 out of 4 applicable features	25%
Grand Total	***22 out of 40 applicable features***	**55%**

According to the current application of the LDN Checklist, features under Group A (fundamental to LDN), Group C (promote responsible and inclusive governance) and Group F (innovative finance) had **important gaps for Angola:**[47]

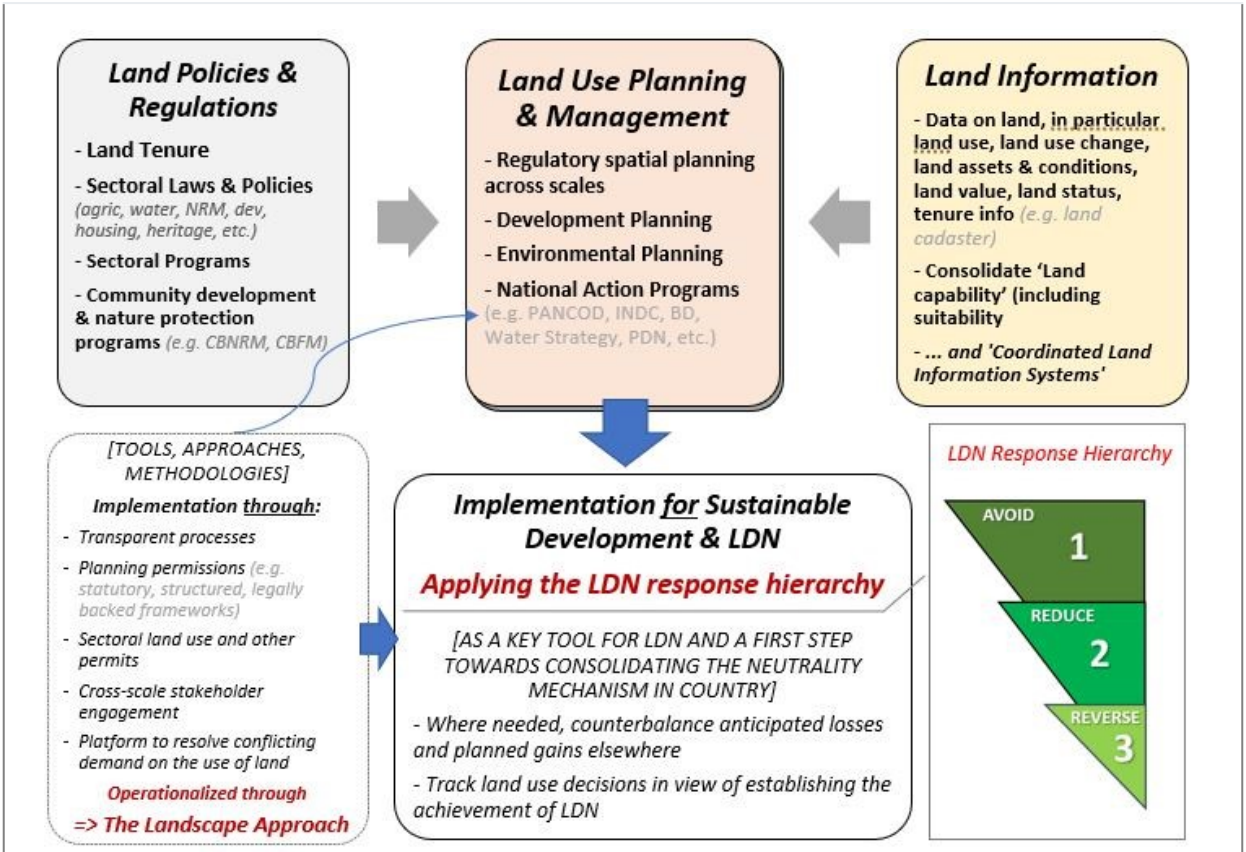
(A.8) monitoring system consistent with national LDN targets and Sustainable Development Goal (SDG) targets, particularly SDG 15.3 and its indicator 15.3.1 on LDN;

(A.13) establishment of a mechanism that involves relevant stakeholders in regular monitoring and validation of LDN status, reporting as well on project implementation outcomes, with particular attention to gender;

(C.28) need for strengthening (or developing) institutional arrangements through collaboration with a range of actors at multiple administrative levels; and

(C.26) ensure strong gender equality, inclusiveness, accountability and transparency in land-use decisions and planning.

Figure 4. Pre-conditions for delivering LDN through land-use planning and management



Source: Adapted from Enemakr et al. (2005). In Metternicht, G. (2018). Land Use and Spatial Planning: Enabling Sustainable Management of Land Resources. Land Use and Spatial Planning. The original figure is depicted in Figure 12.
Note: The project?s Theory of Change (ToC) discusses the context specific assumptions (needed conditions) and certain logical premises (given conditions) for the realization of a strategy centered around land-use planning and management.

The application of land-use planning and management shown in Figure 4 is a ?toolbox? that addresses both Sustainable Development and LDN through a variety of tools, approaches and methodologies. More importantly, Figure 4 summarizes in a few words and boxes several of the important LND principles, including the capital importance of land policies, land-use planning and management and of land information systems for LDN. Importantly, at the bottom centre of the toolbox are featured three elements: (i) application of the LDN response hierarchy; (ii) possibility of counterbalancing ?losses? and ?gains? elsewhere; and (iii) the need for tracking land-use decision with respect to maintaining (or exceeding) LDN. Of all three elements mentioned, the first and third are conditions, the second is an option.

Land-Use Decision Making

Decision-making on land-use in Angola is a complex and challenging process. Several stakeholders from various spheres of influence, as well as government from different administrative levels, play a role in making decisions on land use within a given landscape. Hence, **spatial planning** is both an essential framework and a tool for planning landscape management and coalescing support from stakeholders. However, it can be ineffective without strengthening institutions, policies and regulatory frameworks of the relevant sectors. Angola needs to institutionalize inclusive processes of decision-making on land use at different levels; and to link decision-

making to the spatial planning process, while ensuring that the more difficult elements are enforceable.

A major *barrier* for the advancement of spatial planning in Angola is the absence of suitable decision-support systems that can capture the complexity of land-use management processes. While the Spatial Planning Law (*Lei do Ordenamento do Territ?rio e do Urbanismo* - LOTU Law, 2014) foresees different types of land-use planning being applied at various scales for different purposes and situations on the ground, the necessary technical inputs are not spelled out. Land-use planning is by default spatially based. However, the institutions that lead and advise on land-use planning and management lack the basic GIS tools and data for supporting the process. Furthermore, existing frameworks seems to concentrate mostly on planning and less on implementation. According to the Angolan Ministry of Urbanism and Housing[48], all 166 territorial plans developed at province level have been realized by, or with support from, external consultants. This further highlights the need for a strong capacity development component on the elaboration of ILUPs.

Another constraint is linked to the **need to coordinate land-use decision-making across the relevant sectors,** notably **agriculture, forestry and water**. However, decisions on investments regarding **macro infrastructures, roads and varied industries** can also have a considerable impact on the landscape. The role of **market forces and of private sector** players in land-use decisions-making processes is also relevant, particularly in relation to the development of value chains and the negotiation of land-use trade-offs at the landscape levels.

Angola?s LDN agenda from 2018 foresees a multi-sectoral policy response to implement LDN frameworks, aligning national efforts that can potentially provide a foundation for landscape-level interventions. The Ministry of Culture, Tourism and Environment (MCTA) is at the forefront of LDN-driven initiatives and UNCCD reporting, through its Directorate of Environment and Climate Action (DNAAC). In the next few years, DNAAC is expected to have the task of evaluating the effectiveness of LDN interventions towards achieving the target.

More involvement of other institutions and sectoral players in delivering the LDN target is crucial desired, both at the national level and on the ground, and a much stronger formalized alliance between between MCTA and MINAGRIP is essential, with differences in land-use policies and approaches resolved/harmonized

With the plurality of stakeholders, decisions may have conflicting objectives. Furthermore, **decisions that influence the outcome for landscapes are also scale-dependent** ? that is, decisions are made at the national, provincial, commune level or even at the local community and at the farm levels may also have conflicting objectives. Some decisions are made at the regional level (e.g. at SADAC level or within a transboundary basin committee) and yet others at the global level (e.g. the push from the UNCCD COP for Parties to establish of LDN national targets and pursue them). All of these decisions are influenced by the prevailing sectoral frameworks and market forces. Angola is yet to develop a comprehensive decision support framework for land-use planning and management. The LDN agenda may be a positive driver in this respect.

At the same time, there are **nascent policy and regulatory frameworks for managing land-use and natural resources** in Angola. Some of these are spatially-based, while others are sectoral. The Land Law (09/04), Territorial Planning Law (03/04), Agrarian Development Law (15/05), Environmental Law (5/98) and more recent Law on Forest (6/17) provide useful frameworks, but when it comes to integrating management of landscapes, there are many anomalies.

Clearly, current frameworks are not effective enough for regulating land-use across different scales, nor integrating the different regimes of access to land, resources and land use. Cross-sectoral integration is *ad hoc* and insufficient, therefore functions as a *barrier*. The SHARP Assessment indicates that forests

are accessed by 92% of producers on average, unabated, and that 80% of respondents use forest trees as source of charcoal. In Angola, there is no regulatory backing for the establishment of community-based forest management (CBFM) schemes, although such regimes and schemes are common in neighboring countries.

Land Tenure Governance

Application of the land tenure regime in Angola poses additional challenges in relation to land-use management, while noting that land-use management is primarily concerned with the planning and enforcement of land-use practices. Indeed, **poorly regulated land use over the years has had a pernicious impact on land productivity,** often resulting in land degradation.

Land tenure governance is ensured at village level in accordance with the directives and decisions of traditional authorities (*Sobas*) ? with or without the involvement of the State and the implication of processes foreseen in the Land Law and Regulations. These practices vary significantly according to locality, kinship, ethnicity, gender and, quite importantly, level of access to knowledge and the ease of navigating the process of asserting rights ? land rights in particular.

For the majority of local communities, the constitutional principle of ?all land belonging to the State? could be interpreted along the lines of shared property, ?good land stewardship? or other tenure systems that are based on **?structured common property?**. Currently, Angola have models of structured common property (customary common right, acording to Land Law -09/04), however its implemenmtation reamins weak due to low capaities of local institutions to implement it. Also, the prevailing land tenure models have failed to ensure equitable stakeholder participation in decision-making and in the sharing of benefits from land productivity. Women are particularly marginalized from the process of land-use decision making and ? more relevant for tenure ? from the process of land attribution at the local level.

Three major problems are highlighted with respect to asserting communities? common tenure rights vis-?-vis the land that they traditionally use: (i) lack of institutional capacity on the part of State agencies to manage the land titles registration process; (ii) need of legal regulatory framework improvemnts regarding community land delimitation procedures; and (iii) women?s limited participation in the process of asserting their rights, especially in rural settings. Thus, women and other vulnerable groups are marginalized from the process of making land-use decisions.

FAO reported in 2020 that aproximatelly 300 local communities across the country had registered land through the formal process prescribed by the Land Law and, in most cases, with technical assistance of FAO and NGOs throughout the local consultation process and formal bureaucratic registration. The Minha Terra Program, launched by presidential decree in 2019 is a clear indicative of political willingness on inproving community land registration situation in the country. Community land registration might help land use planning process in specific cases, as community land delimitation process involves a prliminary assesment of communities natural resources and management procedures.

Stakeholder Participaiton and Capacity for Collaborative Land-Use Planning

The project?s mantra on applying the *integrated landscape approach* requires effective inter-institutional collaboration and intersectoral mainstreaming ? the lack of which represents a barrier.

A model of Integrated Water Resource Management (IWRM) embraced by GABHIC for the management of shared river basins could provide a functional example for integrated land-use planning. GABHIC plays a protagonist role in the concerted planning with peer institutions in other basin countries. Such models would need to be ?unpacked? into measures and actions that would need to be implemented.

River basin master plans, NAPs and SAPs provide a general framework for management of vast, shared water bodies found in southern Angola. The

approach adopted in these plans and programs is integrated, making them rather sophisticated frameworks for spatially based management. Yet, the issue of land degradation is not sufficiently addressed within basin-level strategic planning frameworks ? not to mention the incipient implementation as a barrier in itself. Basin-level master plans, NAPs and SAPs as currently conceived do not anticipate nested planning and management frameworks to accommodate a sub-basin or landscape focus within wider basin/watershed level frameworks. For GABHIC, this represents a barrier and lost opportunity to engage with sectors such as agriculture, forestry and infrastructure.

As in case of international river basins, implementation has been slow, despite the high quality of the planning frameworks for IWRM. The specific barrier identified in this context concerns operational capacity on the ground and limited/insufficient structural investments. More specifically, GABHIC?s primary in-house capacities are in planning and negotiation, and less in terms of a decentralized implementation of actions. GABHIC has been generally successful in mobilizing financial resources but a different institutional profile is required for planning, procuring and overseeing complex water-related engineering projects, all of which could potentially be consolidated through much closer collaboration with INRH.

The current barrier to delivering LDN is the need to leverage investments and promote cross-sectoral integration both within the policy-institutional sphere and on the ground. It requires Directorate of Environment and Climate Action (DNAAC) to coordinate with other sectors on their policies, plans and strategies. This form of organization around land degradation, SLM and SFM constitutes a viable framework for promoting LDN as a national goal for Angola to pursue. However, PND investments for such purposes remain small and policy reform would be needed to effectively link LDN-related actions, to the extent possible, with IWRM actions at river basin levels.

Under the leadership of MCTA?s DNAAC, which serves as a cross-sectoral coordination mechanism, the LDN Committee managed to coalesce key institutional players, including different sections and directorates of MCTA and MINAGRIP, GABHIC among others. Key milestones include the consolidation of national LDN target and preparation of Angola?s latest National Report to the UNCCD. To continue to play this role, DNAAC requires significant capacity strengthening to assume a broader role in the engagement of stakeholders to operationalize landscape level management at decentralized level ? and this is a major *barrier*.

(Barriers #4 and #5)

Barrier Statement #4) *Local land users (large and small) have poor mastery of SLM/SFM practices, limited access to productivity improvement inputs and insufficient incentives to adopt more sustainable land and resource use practices.*

Barrier Statement #5) *Opportunities for strengthening local livelihoods (especially for women) hampered by limited access to finance and markets for SLM/SFM products.*

Gender livelihood and value-chain inequalities curtail opportunities for women

a) Production practices are maladaptive and unsustainable, and producers not well organized

Prevailing production practices and their specific dynamics predominant within the target landscapes have been reviewed in Section 1.2 and are generally characterized as unsustainable, including the following: (i) slash-and-burn itinerant agriculture, practiced by the large majority of smallholders and resulting in improper land clearings; (ii) transhumant pastoral practices, where large herds with limited mobility result in overgrazing; and (iii) the use of scarce forest resources beyond their regeneration rate.

As indicated earlier, food production systems in Angola face many challenges and in the project zone, local land users face **specific challenges linked to land management know-how**.[49]

In order for land users to be able to eventually **invest in improved land care and avoid new land clearings** as a traditional method of improving land productivity, they would need to make a quantitative and qualitive leap towards production intensification, primed on SLM, SFM and Sustainable Range Management, and applying these techniques in a manner that is adapted to local agro-ecological conditions. Such a leap would allow land users to improve productivity, diversity production and increase yields, eventually generating monetary income through the sale of surplus production. It is assumed that, with a certain level of production surplus, land users would be able to invest in improving their plots and maintain this investment post project. It is also assumed that, scaled out (i.e. when a sufficient number of land users have adhered to a land-use intensification program), this investment would be sufficient to either avert or to reduce land degradation at the level of landscapes.

A similar analogy may not apply so readily to forest management and range management because the land tends to be open access, whereas in a settled farming community the sense of tenure vis-?-vis 'the family plot? is assumed to be sufficient for farmers to invest in improved land care and productivity.

Thus, the barrier described herein relates to SLM know-how (and by extension SFM and SRM), which may be overcome through the availability of adequate, needs-oriented rural extension services (implying agronomic advice, forest management services and veterinary support). In the absence of the project, such services would not be affordable to the majority of land users within the project zone or, if available, it would probably be insufficient or inadequate to meet their needs.

An important barrier that the project can address is that very few farmers have access to rural extension services, improved cultivation know-how, adequate farm inputs and machinery. This applies to both smallholders and large-scale commercial farmers. Introducing changes to production methods (e.g. abandoning slash-and-burn practice) in rural Angola will need to be a step-wise approach to avoid being met with resistance. Use of ashes from burning biomass is a well-mastered and cheap way to increase soil fertility in the short-term, for example. Alternatives to shifting cultivation require gradual introduction of agronomical know-how of small agricultural machinery and a different way of organizing production.

Beyond the mere ?transmission of know-how?, rural extension services to be conveyed by the project will be based on the FFS model, centered around **co-creation of locally adapted knowledge** and it will additionally **facilitate the social organization of production.** The latter implies the formation of local cooperatives, associations or working groups, involving farmers, forest dwellers, livestock herders and sub-basin riparian communities. Besides the access to adequate SLM/SFM/SRM know-how many land users also face challenges linked to accessing fertilizer, irrigation inputs, dryland adapted agro-machines and improved seeds, all of which can be addressed by the project through FFS and FFF initiatives.

b) Dryland products in Angola have limited market penetration, despite potential

For small farmers and traditional pastoralists, being able to sell their produce in nearby markets would be a possible pathway towards breaking the cycle of maladaptive and degrading land uses. However, there are many systemic barriers, some of which are being actively addressed through baseline interventions (e.g. issues of rural finance, credit policies and vulnerability to climate change adaptation).

Two main systems co-exist in the agro-value chains in Angola: family farming (smallholders) and large agro-enterprises (large-scale commercial farmers). The former, family farmers, are the majority (likely 80%), most of whom use the slash-and-burn techniques and cultivate on average 1.4-1.7 hectares per family using two or more parcels of land. Several large agro-enterprises,

which numbered 8,360 as of the previous PMPSA (2013-2017), face underinvestment and low productivity problems.

Part of the solutions envisaged by the project imply the intensification of certain production practices and the introduction of changes to others (e.g. new techniques or approaches), so that the overall management of landscapes can make positive and balanced contributions to LDN. In addition, by identifying areas at risks from land degradation within and near the landscapes, the project can support suitable interventions for averting further land degradation.

Intensification and optimization of production practices presupposes that farmers (smallholders in particular) are not at subsistence level and are able to produce some surplus. Intensification often involves use of manure, artificial irrigation and animal waste as fertilizer, while building on know-how, investments and solid information and data. At the same time, the agrarian sector in Angola faces many systemic challenges, including the collection and handling of data. For example, there are no comprehensive statistics on agricultural indicators or land tenure patterns. MINIGRIP maintains statistics on production, which feeds into the FAOSTATS global database, but no data exist on commercialization.

There are also challenges along the entire agro-value chain: from the procurement of basic agricultural inputs (seeds, fertilizer, tools etc.), to the limited and costly availability of both storage and agro-/forestry processing facilities, to the deficient distribution network and high costs of transportation and marketing of agricultural and forest-based products. Similar conditions also apply to the forestry and livestock markets.

A key bottleneck in value chains, according to the analysis in Annex W-3, lies with the **aggregators** and their difficulty in organizing producers in a more effective way. For large traders, food retail, food exporters and land users in general, the practices of local ?middle-man? hinder them from taking part in more dynamic agro-value chains and in accessing more advantageous markets. Lifting this barrier could make a significant difference at local level. Both in rural and urban areas, informal markets are operated by several wholesalers, who are specialized in specific provinces, districts and often a set of products. Their job is to aggregate production from the rural areas, often by visiting multiple rural markets where a few small farmers attempt to sell their surplus. Most of the operations are performed by business women, while processing is owned by men. There are reports of poor hygiene in product handling and bundling. This happens often in open markets located on the roadsides. Within the project zone, there has been no known record of Local Government providing support to value chain stakeholders with the aim of improving conditions in the local public markets.[50]

Informal value chains, as described in the previous paragraph, are extremely inefficient in terms of time and food loss; and they are quite risky business for the entrepreneur. It can be inferred that both informal wholesalers and retailers receive very low income, as the business scale and technology is limited.

Underperformance of these businesses is mainly due to: limited cash flow, lack of investment capital, adequate infrastructure and agro-processing technologies, limited means of transportation and informality of their enterprises. Some wholesalers invest in their own transport fleet and storage facilities, generating much higher revenues and eventually business stability. Very few women operate these businesses and possibly in a cartel-like fashion.

Dryland products in Angola have limited market penetration, despite their potential. However, an important exception is charcoal. Activities of both the charcoal and timber sectors are important drivers of deforestation and degradation in Miombo-Mopane woodland landscapes. Together, these two segments of the Forestry Sector are likely responsible for about half of the active deforestation and degradation in Angola, while the other half can be attributed to the widespread practice of slash-and-burn agriculture. While the activity is considered a driver of deforestation, the collection of woody biomass from

landscapes to manufacture charcoal does not constitute land-use change, as land clearings would do but, depending on local conditions, it may open up access to forest patches to either runaway fires or subsequent clearings. There have been several publications and projects recently that attempt to devise solutions to the problems caused by the charcoal industry in Africa, including CO2 emissions and the linkages to forest degradation and deforestation. The aspect of lost taxation revenue to the States is often neglected. A 2017 UNEP study estimates that 90% of wood consumed in Africa is used for woodfuel and charcoal.

In Angola, charcoal manufacturing remains informal. For the business-person pursuing the activity, acquiring permits to explore forests for such purpose is considered expensive, cumbersome and unnecessary. The SHARP results indicate that, in the project area, access to forest resource is open, wide and unregulated, and that the large majority of households (80%) use trees for producing charcoal ? yet very few admitted to selling it.

The project will seek to address the barriers to a more rational use of biomass resources, by assessing the local demand for charcoal and possible alternatives (e.g. plantation with fast-growing woody species, pelleting, improved kilns etc.). The project will create synergies with the GEF Project Promotion of Sustainable Charcoal in Angola through a Value Chain Approach GEF ID#5719 implemented by UNDP and MCTA, which is working on the policy framework to support a sustainable charcoal value chain and sustainable charcoal production technology, briquetting and energy-efficient charcoal stoves Besides this, little is known about the charcoal subsector in southern Angola, including the economic and NRM processes behind this largely informal value chain. A few studies have been carried out, but they show that the markets are very contextual and studies from one province may not apply to another. Addressing issue of access to forests, know-how and equipment can offer some pathways for creating a ?greener? charcoal value chain.

c) Gender livelihood and value-chain inequalities curtail opportunities for women

Gender-based inequalities in rural settings in Angola are reflected in unequal opportunities for obtaining income, in particular in the rural areas. Also, The SHARP results have shown how this general assumption is also valid in project intervention sites. Most male-headed households (71%, 12 households) have two income sources, while this is true for 47% women-led families (7 households) and 41% of jointly led households (12 households). These data are corroborated with demographic data on gender disaggregated income for Angola, although scant.[51]

The main barriers faced by rural women in the project area are **legal, social, customary, financial and linked to their lower education status**, illustrated by data from SHARP and other sources. A strategy to overcome more general gender-based barriers and negative biases that underpin inequality is included in Annex X-1.

From the analysis, three priorities stand out: (i) unequal income opportunities and unequal pay in rural jobs, especially in large and medium-size farms; (ii) very unequal land tenure conditions between men and women, (including inheritance and ownership of built infrastructure within marriage bonds); and (iii) household leadership and decision-making within it. For the latter (#3), the general gender picture is one of less inequality and more ?harmony?. Concerning (#2), land tenure, it is notable that tradition and culture play an important a role.

On a more positive note, rural women play a rather active role in the sale of agricultural produce. Several of the primary aggregators are women and they are possibly the majority in local markets, directly selling vegetables, grain, fruit and other products from the land. Their constraint for reaching a higher aggregation level appears to be access to own vehicle and perhaps the possession of a driver?s license. The project will take this into account in the strategy but will not directly address it. Refer to Annex X-1 for more details in the Gender Action Plan. the Gender Action Plan.

Barriers #6, #7 and #8

Barrier Statement #6) *Weak national and landscape-level LDN assessment and monitoring frameworks.*
Barrier Statement #7) *Comprehensive, LDN-focused, knowledge management and learning initiative across Miombo-Mopane region is absent.*
Barrier Statement #8) *Insufficient sub-regional/cross-border coordination of landscape management activities among Miombo-cluster countries.*

local level). In the context of the on-going LDN-TSP, specific voluntary LDN targets and strategies developed by the technical committee supported by FAO were presented by the GoA and validated by stakeholders in November 2018. However, the GoA will still requires support to effectively implement and monitor LDN technical measures and targets, and implementing the overall strategy adopted at national level for LDN.

Due to the lack of LD data and capacities to generate LD information in Angola, the GEF LD Project ?Sustainable Land Management in target landscapes of Central Angola? is supporting the Agoecological Zoning Unit to generate LD information in a pilot area in the central part of the country. However this needs to be deepened and scaled up to provide the information needed by the technical LDN technical committee.

Although the LDN technical committee hasn?t been active since the LDN-TSP was validated, during the PPG process the government identified the need to reactivate this committee [52]? (Program 2.4.1).

The lack of capacity on SLM/SFM and LD and and weak technical knowledge and general awareness on these issues are directly linked to reduced opportunities available within Angola for training/capacity building on SLM/SFM. There are, for instance, only a very small number of relevant professional courses covering aspectsSLM or SFM practices available through universities or technical bodies in Angola. These include the University Agostinho Neto, Cuito Cuanavale, National School of Environment and Agrarian Institutes, which addresses environmental topics, but not directly related to SLM/SFM, and these institutions usually lack specialized professionals, materials and practical activities. As LD, and particularly LDN, are relatively new concepts in Angola LD they are barely covered within the country?s academic institutions.

In addition, there areimited opportunities available to technical staff for overseas training due to insufficient funds. Language is also and added challenge as there are relatively few materials and international training opportunities specifically in Portuguese.

Levels of knowledge about LD and LDN issues including SLM/SFM practices even among relevant institutions are extremely low. The recently created LDN Working Group in Angola, although it has a clear mandate, lacks guidance and and agenda. The situation among local agriculture, forestry and environment extension services of is even worse, although some incipient awareness and basic capacity building activities have been developed in through previous GEF founded projects[53]. Although extension services remain focused on strengthening productivity in rural areas, there is an opportunity to introduce ?sustainability? to these services and therefore bring this concept to the communities? practices.

In this context, the project aims to help address the knowledge gap through increasing information available through specific knowledge management and communication activities set out in a Knowledge Management and Communication Strategy and Plan, with production of guidelines, manuals, online courses and training materials (aligned with Outputs 2.1.4 and 3.2.1), as well as highlighting the issue of LD and LDN at the institutional and political level to encourage (leverage) more investment for resources to address LDN.

Understanding of the importance of addressing LD and moving towards LDN is also weak among the private sector and final consumers. Although Angola has

suffered from the adverse impacts of LD in recent years and unsuitable land and natural resource exploitation is widespread, awareness of the problem and the need for more sustainable production and land and natural resource use is still low among the population.

Due to many of the reasons outlined above, including limited numbers of technically trained staff, insufficient financial resources, language barriers and a lack of strategic focus on sustainable dryland management, Angola has limited opportunities compared to many other countries to participate effectively in relevant regional and global forums and initiatives focused on addressing LD and LDN, including potential transboundary and regional initiatives to address common challenges to sustainable drylands management across the Miombo-Mopane ecoregion. Angolan institutions addressing LD and LDN also have less opportunities to gain technical knowledge and a more regional/global perspective on the sustainable management of drylands and particularly to exchange experiences and learn from others also working to achieve LDN. This also represents lost opportunities to to sustain and scale up project and program impacts regionally and globally. The weak participation in key regional/global forums/agreements/initiatives dealing with sustainable management of land and natural resources, LD and LDN, such as SADC, KAZA, and the Miombo Foru i will be address by the project collaboration with Global coordination project and the GCP/REM to improve the effectiveness of actions both for Angola and at the regional and global levels.

By working collaboratively through the GCP/REM , the Angola project can take advantage of the significant resources of dryland expertise available at global and regional levels (including in many cases in neighboring countries within the same region). Apart from helping to improve delivery of project aims in Angola share experiences, lessons learned and best practice with other child projects, adopting similar management approaches to sustainable drylands management will help to generate greater transformational change towards sustainability across the whole Miombo-Mopane ecoregion.

In addition, addressing knowledge and capacity on a regional basis will address some of the weaknesses at national level. Currently, capacity development for dryland management is typically carried out on a piecemeal basis usually resulting in strengthening the capacity of individuals, rather than strengthening organizations and institutions. It typically lacks the systemic approach that is required to promote ownership at national and regional levels, to maximize scale and especially durability of impact (e.g. through establishment of ?communities of practice?, knowledge exchange networks and long-term backstopping to ensure that learning is applied), and to take advantage of opportunities for coordination and economies of scale.

In addition to technical knowledge and capacity, regional links and networks (even between neighboring countries), between producers, distributors and sellers of SLM/SFM products are also weak as a result of unexisting regulatory frameworks and the lack of of a distinctive ?brand? that could give a competitive advantage to producers of SLM/SFM products from the target areas in national, regional and global markets.

Regional and Global Perspectives

Through the effective implementation of Child Projects of the Miombo Cluster under the DSL IP, participating countries have an opportunity to seek strategic and conceptual cohesion, regional collaboration, and peer learning opportunities, in order to address common challenges. However, implementation would not be complete if the management of target landscapes within countries overlooked relevant cross-border aspects. Many of the landscapes targeted by Child Projects abut borders.

In Angola, Sub-Basin #2 (Cahama-Cunene) includes several tributaries of the Cunene River Basin and an important section of the Cunene River itself. It also includes some 17,600 ha that is part of the Cuvelai Basin. Although Sub-Basin #2 (Cahama-Cunene) does not abut the border with Namibia, the management of

its watershed and adjacent area is potentially of relevance to Namibia and the health of grassland plains of the Cuvelai Basin in both countries. The plains provide water to hundreds of thousands of people in both countries, as well as form and water the Etosha Pan of Namibia further south.
While the Governments of Angola, Namibia and Botswana are accustomed to discuss matters of ?shared water bodies? and ?integrated management of land and water? within the relevant joint-basin commissions for the Cunene, Cuvelai and Okavango rivers, the project brings in an additional potentially unifying agenda item to the table - the LND perspective. With it, there is an opportunity to ?simplify? the otherwise complex decision-making process on the management of land areas by applying the LDN response hierarchy. More specifically, it would inform and necessitate decisions on LDN responses in certain LMUs requiring an approach of ?Avoiding?, ?Reducing? or ?Reversing? land degradation. For the participating countries, joint land-use activities would have an immediate benefit of framing the processes within the UNDCCD reporting mechanism. It would also produce enhanced global environmental benefits for all concerned countries in terms of land areas under improved and ?collaborative? management. A similar parallel can be drawn with respect to Sub-basin #1 (Cuchi-Okavango) in relation to the Okavango Basin.
The sub-regional dialogue that would be generated from the activities would create an investment friendly environment under the auspices of SADC?s GGWI-S, for example, including support from other regional bodies and partners. Such collaboration can also happen at the global scale, within a higher-level exchange mechanism for dryland landscapes.

3. Proposed GEF alternative scenario

The proposed GEF alternative scenario is based on a Theory of Change (ToC) that sets out the causal logic and relationships between the project's Outputs (goods and services delivered by the project) and immediate project outcomes (changes resulting from the benefit of project outputs to key stakeholders), medium and longer-term changes and states, and the project's ultimate desired impact (fundamental, durable changes in environmental and social benefits). This is narrated below and summarized in the accompanying diagram. Thereafter, the project strategy, comprising the expected outcomes by end of project within three Component areas of action, is elaborated with details of indicative Activities under respective Outputs.

to expansion of the agricultural frontier; and maladaptive/unsustainable/illegal land-use practices (e.g. charcoal production, felling and collection of forest products, overgrazing).
The central problem is the widespread degradation of land in Angola, which is impacting the Miombo-Mopane Woodlands Ecoregion that is distributed across much of the country (Figure 1B). Thus, the project seeks to transform the management of production systems within the Miombo-Mopane woodlands of Angola?s Okavango and Cunene river basins (project objective), using an integrated landscape management approach that addresses the eight barriers to achieving LDN and thereby alleviate threats to these woodlands in the target landscapes.
Threats to ecosystem services in targeted Land Management Units (LMUs) will be subject to interventions that AVOID, REDUCE and/or REVERSE land degradation trends, while also contributing to national LDN targets, and improved and more resilient livelihoods, as well as to biodiversity conservation.

The Integrated Landscape Management approach will be realized through three interlinked strategies, each reflected in its respective project component, comprising a set of project interventions (activities) and outputs that will address the respective identified barriers to addressing avoiding land degradation and deliver the following ?immediate project outcomes? in the Project Zone.[54].

Component 1 (Enabling frameworks for LDN at national and landscape levels) will address **Barrier 1**: weaknesses in the enabling policy and regulatory environment, and in multi-sector coordination and decision-making; **Barrier 2:** inadequate Institutional mandates and capacities to engage stakeholders in delivering LDN through integrated landscape management; and partially **Barrier 3**: land tenure governance disincentives for land improvement, which reinforce social inequalities, including gender. More specifically, Component 1 will create an enabling environment for LDN by reinforcing the agenda of Angola?s LDN Committee to improve cross-sectoral coordination, policy and planning. Component 1 has one outcome:

Outcome 1.1 Strengthened policy-regulatory and decision-making frameworks for LDN at national and sub-national levels

Component 2 (Strengthening implementation and replicating SLM and SFM practices) will also partially focus on **Barrier 3:** disincentives for land improvement arising from ineffective delivery of land tenure policy and regulations; **Barrier 4:** poor mastery of SLM/SFM practices and limited access to technical support, resources and incentives to improve productivity; and **Barrier 5:** local livelihoods (especially for women) hampered by limited access to finance and markets for SLM/SFM products. These barriers will be addressed primarily through development and adoption of ILUPs and implementation of sustainable and gender-sensitive land management practices on the ground, as well as through development and strengthening of dryland value chains in project landscapes. Capacity building will be supported by strengthening the existing network of Agro-Pastoral/Farmer Field Schools (APFS/FFS) to ensure sustainability of the training. Land users will be incentivized to engage in SLM/SFM through sustainable value chains. Component 2 has three outcomes:

Outcome 2.1 Landscapes in Southern Angola under Integrated Land-Use Planning (ILUP) for LDN

Outcome 2.2 Capacity and resilience of land users to apply SLM/SFM practices to production systems strengthened

Outcome 2.3 Green value chains to support sustainable drylands products developed or strengthened

Component 3 (Strengthening knowledge, learning and collaboration to support progress towards achieving national LDN targets) will address **Barrier 6**: weak national and landscape-level LDN monitoring and assessment and information management frameworks; **Barrier 7**: absence of LDN-focused knowledge management or reflective learning and exchange across the Miombo-Mopane region; and **Barrier 8**: insufficient sub-regional/cross-border collaboration, coordination and exchange on key challenges among the Miombo-Mopane cluster countries on sustainable landscape management. Component 3 focuses on strengthening LDN knowledge management information dissemination, and generating awareness reflective learning and collaboration between cluster countries. Component 3 has three outcomes:

Outcome 3.1 National land information framework strengthened to inform LDN-related policy, planning, and management at landscape, national and global levels

Outcome 3.2 Knowledge and awareness enhanced to support progress towards achievement of national LDN targets

Outcome 3.3 Collaboration and exchange at regional and global levels enhanced to support national/sub-national efforts to deliver LDN

Interlinkages:

Some Outcomes are interlinked and work together or depend on the delivery of others, as shown in the Theory of Change (ToC) diagram where key relationships

between the main elements of the ToC are indicated by arrows. Specifically, Component 1 (strengthening of the enabling environment for LDN) is a prerequisite for all Outcomes under Component 2; and Outcomes 2.2 and 2.3 are interdependent as sustainably farmed products are required for GVCs and, conversely, the promotion of GVCs will support the uptake of SLM/SFM practices and, indeed, is a driver for scaling out such practices in the target areas.

There is also a strong interconnection between Components 1 and 2 and the regional perspective of Component 3[55], whereby results and experiences from Components 1 and 2 contribute to building a national knowledge base on LDN under Component 3, while guidance on improved practices and lessons learned from the project are shared regionally and globally with the wider drylands community under global and regional exchange mechanisms (GCP/REMs), represented by a separate pathway in the ToC diagram. At the same time, knowledge gained and lessons learned by this project, other child projects and through the regional and global communities will be collated and fed back into improving Angola?s SLM/SFM and LDN policies, regulations, financing strategies and land management practices under Components 1 and 2.

Combined, the three components will demonstrate how a paradigm shift towards LDN in the Target Zone can be achieved by integrating the management of production systems at landscape scales, while prioritizing the conservation of Miombo-Mopane woodlands alongside the sustainable improvement of local livelihoods. Delivery of project outcomes will also improve regional decision-making, collaboration and partnerships across the Miombo-Mopane cluster of countries.[56] However, the project?s design and implementation rely on a number of underlying premises (i.e. prior ?givens? or proven conditions) and assumptions (i.e. unproven suppositions), as elaborated below.

Key Premises:

The SLM/SFM and LDN concepts are well documented and have been piloted in various projects[57]. Nevertheless, the projected extent of its applicability and magnitude of its replicability in Angola remain a fundamental premise underlying this project. Other key premises (P) are:

Degradation of water, soil and vegetation functions, as well as GHG emissions contributing to climate change, can be limited through SLM/SFM/IWRM practices that simultaneously conserve natural resources, increase production yields and enhance land users? resilience.

Cultural barriers can be effectively addressed through the project?s gender strategy and safeguards, enabling women to actively participate in project interventions (e.g. sustainable governance of natural resources, SLM, SFM and green value chains). It is crucial that women are involved in the project not only for the sake of gender equity but also for ensuring project overall feasibility and future sustainability.

Land users in rural parts of Angola able to strengthen their land tenure rights have more incentive to improve their land productivity.

Future Covid-19 impacts will not irreversibly affect the project?s institutional and financial support, as well as projected partnerships and interactions with other stakeholders.

Key Assumptions:

Several assumptions that apply over to the project?s timeframe need to be met for the project to operate and deliver at the activity level. The most important is the continuing commitment of key partners and other stakeholders to deliver the project?s objective of reducing land degradation and shifting towards LDN. This is especially important for interventions requiring changes to policy and regulatory frameworks, and for securing investments from co-financiers. Key assumptions are listed below and depicted by ?A? in the ToC diagram. Note that A.1-A.7 apply during the project?s life and A.8 post-project.

National and sub-national government agencies, community groups, civil society and the private sector are willing to participate in cross-sectoral governance for LDN.

There is political will across government to address Angola?s land tenure issues, in line with its policy to promote more responsible land care across landscapes, by focusing on user and access rights, security of tenure and gender safeguards.

Smallholder farmers, individually and collectively, can be motivated to develop their skills and adopt SLM/SFM practices that generate tangible benefits, while accepting potential risks from adopting new practices and products (e.g. seeds/cultivars).

Market demand for dryland products from southern Angola, coupled with viable ways for local producers to commercialize their surplus production, provide the basis for developing green value chains (GVCs), subject to appropriate inputs and improved organizational support.

The private sector is willing to invest in SLM/SFM/LDN activities, encouraged by a supportive regulatory and financial environment.

There is sufficient, continuing political support and resources from national and local government to address gaps in capacity for integrated land-use planning and management.

Countries continue to commit to regional collaboration, benefitting from both the enhanced LDN agenda across the Miombo-Mopane ecoregion and strengthened national capacity.

Future climate change impacts do not irreversibly affect the structure and function of ecosystem services in production landscapes.

Impact drivers:

There are also a number of impact drivers[58] that may increase the likelihood of progress along the causal chain, subject to the project and/or its partners exerting some influence. These are listed below and depicted by a ?D? in the ToC diagram.

Increased awareness among policy-makers, land users, civil society and the private sector of the need to adopt resilient, adaptive or mitigation measures to counter climate change impacts.

Increasing global demand and diversified markets for SLM/SFM products.

Regional initiatives and forums, such as the Great Green Wall and SADC, promoting regional visions for sustainable land and natural resource use, facilitating increased inward investment, and building capacity for sustainable management of land and natural resources.

International legal obligations, such as national commitment to the SDGs, UNCCD, UNFCCC and CBD, sustaining the prioritization of the LDN agenda during project implementation and beyond.

If the outcome-related assumptions and impact drivers hold true, then the interaction between the three project Components will result in delivery of the project?s objective to ?initiate a transformational shift towards sustainable, integrated management of multi-use dryland landscapes in the Miombo-Mopane ecoregions of Angola (Okavango and Cunene river basins) following Land Degradation Neutrality principles?, with further gains, represented as four Medium term Outcomes (MTO), of:

Strengthened enabling environment supporting out-scaling of SLM/SFM and the application of the LDN principles across Angola (MTO1):

Increased application of integrated land use planning for LDN and SLM/SFM/sustainable rangeland management practices across landscapes in Angola (MTO2);

Increased long-term investment (market and financing mechanisms) in land use models and innovation to support sustainable dryland management and restoration of degraded ecosystems (MTO3); and

Apart from national gains, delivery of project outcomes would also improve decision-making, partnerships and collaboration for addressing LDN across

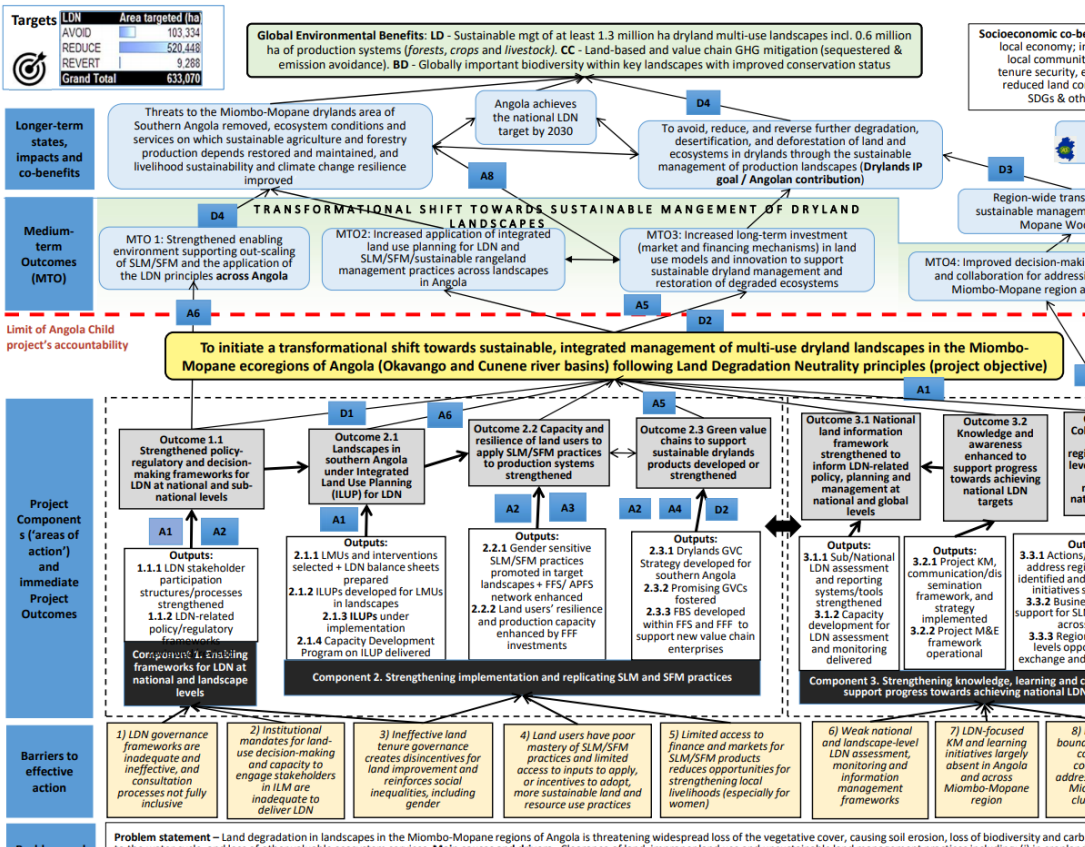
Miombo-Mopane region and globally (captured as MTO4, and represented by a separate causal pathway in the ToC graphic).

Together these, with additional external inputs, will lead to longer term outcomes and changes in state, including: ?*threats to the Miombo-Mopane drylands ecoregion of Southern Angola are removed, ecosystem conditions and services on which sustainable agriculture and forestry production depends restored and maintained, and livelihood sustainability and climate change resilience improved?* and delivery of the Angolan contribution to a ?region-wide transformation to sustainable management of Miombo-Mopane Woodlands? and the goal of the SFM Drylands Sustainable Landscapes Impact Program, which is ?*to avoid, reduce, and reverse further degradation, desertification, and deforestation of land and ecosystems in drylands through the sustainable management of production landscapes*?. Together these should also help Angola achieves its national 2030 LDN target, and contribute to achieving Global Environmental benefits and a number of socio-economic co-benefits.

The causal logic of Angola?s child project, summarized in the ToC diagram, is well-aligned with the over-arching ToC for the Dryland Sustainable Landscapes Impact Program (DSL IP) and Land Degradation Objective. This program approach applied by Miombo-Mopane countries will sustain integrated management in the target landscapes, thereby maintaining or improving the flow of both ecosystem services (LD 2.2) for biodiversity conservation and agro-ecosystem services (LD 1.1) for food production and the livelihoods of forest-dependent people.

The Project Strategy is further elaborated in the next Section, providing details about the project components, outcomes, outputs and proposed activities.

Diagramatic Summary of the Theory of Change for the Child Project in Angola



3.3.2 Project Strategy

Project Objective

The Angola Child Project is part of the GEF-7 Sustainable Forest Management Impact Program on Dryland Sustainable Landscapes (DSL IP), whose global objective is to *avoid, reduce, and reverse further degradation, desertification, and deforestation of land and ecosystems in drylands through the sustainable management of production landscapes*. The Angola Child Project will *contribute to the above goal* through the following project-specific objective:

Angola Child Project Objective:

To initiate a transformational shift towards sustainable, integrated management of multi-use dryland landscapes of the Miombo-Mopane ecoregions of Angola (Okavango and Cunene river basins) based on Land Degradation Neutrality principles.

The project has been designed to generate catalytic effects (i.e. the ?transformational shift?) within targeted landscapes that harbour Miombo-Mopane Woodlands, including the Baikiaea Woodlands). This implies that the degradation of water, soil and vegetation functions (as well as GHG emissions contributing to climate change) can be limited through the demonstration of integrated (catchment level) land use planning and a more informed and targeted application of (evidence based good) SLM/SFM practices that simultaneously conserve natural resources, increase yields and enhance land users? resilience. The project will also provide major opportunities to demonstrate how pressure and threats on neighbouring refuges of biodiversity can be contained and reduced. The future integrity of the PA?s system in Angola, comprising of 14 sites (87,507 km2) and covering just 7% of the country (terrestrial), see Figure 3, will depend increasingly on sustainable landscape management approaches, even with a modest expansion of the PA?s system. Developing land-use plans, that are restricted to sectoral and administrative boundaries as is currently the case, will not achieve the same transformational shift. Hence, the vital importance of demonstrating how this can be achieved in these target landscapes, where replication post-project will be equally important.

The adoption of SLM/SFM practices for integrated landscape-scale planning and management have many similarities with IWRM approaches. Hence, the comprehensive transboundary river basin planning undertaken for OKACOM and CUVECOM will be incorporated during project implementation. The project will also contribute to strengthening the livelihoods of local communities by supporting sustainable dryland value chains. This is essential in order to help alleviate the economic hardship and vulnerability faced by local communities and thereby enable them to shift to more sustainable landscape management practices that, in turn, will global environmental benefits and contribute to LDN. The project will additionally address challenges that are specific to the Miombo-Mopane Woodlands Ecoregion through a concerted participatory approach nationally and through Angola?s participation in the Regional Exchange Mechanism. REM is a demand-driven partnership for connecting, learning, managing and collaborating on ?common management challenges? of relevance to Miombo-cluster countries. Seven of 11 countries in total are participating in the DSL IP in the Southern African region.

Miombo-Mopane cluster ? a harmonized approach

Angola?s child project?s Theory of Change (ToC) is well aligned with the DSL IP?s ToC, which adheres to the principles of the GEF?s programmatic approach outlined in the GEF-7 Strategy.[59] In addition to enabling countries to address complex, commonly encountered drivers of land degradation in the targeted landscapes in a

systematic and harmonious manner, this IP grasps the opportunity to tackle transboundary issues in an integrated way, specifically those related to water using IWRM experience to crossborder trade based on sustainable/green value chains.

The overall DSL IP approach embedded in each child project ToC presumes[147] that it is possible ?to effectively address threats to Miombo-Mopane woodlands and their globally important environmental values and ecosystem services, while contributing to land degradation neutrality (LDN), sustaining local livelihoods and enhancing climate change resilience across landscapes?, subject to GCPs pursuing the following strategies:

- developing the capacities of stakeholders to identify and assess the drivers of land degradation in a participatory manner for more informed decision-making on SLM/SFM;
- strengthening multi-sectoral and multi-stakeholder coordination and collaboration at all levels (e.g. LDN platforms at national and landscape levels);
- improving regulatory frameworks for sustainable landscape management;
- strengthening cross-sectoral rural advisory services to educate land users about integrated SLM/SFM;
- providing incentives for land users to engage in SLM/SFM (e.g. through sustainable value chains and securing their rights); and
- sharing knowledge between Miombo-Mopane cluster countries.

The **harmonized approach** towards achieving LDN, livelihood sustainability and climate change resilience and adopted by GCPs in the Miombo-Mopane cluster is reflected in the **three Components** of the Angola Child Project and their respective outcomes and outputs, all of which are decribed below.

Impacts of COVID-19

- The baseline scenario of the project might be affected by the COVID-19 pandemic. According to preliminary assessments done by the FAO Angola Office, agriculture production is being negatively affected in terms of labor shortages. Several production units have begun working below capacity. Mobility restrictions and consequent logistic bottlenecks are leading to negative impacts on food supply and demand, trade, etc. As a result, national food and nutrition security, and rural communities? livelihoods are seriously affected.

  In order to alleviate this situation and build back better, the Government of Angola launched?a Presidential Decree (98/20) in April 2020 to support families, enterprises and the informal economy sector affected by COVID-19. The Decree is focused on TAX reduction and access to financial mechanisms. Additionally, the ?Family farming and fisheries Acceleration Integrated Program (PIAAPF)?[1]?launched by Ministry of Agriculture and Fisheries in June 2020, aims to support family farming in 3 areas: Support Value chains to increase production, strengthen human resources and support the agriculture input sectors. This program has a budget of 450 Million USD to be implemented over two years. DSL IP will directly liaise with PIAAPF in order to share methodologies (as for value chain support), introducing sustainability and the environment dimension in the various areas of PIAAPF.

  In addition, there are several digital technologies and innovative approaches that the project will introduce to support sharing of knowledge virtually in support of social distancing. For example; tablets

that were introduced for the SHARP household surveys will be used to take footages on different SLM/SFM approaches that will be disseminated to wider groups of stakeholders as well as for monitoring and evaluation purposes. This approach will be complemented by the "Making every voice count for adaptive management" initiative facilitated by the Global Coordination project. This initiative promotes a variety of communication tools, focusing on a participatory video approach as an interactive platform that supports networking and knowledge generation, and in later stages documenting and disseminating knowledge assets and lessons learned ? especially those identified by the local communities and stakeholders at landscape level. The goal is to create a bridge between other teams and initiatives and work beyond the 11 countries involved in this program. The activities will be complemented by specific activities and tools to ensure access to agriculture and forestry advisory services during COVID-19 pandemic, such as the use of radio, print media, videos, mobile vans, and social media (e.g. WhatsApp) to overcome barriers related to social distance, travel limitations and possible lockdown periods.

- The project?s overall strategy is geared towards increasing the ecological, social and economic resilience in the target landscapes. The project?s corresponding broader interventions are therefore well adapted to mitigate the negative impact of COVID-19 by:?Supporting local supply chains, hence increasing the resilience of local food systems, food security and nutrition (through the establishment of community seed banks and diversification of on-farm production using drought tolerant and nutritious legumes) while simultaneously addressing land degradation and increasing agricultural productivity.
- In direct alignment with PIAAPF, creating green jobs through the selected value chains which in turn will improve the overall management and resilience of the landscape (e.g. apiculture which promotes pollination, reduction of forest fires through introduction of modern bee hives while increasing local livelihoods).
- Promote the sustainable management of the forest resources which make a significant contribution to food and nutrition security, helping ward off debilitating micronutrient deficiencies while diversifying diets and livelihood.
- Supporting the sustainable use of woodfuel (which remains the main source of energy for cooking) and therefore energy and food security.

The project interventions in the field will be accompanied by applying FAO resource handbook for running farmer field schools (FFS) during the COVID-19 pandemic: ?http://www.fao.org/3/ca9064en/ca9064en.pdf

> The handbook has two main purposes. First, it contains guidelines that focus on reducing risks of COVID-19 community transmission when running FFS and other agricultural training activities, based on WHO recommendations adapted to the context of FFS. Second, it aims to guide practitioners in using FFS positively to disseminate basic protective measures and build effective responses to the COVID-19 pandemic. To this end, a set of 21 learning activities to integrate COVID-19-related topics in FFS and help communities respond to the challenges they face.

The project?s meetings and workshops will be carried out electronically through Zoom or similar system, ensuring a minimum representation of all interested stakeholder groups. To the extent possible, and depending on changes in the Malawian government regulations on limitations on the number of people who can meet and on the movement of people within / outside the country and within / outside the target districts, the

project will try to group the maximum number of people legally possible in a common space, to minimize the problems derived from Zoom meetings with multiple people. The project team will request the respect of all legal measures established by the government when people gather, such as a mask, hand washing, safety distance, ventilation of the meeting space, maximum meeting time, etc

All participatory events (e.g. for the elaboration of Integrated Land-Use Plans (ILUPs) will be used to: (i) counter spread of fake news on COVID-19, (ii) equip and train front-line project facilitators and field workers, and community leaders, about COVID-19 related knowledge; (iii) raise awareness and disseminate information about COVID-19 impacts and response measures in agriculture, forestry, food security and nutrition; and (iv) inform about and encourage the observation of the official rules to be followed to avoid contagion and transmission.

Component 1. Enabling frameworks for LDN at national and landscape levels

In the DLS IP harmonized approach, Component 1 is focused on the enabling environment for LDN, such as land-use planning policy. This applies similarly to Component 1 of the Angola Child Project, while Component 2 is concerned with the operationalization of land-use planning and land management.

Component 1 draws directly from recent UNCCD guidance on the enabling environment for LDN[60]. It identifies the conditions necessary for a country to successfully pursue an LDN-oriented land degradation strategy and the multiple benefits generated from implementing such a strategy at national, regional or local levels.

Conditions pertaining to the enabling environment necessary for achieving LDN align well with PPG findings, such as those based on RS assessment and stakeholders? perceptions of land degradation, combining scientific evidence with experiential observations. Additionally, the importance of contextual analysis is highlighted: for example, the socio-economic background analysis that underpinned the Barrier Analysis, Baseline SHARP survey and Capacity Needs Assessment. All of these assessments, surveys and analyses carried out during the PPG have informed the design of interventions.

It is helpful to follow the aforementioned UNCCD guidance and **structure the enabling environment around four dimensions, which in turn are differentiated into 15 elements** that are considered to be most relevant to deliver LDN. These are listed in Table 2 as a check against project Outputs (mostly from Components 1-2) to ensure that relevant enabling elements (criteria) have been included in the Project Strategy. Most elements are shown to be directly relevant to the project.

Table 3. Alignment of Project Strategy with elements of a four dimensional LDN enabling environment

Enabling Environment Dimension	Element or Criteria	Relevant Project Outcomes

1. Institutional	**1.1 National political commitment and agenda: high-level commitment; clear priorities and targets set; targets mainstreamed into NAP and National Development Plan**	**Outcome 1.1**
	1.2 Coordination: lead national agency responsible for LDN and integrated land-use planning; mechanisms in place for horizontal and vertical coordination	**Outcome 1.1, Outcome 2.1 Outcome 3.1 and Outcome 3.3**
	1.3 Multi-stakeholder consultation: inclusion of civil society and other stakeholders; participatory process	**Outcome 1.1, Outcome 2.1**
	1.4 Institutional capacities: in planning, policy development, monitoring, enforcement	**Outcome 1.1, Outcome 2.1**
2. Financial	**2.1 Finance needs assessment or costings identified for LDN implementation (e.g. operational, monitoring, evaluation etc.)**	**Outcome 2.3**
	2.2 Identified sources of finance: instruments, mechanisms described or identified; earmarked funds in budget; additional sources of finance	**Outcome 2.3**
3. Policy / regulatory	**3.1 Land tenure considered: user rights; access rights; control rights; transfer rights and tenure security**	**Outcome 1.1 and Outcome 2.1**
	3.2 Integrated land-use planning system considered/mentioned	**Outcome 1.1 and Outcome 2.1**
	3.3 Neutrality mechanism to counterbalance losses and gains discussed or proposed; consideration of avoid, reduce, reverse hierarchy	**Outcome 1.1, Outcome 2.1**
	3.4 Regulations and rules around LDN considered: policies, procedures, incentives	**Outcome 1.1**

	3.5 Policy coherence: policy alignment; consideration of synergies/ trade-offs (e.g. synergistic policies operationalized at the same time by different ministries)	**Outcome 1.1**
4. Science-policy interface	**4.1 Effectiveness of data and monitoring systems considered; consideration of 3 global indicators**	**Outcome 3.1**
	4.2 Consideration of technical capacities in the country for LDN target setting and implementation	**Outcome 1.1 and Outcome 2.2**
	4.3 Consideration of information on causes/effects of land degradation and LDN - ecological, social, economic (or information to conduct preparatory assessments)	**Outcome 1.1, Outcome 2.1 and Outcome 3.1**
	4.4 Information on multiple benefits of SLM and LDN considered (e.g. biodiversity, climate, livelihoods etc.)	**Outcome 1.1, Outcome 2.1 and Outcome 2.2**

Component 1 is designed to address Barriers 1 (governance), 2 (institutional) and 3 (land tenure), elaborated in Section 2.1. The underlying assumptions concern: a willingness among all stakeholders to engage across sectors in the governance of LDN (A.1); political will to address land tenure issues (A.2); and and a private sector willing to invest in SLM/SFM, encouraged by supportive regulatory and financial environments (A5). These scenarios are depicted in the ToC diagram.

The Ministry of Culture, Tourism and Environment (MCTA) will lead the execution of Component 1, collaborating closely with other key stakeholders, notably GABHIC with their experience of managing internationally-shared rived basins reating the ?enabling environment? for the governance and financing of LDN at both national and landscape levels requires the strengthening or development of tools, systems, processes and, most importantly, human capacity with the relevant skills and ability/readyness to work in an integrated, cross-sectoral manner demanded by the landscape approach. FAO will provide Technical assistance.

GABHIC already possesses a decision support system for watersheds, developed under a GEF International Waters (IW) project. If practicable, this system can be modified to accommodate the project?s dryland landscapes and thereby integrate the planning and management of land and water use at landscape scales. At the very least, the project should be able to access the wealth of information held in the systems maintained by GABHIC.

Two ministries, MCTA and MINAGRIP **will co-finance Component 1 from the National Development Program (PND)** as detailed in the table below. The project will collaborate closely with these ministries through partnerships or other applicable implementation arrangements to maximum effect. Collaboration with GEF IW projects is also foreseen; details are given in Section 6b.

Baseline Project / Program / Initiative	Component 1	
	Baseline	Co-financing
MCTA (DNAAC) PND # 2.4.1: Climate Change	$12.2	$7.1236
MINAGRIP (DNF) PND # 2.3.4: Promoting Sustainable Use and Management of Forest Resources	$2.2	$0.4
IFAD SREP - Smallholder Resilience Enhancement Project	$6.0	$0.9
AFDB Agricultural Value Chains ? Support to Sustainable Development. & Growth	$4.0	$0
FAO	$0.35	$0.025
Totals (US$ million)	**$24.7**	**$8.4486**

Outcome 1.1	**Strengthened policy-regulatory and decision-making frameworks for LDN at national and sub-national levels**

Three main aspects are covered under Outcome 1.1 relate to the enabling environment for LDN and associated frameworks for land-use planning and sustainable management, as described below:

Strengthening cross-sectoral institutional policy-regulatory frameworks for LDN in order to deliver integrated, evidence-based and rational decisions on land use within landscapes;

Development of effective planning frameworks and participatory stakeholder engagement structures and processes at systems and institutional levels, while noting that integrated spatial planning of landscapes will be operationalized congruently under Component 2; and

Reviewing and revising certain policies, related legislation/regulations and, importantly, the way that they are being applied. The latter includes the development of local bylaws to support the management of landscapes, particularly given that the passing of national legislation can be a lengthy and unpredictable process.

Outputs and Activities under **Outcome 1.1** are designed to improve the effectiveness and success of both planning and managing landscapes by developing the necessary **governance, systems, institutional capacities and stakeholder structures and processes necessary to mainstream LDN principles and to apply the ?landscape approach?**. Financial needs assessment, existing and potential resources and financing mechansims are also part of the enabling environment to be strengthened under Outcome 1.1, as well as the development of strong colalboration. Each Output and its respective activities are considered below.

Output 1.1.1 *LDN stakeholder participatory and decision-making structures at national level strengthened/established, with vertical integration to landscape level multi-sectoral working groups*

Output 1.1.1 is focused on putting in place the ?building blocks? for the implementation of LDN related measures, specifically in relation to

setting up or strengthening the structures, mechanisms and processes that enable horizontal/vertical coordination between sectors and ensure stakeholders are directly involved in decision-making from the outset. It addresses Criteria 1.2 (coordination) and 1.3 (stakeholders) of the institutional dimension of **Table 3**, aligning well with the UNCCD guidance[58]:

> *?Planning and implementation of LDN involves well-designed participatory processes that include stakeholders, especially land users, in designing, implementing and monitoring interventions to achieve LDN. Processes should consider local, traditional and scientific knowledge, applying a mechanism such as multi-stakeholder platforms to ensure these inputs are included in the decision-making process. The process should be sensitive to gender, and imbalances in power and information access.?*

The key national institutional stakeholders concerned with the management of landscapes are: the Directorate of Environment and Climate Action (DNAAC, under MCTA), which is the focal point for UNCCD and UNFCCC; specific directorates and institutes of MINAGRIP concerned with rural extension, agriculture, forestry and livestock; and the Office for the Management of the Cunene, Okavango and Cuvelai Hydrographical Basins (GABHIC, under MINEA), where the project?s target landscapes are located and defined as sub-basins within the Cunene and Okavango river basins.

Indicative Activities under Output 1.1.1

Undertake Capacity Needs Assessment Survey among relevant government agencies and other key stakeholders at national, provincial and district levels to identify: (i) levels of awareness and knowledge about LDN; and (ii) gaps in policy and regulations regarding landscape planning and management. This will inform the review of policy and regulatory frameworks (**Output 1.1.2**) and the Capacity Development Program on Integrated Land-use planning (**Output 2.1.4**).

Strengthen the national LDN Working Group, originally established in 2018. This should include reviewing its structure (membership, reporting and supporting arrangements), terms of reference (tasks) and training needs. Over-riding tasks of this Working Group include: providing technical oversight on the application of the landscape approach to the PSC; supporting government with its reporting to UNCCD, UNFCC and CBD; and promoting awareness about LDN and ensuring it is mainstreamed across the respective sectors. In order to achieve it, under this output the LDN Working Group will receive tailored trainings.

Should it be considered necessary to change the mandate of the Working Group from one of undertaking specific tasks to making high-level decisions, then it may be appropriate to transform the Working Group into a Committee, supported by a newly created LDN Task Force.

A specific task for this existing Working Group will be to oversee the development of an LDN monitoring system, referred to under Output 3.1.1.

Design a generic framework, comprising platforms and processes, that will enable stakeholders to participate in applying the landscape approach to the target sub-basins to achieve LDN. The framework should be fully integrated, both vertically (national ? provincial ? district ? municipality - community) and horizontally (multi-sector), and applicable to individual landscapes or landscapes nested within basins. It will reflect the governance structures and consultation processes to be put in place to ensure that all stakeholders are able to participate in land-use planning and management. It is

particularly important for the private sector, civil society, minority groups and the interests of women and youth to be represented throughout the different elements of this governance framework. Any engagement with indigenous peoples will be compliant with FAO procedures.

The LDN Working Group is a key platform at national level and other multi-sector Working Groups will be established for individual landscapes, with vertical coordinating mechanisms to the national Working Group. As appropriate, Landscape Forums will be created at communal, municipality or provincial levels to raise awareness about LDN and capture consensus views on land-use planning and management to feed into the respective Working Groups.

Scoping of the framework will be completed during the project?s inception phase and its stakeholder groups targeted for relevant training modules under Output 2.1.4.

Develop Stakeholder Engagement Plans for each target landscape, based on the generic governance framework (Activity 1.1.1c). Administrative stakeholders at provincial and more localized levels of government in the two target landscapes are listed in **Table 4** to inform the structure of these plans, depending on the levels at which it is decided to establish Working Groups (landscape level) and Forums (provincial, municipal and/or communal). These plans will be prepared during project inception, alongside the LDN framework, and should build on previous engagement with stakeholders during the PPG (**Annex 12** and, in case of agro-value-chain stakeholders, **Annex X-2.2**). The scope of a Stakeholder Engagement Plan should consider/determine/include the following:

Gender-sensitive, FPIC compliant stakeholder engagement process that also takes into account ethnic and other minority or marginalized groups, youth and the elderly into account in its design and in the composition of consultative mechanisms to ensure their adequate representation.[61]

Key stakeholders listed, profiled and their interest/relevance to the project identified, particularly with respect to enhancing the enabling environment (Component 1), integrated landscape planning and/or management (Component 2), knowledge management and M&E (Component 3), and capacity building (cross-cutting).

Overview of the governance framework at national, provincial, district, municipality, commune and land-owner/user levels with which integrated landscape management will need to engage. Key stakeholders identified at each level, along with existing mechanisms/platforms for consultation. Where no mechanism exists, then new mechanism (e.g. forum, consultative group) identified and confirmed by government.

ILUP process designed for LMUs, relevant levels of governance identified for engaging with respective stakeholder groups and consuktative mechanisms elaborated. Approximate timeframes should be specified and overall deadline agreed among key stakeholders. It is anticipated that drafting the Integrated Land Use Plan will take six months, including interative workshops involving planners and key stakeholders, followed by a three-month consultation period that culminates in a final draft, which is agreed by month 12 at the latest.

The Plans should include a monitoring framework to track stakeholder engagement during their preparation, timeliness of deliverables and feedback on the process from stakeholders in order to feedback lessons learned.

Develop and implement a LDN Communications Strategy and Action Plan to target LDN awareness raising and capacity development among the different government sectors, private sector, civil society and land user groups. The Strategy will be drafted during project inception, taking into account gender equity and other social inclusion issues identified in the Gender Analysis (**Section 3b**); and subsequently updated in the light of findings from the Capacity Needs Assessment Survey (**Activity 1.1.1a**). The Strategy will identifiy what needs to be communicated (key messages, best practices, skills development, access to resources etc.), to whom (target groups), by what means (newsletter, outreach materials, knowledge products, training modules, events etc.) and implementation timeframes, all of which will be updated annually in the Action Plan.

Output 1.1.2 *Policy and regulatory frameworks relevant for land-use planning and management reviewed and revised to incorporate and promote LDN principles and SLM/SFM interventions*

Output 1.1.2 is focused on identifying and filling the policy and legislative gaps in enabling Angola to pursue an LDN approach to planning and management at a landscape scale, taking into particular account Criteria 3.1 (land tenure), 3.4 (regulations and rules) and 3.5 (policy coherence) of the policy/regulatory dimension of the UNCCD guidance on establishing an enabling environment for LDN (Table 2).

Indicative Activities under Output 1.1.2

Establish an *ad hoc* legal Task Force to oversee delivery of policy and regulatory changes in land-use planning and management, based on LDN principles and mainstreaming SLM/SFM across landscapes at sub-basin scales. This LDN Task Force will be constituted by in-house legal services of MCTA , MINAGRIP and MINEA; and members will receive training in LDN and the integrated landscape management approach (**Activity 2.1.3**). It will advise the PSC and be serviced by one or more consultants, whose will report to the members.

Scope the Policy-Regulatory Review and develop a ToR during project onset, all of which can be reviewed by key stakeholders participating in the project?s Inception Workshop. While the geographic scope is national, provisions for transboundary river basins will need to be taken in account and this is where the Regional Exchange Mechanism (REM) of the DSL IP might have a role. The review should be drafted within 12 months, subjected to a three month consultation period with key national stakeholders as well those engaged in planning SLM/SFM in the target landscapes using the participatory structures and processes established under **Output 1.1.1**, and then completed within a further three months. The following topics are proposed for inclusion in the review:

Land tenure: policy and practice are identified as a major barrier to achieving LDN, which requires a more rational approach to land-use management. Three major problems faced by communities asserting their common tenure rights to land that they traditionally use are:

Lack of institutional capacity on the part of State agencies to manage the land titles registration process;

Need of legal regulatory framework improvements regarding community land delimitation procedures; and

Traditional land tenure systems prevalent in Angola are inadequate with respect to gender equity and continue to create uncertainty among community members regarding equitable access.

Currently the Land Law 09/04 has its regulation fro land concessions, but regulation for community land registrations remais vague and needs a review that can be bassed in the long experience of community land registrations carried out in the country and also in collaboration with the Govermental Programa Minha Terra

These and other issues[62] will need to be addressed and, given the detailed and complex nature of land tenure policy and legislation, may require additional support, such as from FAO?s readily accessible Land Tenure Unit (PSPL).

Forestry concessions: legislation exists but enforcement, especially in drylands, requires a more robust approach; and other options merit expoloration of the charcoal market: may require a specific approach in drylands to avoid the usual forest degradation caused by charcoal production and excessive firewood collection.

The **National Strategy for Climate Change (ENAC)** establishes the vision for 2030 of the Angolan national policy. The strategy takes into account the need to connect Angolan policy in terms of mitigation and adaptation to the impacts of climate change while taking into account the challenges posed by the new Paris Agreement. ENAC presents the position of Angola on the challenges of climate change, as well as the development of two documents: the National Emissions Plan and the National Plan for Adaptation to Climate Change. ENAC also establishes a national monitoring, reporting and verification system (MRV), which consists of a set of procedures. These procedures consist of the legal, institutional and technical aspects in order to collect and report information in a precise, reliable and transparent way for the implementation of the strategy. The project will provide legal support for the revision of it and the integration of the LDN approach in the action Plan. The ENAC also includes legal and regulatory frameworks revision that the project will contribute to. With these support to the ENAC it is expected to be ready to be endorsed by the parliament in 2021.

Community-based forest management has rarely been trialed in Angola, reflecting the regulatory gap in devolved management of common resources such as forests/woodlands. Formalizing CBFM, so that rules of access to forest land and forest protection can be enforced, requires land-use regulations. Such an initiative is proposed using the ILUP stakeholder engagement mechanism piloted under Output 2.1.2 and delivered in the target landscapes under Output 2.1.4.

Other legal options for socially inclusive devolved land management include community management authority, conservation management, stewardship, co-management, and proclamation and demarcation of community managed areas.

Improvement and professionalization of rural extension services and forest monitoring services and systems: noting that proposed activities are primarily limited to scoping and addressing capacity development needs, alongside mainstreaming gender equity aspects. It will include provisions to integrate Farmer Field School (FFS) and Forest-Farm Facility (FFF) initiatives into national policies and programs, delivered by Rural Advisory Services.

Management of sub-basins (landscapes): given that finance is often the main barrier to implementing technically sound international river basin management plans, agreed by the

respective riparian countries, this project will resolve the stalemate by enhancing statutory planning and management policies and regulations to address LDN at sub-basin levels.

Existing policy/regulatory provisions for the establishment of seed banks ? refer to Activity 2.2.2a for details.

Regulation and certification of harvesting and marketing NTFPs offers a huge opportunity to capitalize on demands for NTFPs, given the long list of NTFPs from drylands in Angola currently marketed, of which only honey is currently marginally controlled and regulated.

Extent of alignment of national policies and strategies with regional land and water policies and initiatives that promote LDN to ensure consistency and generate synergy where appropriate. Examples include: SADC?s related policies and initiatives, such as the Environment and Sustainable Development Program under the Food, Agriculture and Natural Resources Directorate (FANR) and the Regional Indicative Strategic Development; OKACOM?s experience with international river basins; and the Great Green Wall Initiative for Southern Africa (GGWI-S)[63].,This task will be facilitated by the GCP and Regional Support Facility (RSF) under the DSL IP.

Undertake the Policy-Regulatory Review, based on the ToR generated from the above scoping exercise. It is anticipated that consultant(s) will be recruited for this purpose and work under the guidance of the Legal Task Force. The consultancy, supported by the Task Force, will include consulting with relevant stakeholder groups on the draft policy-regulatory review, using the structures and processes specified in the Stakeholder Engagement Plans (Activity 1.1.1.d) for the respective landscapes, prior to its finalization.

Embed LDN principles within land use/management policy and, based on the policy-regulatory review findings, **draft amendments to regulations, agreements, accords and, where needed, more formalized by-laws**. In-house legal services will address this task, supported by professional legal services if deemed necessary. Draft materials (or easy-to-understand summaries) will also be shared with stakeholders in the same way as for **Activitiy 1.1.2c** both for information and consultation purposes.

Ensure that the Communication Strategy (Activity 1.1.1e) is fully aligned with this Output so that stakeholders can be appropriatedly targeted and kept well-informed about its progress, opportunities to engage in consultation processes and capacity building events, and prepare for up-coming changes in land-use policy and practices.

During the PPG, GoA emphasized that ?ensuring land tenure security? is a national priority under its Agricultural Sector Mid-Term Plan (PMPSA 2018-2022), which is focused on improving productive capacity and infrastructure in the Agrarian Sector. Hence, government?s strong support towards this project, which will be addressing this issue through a drylands lens.

Revision of land tenure policy and regulations is important to underpinning the SLM/SFM in the landscapes. In order to achieve LDN, many of the issues are likely to be more easily resolved through the integrated landscape approach piloted under Component 2 by applying conflict resolution measures to address land tenure, land use and boundary disputes as part of an inclusive process of engagement with all relevant stakeholders.[64] This is elaborated in the next section.

Technical support are readily available from FAO?s Land Tenure Unit (PSPL), including expertise, training manuals (e.g. *Voluntary Guidelines on the Responsible Governance of Tenure*) ful lessons can also be learned from FAO?s *)* and its mapping application (SOLA Open Tenure), any or all of which can be accessed to help address land-use conflicts and boundaries disputes as implementation progresses.

Component 2. Strengthening implementation and replicating SLM and SFM practices

Component 2 is focused on the practical application of the landscape approach: first and foremost through the use of spatial planning to identify and prioritize SLM/SFM measures according to the local and landscape (sub-basin) context; secondly, through selecting and imlementing SLM/SFM practices within the target landscapes; and thirdly, through one or more investment mechanisms established under the Capacity Development Program (Ouput 2.1.4) to enable individual land users and communities secure the financial resources necessary to make a paradigm shift in their land use activities towards LDN and realize their aspirations. The dissemination and upscaling of the SLM/SFM practices will depend on two main multiplier mechanisms: (i) rollout of agrarian support services through Farmer Field Schools (FFSs) and Forest-Farm Facilities (FFFs), such as community seed banks (CSBs), under Outcome 2.2; and (ii) strategic investments in the development of drylands? value chains (Outcome 2.3).

Component 2 draws on the UNCCD enabling-environment guidance for LDN, particularly with respect to the financial and science-policy interface dimensions (Table 2). It is designed to address Barriers 3 (land tenure), 4 (unsustainable land management) and 5 (access to finance and markets), as elaborated in Section 2.1. The underlying assumptions concern: a willingness among all stakeholders to engage across sectors in the governance of LDN (A.1); political will to address land tenure issues (A.2); market demands for dryland products fromsouthern Angola that will fuel green commodities and value chains (A.3); and a private sector willing to invest in SLM/SFM, encouraged by supportive regulatory and financial environments (A5). These scenarios are depicted in the ToC diagram.

Spatial planning of land use will be based on systematic assessment of land and water potential in target landscapes. It will be comprehensive but pragmatic, drawing in stakeholders from relevant sectors in order to express their specific interests in an integrated, participatory manner within a holistic context (landscape/sub-basin) that is LDN focused. Participatory planning, including agriculture (pasture, crops, forests), environment (nature, water, air), industry (food, timber, water, waste management), local government, communities, NGOs, CSOs and any other interested parties, is most important when dealing with common property and land that can be potentially claimed by communities on the basis of their customary rights, especially as many community lands are degraded and conflicts over land-use rights may exist. When relevant for the integrated plans , land tenure will be adressed through the project intervention by supporting communities in offcicially recognizing their lands or strengethening capacitie in local institutions to carry out land delimitations.

Alternatives for land under specific uses take into account economic conditions and potential LDN benefits. Some land may be proposed for restoration, especially forest. In order to assess potential land uses and identify the best options, local assessments and consultations are anticipated under Output 1.1.1. and these will need to align with national and cross-boundary interests as part of the landscape-level ILUP process.

Implementation of the Integrated Land-Use Plan will be operationalized initially through a set of project intervention sites, defined as Land Management Units (LMUs), located within the target landscapes (sub-basins). Ultimately and certainly by the end of the project as part of an Exit Strategy, plans will be developed for scaling ?out? and ?deeping? the relevant SLM and SFM practices across the target landscapes through replication and adaptive[65] measures. If time and resources permit, the project will be able to reach out beyond the targeted landscapes to other landscapes next in priority.

As explained before, the COVID-19 has negatively impacted in the agriculture sector. The project will align and generate synergies with government response programs to mitigate the negative impacts of COVID-19. In this sense, efforts will be made to find synergies with PIAAPF launched by MINAGRIP. Specific cordination will be carried out specifically for outcome 2.2 and outcome 2.3.

The implementation of Component 2 will be leaded by MCTA and the execution will be carried out by Local NGOs, collaborating closely with MCTA and other key stakeholders. FAO will provide techncial assistance. **Six programs contribute to the project?s baseline , three of which will co-finance Component 2 from the PND,** as shown in the table below. As in the case of Component 1, the project will collaborate closely with these ministries through partnerships or other applicable implementation arrangements.

Baseline Project / Program / Initiative	Component 2	
	Baseline	Co-financing
MCTA (DNAAC) PND #2.4.1: Climate Change	$12.2	$7.0
MINAGRIP Program #2.3.2: Promoting Agricultural Production	$48.4	$9.81
Municipalities, (notably Cuchi, Cahama and surroundings) PND #4.3.2: Decentralization and implementation of local governments	$7.9	$0.0
IFAD SREP - Smallholder Resilience Enhancement Project	$6.0	$0.9
AFDB Agricultural Value Chains ? Support to Sustainable Development and Growth	$4.0	$0.0
FAO	$3.0	$0.5
Totals (US$ million)	**$81.5**	**$17.76**

Progressing from the current baseline, the scaling out of SML/SFM within the target landscapes will be achieved through four main steps:

- developing integrated land-use plans for target landscapes and prioritizing implementation of sustainability actions;
- enhancing the ability of land-users to counter the drivers of land degradation by improving their land-use management practices within an integrated landscape context, with support from participatory, cross-sectoral rural advisory services that are designed to both build capacity and empower community groups, forest and farm producers, and extension workers;
- enabling forest and farm producers to diversify their production, thereby promoting resilience and improving livelihoods in the targeted landscapes; and
- providing incentives to land users to manage landscapes sustainably through green value chains.

Outcome 2.1	Landscapes in Southern Angola under Integrated Land-Use Planning (ILUP) for LDN

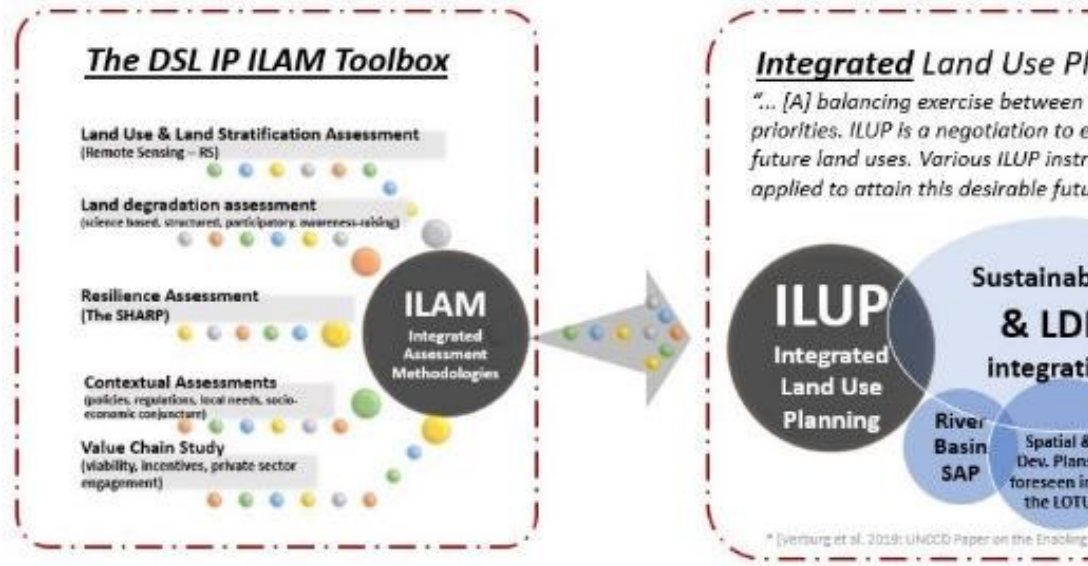
Currently there is no pre-existing land-use planning or management framework that specifically addresses sustainability within landscapes that, by default, are the target of different and often competing sectoral interests (e.g. biodiversity conservation, forestry, agriculture, water catchment, mining), while also covering a range of administrative jurisdictions (i.e. provinces, municipalities, or communes). The existing planning framework is concerned with physical and infrastructural planning and, to a less extent, with investment at the provincial level that in most instances is focused on urban municipalities.

However, there are integrated water resource management frameworks for the Cunene and Okavango river basins that seek sustainability: respectively, these are the Kunene River Master Plan from the early 2000s and the 2011 Strategic Action Program (SAP) for the Sustainable Development and Management of the Cubango-Okavango Basin. Implementation of these planning and management frameworks has remained incipient, however, as described under Barrier #1. Furthermore, there are no planning frameworks nested within the basin-level plans for these two rivers that focus on specific watersheds or address integrated water and land-use management. Likewise, specific operational plans or mechanisms to address the LDN target and related framework are lacking. These gaps will be accommodated under Outcome 2.1 through the ILUP proposed for each sub-basin, providing a novel and and important opportunity for progressing what has been envisioned since the beginning of this millenium.

The project will both strengthen integrated land-use planning at landscape level while also materially supporting implementation of the resultant Land-Use Plan, which will include a framework of indicators to monitor implementation. Integrated planning will prime the sustainability aspects embedded in the LDN target, while also ensuring that the process is cross-sectoral and fosters multi-stakeholder collaboration. Existing multi-sectoral stakeholder platforms and processes at national and local levels will be strengthened and enhanced to facilitate participatory, adaptive landscape planning and management; and the resultant Stakeholder Engagement Plans for the target landscapes designed under **Output 1.1.1** will underpin the Integrated Land-Use Plans prepared under **Output 2.1.2** and implemented under **Output 2.1.3**.

Figure 5. Integrated Landscape Assessment Methodology applied to FAO GEF DSL IP Child Projects of the Miombo Cluster, based on a framework developed in 2017 by UNCCD?s Science Policy Interface[66]

Key elements of the **I**ntegrated **L**andscape **A**ssessment **M**ethodology and other studies that will feed into the **I**ntegrated **L**and-**U**se **P**lanning and, in the case of the ***Angola Child Project***, be operationalized under **Component 2**:



Outcome 2.1 builds on preliminary findings from applying the Integrated Landscape Assessment Methodology (ILAM) undertaken during the PPG phase, which will be further elaborated and consolidated to inform the Integrated Land-Use Planning (ILUP), as modelled in Figure 5. ILUP is considered by UNCCD to be a highly effective instrument for delivering LND within landscapes: hence, it is prioritized within the DSL IP for piloting the landscape approach in conjunction with other mechanisms. The scoping, planning and costing of SLM/SFM practices in pursuit of LND will go hand-in-hand with sectoral planning for production activities (agrarian and non-agrarian), taking into account socio-cultural, economic and environmental targets and considerations that affect land use.

Box 8. Integrated Landscape Assessment Methodology (ILAM) toolbox

An Integrated Landscape Assessment Methodology (ILAM) toolbox was developed to ensure that the six Southern African countries follow a harmonized, systematic approach to baseline assessments and subsequent project development which is linked to the LDN Conceptual Framework (LDN CF) and associated guidelines for application. The aims of the ILAM toolbox were twofold: i) to enable the systematic assessment of essential baseline information from national to regional/district level, initial site level and household level using an integrated strategic approach; and ii) to provide countries with a toolbox that is replicable to support the future baseline assessment and integrated land use planning, SLM/SFM decision making and monitoring at sub-national level in contribution to national priorities, processes and targets, including LDN.

The essential components of the toolbox consisted of a combination of bottom-up and top-down approaches that support various Modules in the LDN CF as follows:

LDN CF Module	Toolbox components

Module A: To enable integrated landscape-level system description (e.g., biophysical, socio-economic, land degradation processes and drivers, existing SLM/SFM, value chains, resilience, etc.).	**Rapid participatory land degradation assessment per land type** **Participatory stakeholder analysis** **Climate-risk assessment** **Policy, institutional and capacity needs analysis** **Indigenous Peoples and the Free, Prior and Informed Consent assessment (FPIC) assessments** **Household surveys using the Self-evaluation and Holistic Assessment of climate Resilience for farmers and Pastoralists (SHARP)** **Value chain analysis and selection**
Module B: To determine the frame of reference or baseline values for the three indicators of land cover, land productivity and soil organic carbon*	**Remote sensing (Collect Earth, Trends Earth)**
Module D: **Determine existing policies for land governance, land use planning and natural resource conservation and management.** **Preparatory assessments of land degradation status, resilience of current land uses, socio-economic context (including gender equality)**	**Policy, institutional and capacity needs analysis** **Rapid participatory land degradation assessment per land type** **Household surveys using the Self-evaluation and Holistic Assessment of climate Resilience for farmers and Pastoralists (SHARP)**
Module E: Determine baseline values for LDN metrics	**Remote sensing (Collect Earth, Trends Earth)**

***** The soil organic carbon indicator, due to its complexity, is derived from the land cover change (traditional approach applied by basically everyone, including the IPCC https://archive.ipcc.ch/ipccreports/sres/land_use/index.php?idp=98 and https://archive.ipcc.ch/ipccreports/sres/land_use/index.php?idp=163, trends.earth and the EX-ACT team). During programme/project implementation, the REM/global project will provide further guidance on how to comprehensively estimate and monitor the SOC indicator

In line with RAPTA, the ILAM methodology enabled a better understanding of direct and indirect drivers of land degradation and resilience, including anthropogenic causes, by:

Identifying and analysing the level of exposure of production systems, livelihoods and landscapes to climate and non-climate hazards

Understanding of the nature of vulnerabilities (sensitivity) of communities and landscapes to such threats.

Assessing the capacity of households and ecosystems to respond to the identified risks as well as to changes in future trends and shocks (adaptive capacity).

The combination of different tools and analyses allowed the application of resilience thinking at different scales, comprising the transformational change and adaptation components. The?combined?analyses further applied a land-based approach based on land types,?in line with the LDN approach. This integrated and participatory strategy supported the design of custom-designed strategies that foster the transformation of socio-ecological systems to desirable states, i.e. resilience, food security and LDN.
Following the testing of the ILAM toolbox during the PPG phase, the following main gaps were identified which will be addressed during project implementation in close collaboration with the Regional Exchange Mechanism (REM) (See Outcome 1.1):

Improved, more detailed LD assessment methodology to enable mapping of LD and SLM/SFM assessment results at sub-basin level;
Identification of complementay indicators to assess LD and SLM/SFM to enable LDN monitoring;
Validation of assessment results with major stakeholders, including land user representatives;
Enabling identification of existing good SLM/SFM practices and reasons for their effectiveness; and
Categorizing and accounting for land use decisions and the impacts of land use, land use change, climate variability, and management with respect to land degradation, resilience and livelihoods.

Detailed description of the Integrated Landscape Assessment Methodology (ILAM) can be found in Annex N.

Underpinning Outcome 2.1 is the development and implementation of an integrated, science-based and gender-sensitive landscape-level assessment, planning and monitoring process for the **two target landscapes: Cuchi-Okavango (Sub-basin 1)** in Cuando Cubango province; and **Cahama-Cunene (Sub-basin 2)** that straddles Cunene and Hu?la provinces.
Thus, the four Outputs under Outcome 2.1 will respectively address: expansion, elaboration and consolidation of the ILAM, from which the pre-selected Land Management Units and intervention activities will be confirmed; preparation of the Integrated Land-Use Plans for each target landscape based on the selected LMUs, in line with the consultation processes and structures determined in the Stakeholder Engagement Plans under Activity 1.1.1d; implementation of the respective Plans once developed and agreed by the key stakeholders; and building capacity in integrated land management, largely through training, outreach and financing mechanisms.
Given that capacity development and associated training in integrated landscape management to achieve LDN is also needed in Component 1, Output 2.1.4 will address the overall design of the Programme across all Components. Raising awareness among stakeholders about the importance of ILM and LDN will be supported from Component 3 under the Communications Strategy.

Preparatory work on ILAM and ILUP undertaken during PPG stage

The ILAM toolbox includes both low-tech approaches, such as focus groups to summarize stakeholder priorities and land potential, and high-

tech, data-driven approaches, such as the Remote Sensing Assessment (RSA) that can be easily replicated in country because of the use of open platforms. Application of the ILAM toolbox during the PPG stage generated some useful products for project design, as well as providing background and contextual information for the ILUP process during implementation. The toolbox includes:

- Land Use & Land Stratification Assessment (remotely sensed);
- Land Degradation Assessment (science-based, structured, participatory, awareness-raising);
- Climate Resilience Assessment (SHARP);
- Contextual Assessments (policies, regulations, local needs, socio-economic context); and
- Value Chain Study (viability, incentives, private sector engagement).

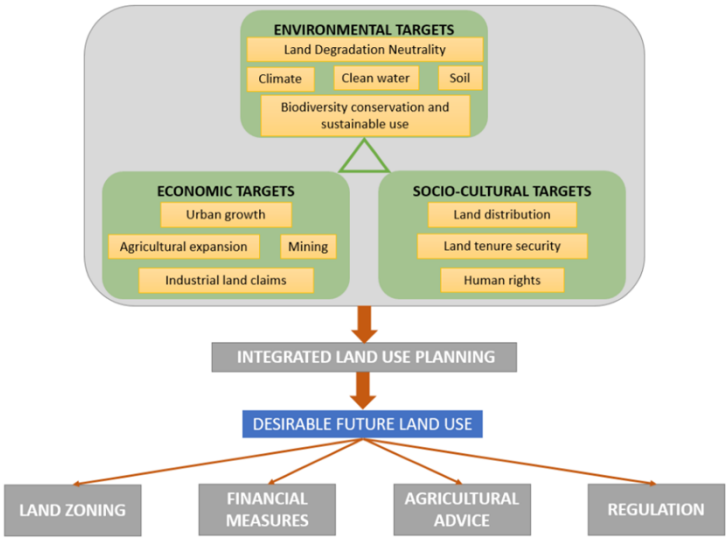
The above products were corroborated by other baseline assessments (e.g. finance) and a stakeholder engagement process that resulted in a comprehensive Stakeholder Map, Capacity Needs Assessment and a Gender Mainstreaming Analysis and Gender Action Plan (GAP).

ILUP is described in the UNCCD guidance[58] as a balancing exercise between three broad priorities (environmental, socio-cultural and economic), whereby targets such as LDN are reconciled through a political process that decides upon a desirable future land-use. Various ILUP instruments can be applied to attain this desirable future land use, such as zoning (e.g. grazing exclusion), agricultural advisory services (e.g. best practices in SLM), financial incentives (e.g. payment for ecosystem services) and regulation (e.g. protected areas).

Preparatory ILUP undertaken during the PPG included mapping predominant land-use systems (LUS) based on the RSA, overlaying their level of degradation, and then visually predicting the extent to which degradation is likely to evolve in the near future using land-use dynamics to assess their threatened status. This enabled LMUs to be defined and prioritized based on assessments of declining land productivity and LDN status as described in Sections 1.2 (Figure 4) and Section 2, respectively.

To date analyses have been carried out only visually but other methods, including the use of data handling routines to accelerate assessments, may be developed during implementation: taking into account, for example, the presence of major roads and human settlements, accessibility to forest (e.g. presence of feeder roads, trails, rivers etc.) and protection status. Theoretically, protected areas can reduce or halt the advancement of land degradation, depending on whether or not boundaries are respected. In Sub-basin 2 (Cahama-Cunene), the presence of protected areas has only been partially effective. In Sub-basin 1 (Cuchi-Okavango), access to forests drives land degradation but, conversely, agricultural land in the surroundings of Cuchi town has shown improvement, due to ready availability of fertilizer and/or access to water for irrigation. More detailed analysis and ground-truthing of such factors may be needed during the planning phase.

Figure 6. ILUP is a participatory planning process by which future desirable land status is identified, such as LDN, and becomes attainable through zoning land usage according to land suitability and other agreed criteria.[58]



The next step in the planning process involved selecting LMUs, based on the predominant land use system determined from a cursory analysis of land cover imagery (remotely sensed) and a suite of other parameters using the Collect Earth Open Foris platform. LMUs were then prioritized by government at a global workshop in January 2020 in accordance with a selection of criteria[67] and the respective polygons digitised. Potential interventions for the respective LMUs are summarized in **Table 4** using a simple framework that aligns with the World Overview of Conservation Approaches and Technologies (WOCAT)[68] and focuses on the LDN mechanism of *avoid, reduce and reverse* to counterbalance losses and gains.

A total of 18 LMUs (i.e. project intervention sites) were tentatively identified during the PPG stage: 9 in the 485,412.83 ha Cuchi-Okavango Sub-Basin 1 and 9 in the 880,046.04 ha Cahama-Cunene Sub-Basin 2. LMUs cover a combined non-overlapping area of 633,278 ha[69] **Figures 10 and 11**, respectively, together with the indicative management interventions that are colour-coded on the maps and listed in the legends. in the legends.

Output 2.1.1 *Land Management Units and respective interventions selected, landscape level assessments expanded and deepened*

Output 2.1.1 focuses on confirming and updating preliminary findings of the landscape assessments undertaken during the PPG using ILAM, while also expanding and, in regard to cultural values, ?deepening? them to provide a better insight to each target landscape. This will enable the Land Management Units pre-selected during the PPG phase to be confirmed and a baseline LDN balance sheet, as at the start of implementation, to be prepared during project inception. Building on the work undertaken during the PPG as summarised above, the further Indicative Activities are guided by Criterion 3.1 of the policy/regulatory dimension and Criterion 4.3 of the science-policy interface dimension (Table 2) and elaborated below.

Table 4. Management interventions for prioritized LMUs, using a modified World Overview of Conservation Approaches and Technologies template

NOTES =>	*[a]*	*[b]*	*[c], [f]*	*[d]*	*[b], [f]*	*[b], [f]*		[e]
LMU #	Name of Approach	For which land-use type	Location / Project Code	Area (ha) covered by ILUPs (at least)	Type of Approach	Stakeholders involved	Objectives	Local Land user/ cal comm unitie ? invol ment
Cuchi-Okavango (Sub-Basin 1)								

1	A1 Cuchi-Liunda Community Forest Reserve Conservation Sustainable use 31,100 ha	Forest/ woodlands	LMU-AO-1 | Sub-Basin 1, LUS = Forest A1	31,000	Community Forest managed by nearby localities (Cuchi and Liunda), area to be sustainably managed by nearby communities of Liunda and Cuchi for forest seed supply and other NTFPs in view of avoiding deforestation and degradation and promoting SFM.	Communities in Cuchi and Liunda, MCTA / INBAC concerning the consideration of the site as a potential protected area	Forest strict conservation in core, less disturbed areas (exact zone tbd) and sustainable offtake in other areas (90%), plus forest tree seed supply and seedling production	Generally informed about the proje, but not y direc y engag d for this activ y

2	A2 Cuchi Municipal Forest and Seed Bank 1,388 ha	Forest/ woodlands	LMU-AO-2 | Sub-Basin 1, LUS = Forest A2	1,388	Small forest patch in a peri-urban area, proposed managed locally by the Municipal Council of Cuchi. The project would build a small nursery infrastructure in the forest (near the road) and develop relevant community seed banks activities in it. The area will be under SFM practices aiming to increase seed production and to reduce pressure from overexploitation of wood resources, grazing and agricultural expansion. Aspects of fire management will also be cover	Forest users and forest keepers in Cuchi, Municipal and communal government, Seed Bank designated manager, IDF (if interested)	Forest tree seed supply and seedling production, forest reproduction through nursery and small experimental field (arboretum)	Generally informed about the proje, but not y direcy engagd for this activi y

3	A3 Cuchi 1000-hectare Forest Restoration Pilot No.1	Forest/ woodlands	LMU-AO-3 | Sub-Basin 1, LUS = Forest A3	1,000	Community Forest where natural assisted regeneration will yield ecosystem recovery. 1000 ha under SFM and restoration of 114 ha.	Forest restoration local working group, once established, riparian communities	Forest ecosystem rehabilitation through assisted natural regeneration and habitat management	Generally informed about the proje, but not y direcy engagd for this activy
4	B1 Cuchi Baseline 1 Agricultural Improvement Polygon South 21,508 ha	C cropland	LMU-AO-4 | Sub-Basin 1, LUS = Cropland B1	21,508	Cropland areas, degraded, where FFS will be rolled out on 1,250 ha of farmlands with the aim of improving techniques and helping farmers adopt SLM. Intervention will also focus at increasing trees on farms, taking advantage of the established nursery.	Local farmers in the area engaged through FFSs	Gradual agricultural intensification at scale, improved cropland management, sustainable food production	Initiay engagd

5	B2 Cuchi Baseline 1 PLUS Agricultural Improvement Polygon North 10,000 ha	C cropland	LMU-AO-5 | Sub-Basin 1, LUS = Cropland B2	10,000	Similar interventions as the site above (B1), covering and area of 950 ha.	Local farmers in the area engaged through FFSs	Gradual aviculturalintensification at scale, improved croplandmanagement, sustainable food production	Not yengagd
6	B3 Cuchi (nested in D1) Phase2 Muco va-Liacongo-Dejunga Agricultural Polygon East 5,700 ha	C cropland	LMU-AO-6 | Sub-Basin 1, LUS = Cropland B3	5,700	Cropland areas, degraded, where FFS will be rolled out with the aim of improving techniques and helping farmers adopt SLM. At least 500 ha of farms reached through FFS.	Local farmers in the area engaged through FFSs	Gradual agriculturalintensification at scale, improved croplandmanagement, sustainable food production	Not yengagd

7	**B4 Cuchi Meanders Horticulture Polygon Peri-Urban 4,900 ha**	**C cropland**	**LMU-AO-7 | Sub-Basin 1, LUS = Cropland B4**	**4,900**	**Cropland areas, degraded, where FFS will be rolled out with the aim of improving techniques and helping farmers adopt SLM. At least 1,650 ha of farms reached through FFS.**	**Local farmers in the area engaged through FFSs**	**Rapid agricultural intensification, improved cropland management, sustainable food production**	**Generally informed about the proje, but not y direcy engagd for this activi y**

8	**D1 Cuchi River Municipal Watershed Macro Management Plan (Cuchi Commune Chapter)** ***total area including nested B3:*** **117,000 ha**	**M mixed (mixture of land-use types within same land unit)**	**LMU-AO-8 | Sub-Basin 1, LUS = Watershed - Forest- Cropland D1**	**111,300**	**Watershed management, integrated (land & water) in view of creating improved conditions along the Cuchi river watershed, the northern part will be under the responsibility of the Cuchi Commune, with due technical assistance for improved management and assistance from GABHIC.**	**GABHIC, Cuchi Municipality and Cuchi Commune, riparian residents**	**Integrated watershed management**	**Generally informed about the proje, but not y direcy engagd for this activi y**

9	**D2 Cuchi River Municipal Watershed Macro Management Plan (Chinguanja Chapter) 56,000 ha**	**M mixed (mixture of land-use types within same land unit)**	**LMU-AO-9 | Sub-Basin 1, LUS = Watershed - Forest-Cropland D2**	**56,000**	**Watershed management, integrated (land & water) in view of creating improved conditions along the Cuchi river watershed, the southern part will be under the responsibility of the Chinguanja Commune, with due technical assistance for improved management and assistance from GABHIC.**	**GABHIC, Cuchi Municipality and Chinguanja Commune, riparian residents**	**Integrated watershed management**	**Generally informed about the proje, but not y direc y engag d for this activ y**
Cahama-Cunene (Sub-Basin 2)								

10	**A4 Tchipelongo Forest Patch of Zambezian Baikiaea woodlands *t***	**Forest/ woodlands with presence of small farms and grazing sites.**	**LMU-AO-10 | Sub-Basin 2, LUS = Forest A4**	**18,334**	**Fragmented forest area with considerable interaction agriculture-livestock-forests, where the project aims to achieve similar results as for polygon A7 (see below) but also introduce additional elements of SLM and rangeland management to preserve existing forest fragments.**	**Local agro-pastoralists in Tchipelongo, Muculo and Bela-Bela villages.** **Local Government in the municipality and province, responsible for the ILUP development and consultations in partnership with the operations partners.** **MICTA, DNAAC, INBAC and IDF**	**SLM, SFM, rangeland management**	**Generally informed about the proje, but not y direcy engagd for this activi y**

11	**A5 Tchipelongo Forest Restoration Pilot No.2 Arboretum and Seed Bank 1000 ha**	**Forest/ woodlands**	**LMU-AO-11 | Sub-Basin 2, LUS = Forest A5**	**1,000**	**Small forest patch in a peri-urban area, proposed managed locally by the Municipal Council / Commune of Tchipelongo. The project would build a small nursery infrastructure in the forest (near the road) and develop relevant community seed banks activities in it.**	**Forest restoration local working group, once established, riparian communities**	**Forest rehabilitation and reproduction through nursery and small experimental field (arboretum)**	**Generally informed about the proje, but not y direc y engag d for this activ y**

12	**A6 Cahama Forest Restoration Pilot No.3 Arboretum and Seed Bank 1000 ha**	**Forest/ woodlands**	**LMU-AO-12 | Sub-Basin 2, LUS = Forest A6**	**1,000**	**Small forest patch in a peri-urban area, proposed managed locally by the Municipal Council / Commune of Cahama. The project would build a small nursery infrastructure in the forest (near the road) and develop relevant community seed banks activities in it.**	**Forest restoration local working group, once established, riparian communities**	**Forest reproduction through nursery and small experimental field (arboretum)**	**Generally informed about the proje, but not y direc y engag d for this activ y**

13	B5 Cahama-Tchipelongo Baseline 2 Agricultural Improvement Polygon Riverine 7,388 ha	C cropland	LMU-AO-13 | Sub-Basin 2, LUS = Cropland B 5	7,388	Cropland areas, degraded, where FFS will be rolled out with the aim of improving techniques and helping farmers adopt SLM	Local farmers in the area engaged through FFSs	Gradual agricultural intensification at scale, improved cropland management, sustainable food production	Generally informed about the proje, but not y direcy engagd for this activi y
14	B6 Cahama-Tchipelongo Baseline 2 PLUS Agricultural Improvement Polygon Rural Multi-System 3,160 ha	C cropland	LMU-AO-14 | Sub-Basin 2, LUS = Cropland B 6	3,160	Cropland areas, degraded, where FFS will be rolled out with the aim of improving techniques and helping farmers adopt SLM	Local farmers in the area engaged through FFSs	Gradual agricultural intensification at scale, improved cropland management, sustainable food production	Generally informed about the proje, but not y direcy engagd for this activi y

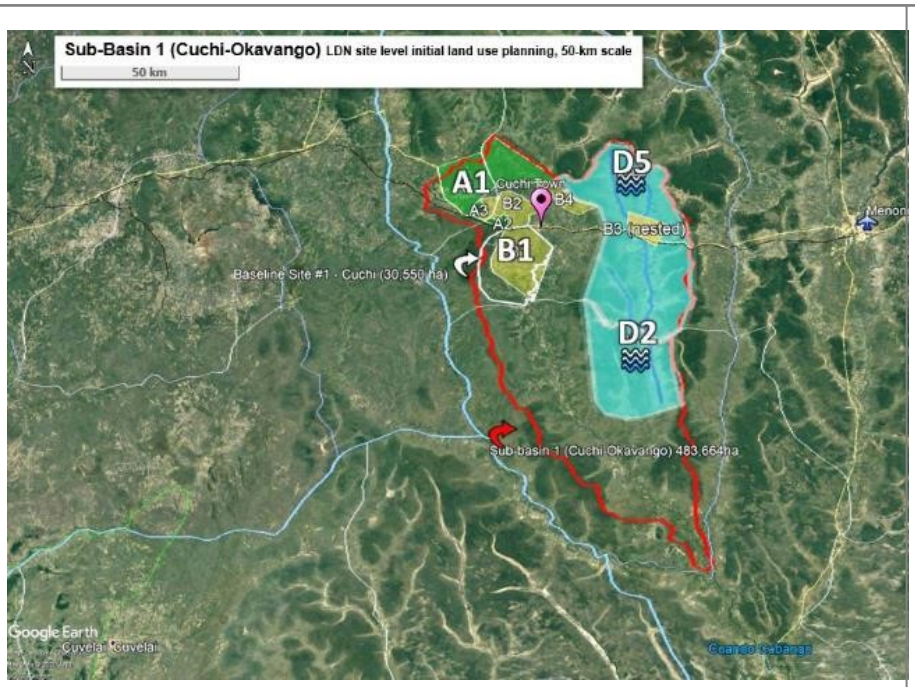
15	**B7 Cahama-Gambos Commercial Farming Sustainability Scheme 164,400 ha**	**C cropland**	**LMU-AO-15 | Sub-Basin 2, LUS = Cropland B 7**	**164,400**	**Commercial cropland areas, degraded and a history of land conflict, where the project proposes to study land use in detail and optimize land use and benefit sharing.**	**Commercial farmers, MINAGRIP, IDA, MCTA, Terras**	**Consult for improving the management of land and assisting with land conflict resolution, if desirable.**	**Cahama residents: Generally informed about the proje, but not y direcy engagd for this activy. Gamos residnts and large scale farms: No yet engagd**
16	**C1 Cavale-Colavango Ripari an Rangelands 54,200 ha**	**G grazing land**	**LMU-AO-16 | Sub-Basin 2, LUS = Grassland C1**	**54,200**	**Rangeland, sustainable management of livestock routes, pasture and improved access to agro-veterinarian services**	**Local agro-pastoralists**	**Sustainable rangeland management**	**Not y engagd**

17	**C2 Cahama Productive Rangeland Collaborative Management 87,000 ha**	**Grazing land**	**LMU-AO-17 | Sub-Basin 2, LUS = Grassland C2**	**87,000**	**Rangeland, sustainable management of livestock routes, pasture and improved access to agro-veterinarian services, but considering that some areas may be claimed, so a plan and scheme for seasonal access to land coupled with and productivity enhancement measures will be implemented and may include (planting palatable grasses, use of controlled early burning in certain areas, production and spreading of biochar / terra preta on site, etc.)**	**Local agro-pastoralists**	**Sustainable rangeland management**	**Not yet engaged**

18	A7 Tchipelongo Forest 54,000 ha	Forest/ woodlands	LMUs_Sub-basin 2 (Cahama-Cunene)	54,000	Forested area where currently, habitat disturbance seems light, with small households and in its interior, so the forest is relatively well preserved. According to the FSC criteria[70], this area is categorized as HCVF at least under categories HCF 4 and 5 (other categories might also apply upon further studies) It is relatively rare a representative of Zambezian Baikiaea woodland in Cunene province and represents a key landscape for the maintenance of the integrity of the	Local agro-pastoralists in Tchipelongo, Muculo and Bela-Bela villages. Local Government in the municipality and province, responsible for the ILUP development and consultations in partnership with the operations partners. MICTA, DNAAC, INBAC and IDF	Sustainable forest management (NTFPs collection, sustainable use, assisted natural regeneration)	Generally informed about the proje, but not y direcy engagd for this activi y

- ***Figure 7. Indicative LMUs for Sub-Basin 1 (Cuchi-Okavango),*** *covering a total area of 242,796 ha (corrected for nested intervention site B3) within their 485,412.83 ha target landscape (i.e. 50% coverage).**

Figure 10A Overview of Sub-Basin 1 showing indicative land management interventions



Legend

Provincial borders
Roads
Railway
Landscape

Land Management Units (ILUPs):

A1 Cuchi-Liunda Community Forest Reserve Conservation Sustainable use 31,000 ha

A2 Cuchi Municipal Forest and Seed Bank 1,388 ha

A3 Cuchi 1000-hectare Forest Restoration Pilot No.1 1,000 ha

B1 Cuchi Baseline 1 Agricultural Improvement Polygon South 21,508 ha

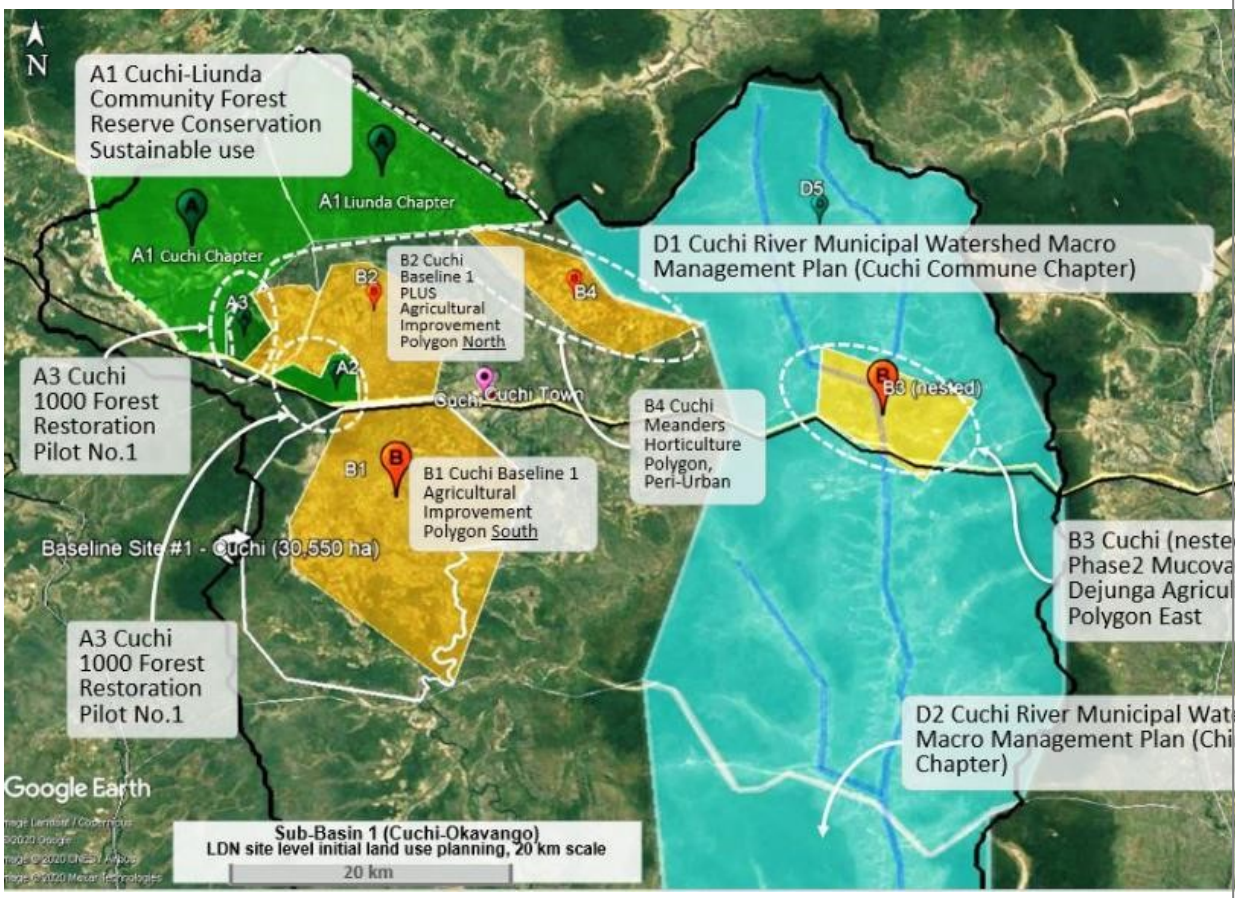
B2 Cuchi Baseline 1 PLUS Agricultural Improvement Polygon North 10,000 ha

B3 Cuchi *(nested in D1)* Phase2 Mucova-Liacongo-Dejunga Agricultural Polygon East 5,700 ha

B4 Cuchi Meanders Horticulture Polygon Peri-Urban 4,900 ha

D1 (shown as D5) Cuchi River Municipal Watershed Macro Management Plan (Cuchi Commune Chapter) 117,000

Figure 10B Northern part of the landscape around Cuchi town, featuring Cuchi River watershed in greater detail



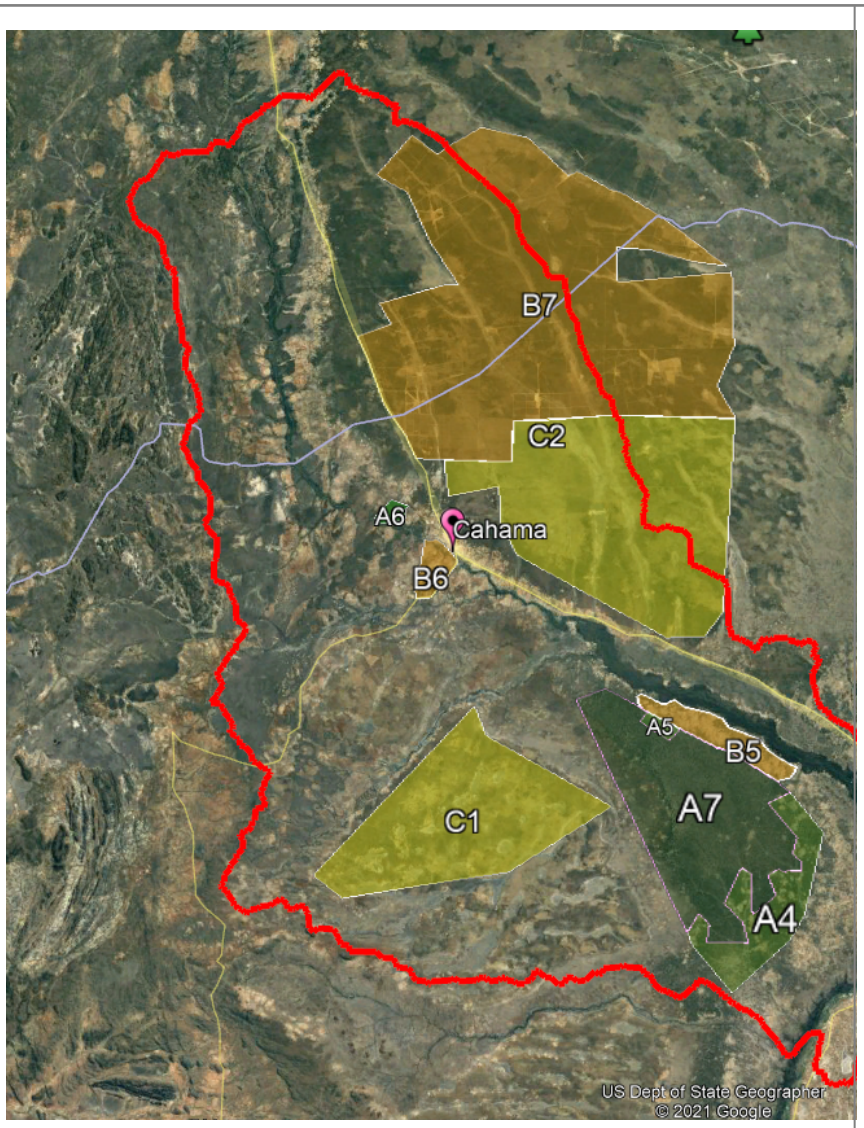
Interventions related to:	Forest (mainly) 33,388 ha	Cropland (mainly) 42,108 ha	Grassland 0 ha	Watershed (mainly) 167,300 ha

*Areas are based on GIS shape files. More detailed larger scale maps of this landscape are provided in Annex E.

Page Break

***Figure 8. Indicative LMUs for Sub-Basin 2 (Cahama-Cunene)**, covering a total area of 390,482 within their 880,046.04 ha target landscape (i.e. 44% coverage).**

Figure 11A Overview of Sub-Basin 2 showing indicative land management interventions



Legend

Provincial borders
Roads
Landscape Protected Area

Land Management Units (ILUPs):
A4 Tchipelongo Forest Patch of Zambezian Baikiaea wo odlands 18,334 ha
A5 Tchipelongo Forest Restoration Pilot No.2 Arboretum and Seed Bank 1000 ha
A6 Cahama Forest Restoration Pilot No.3 Arborettum and Seed Bank 1000 ha
A7 Tchipelongo Forest (54,000 ha)
B5 Cahama-Tchipelongo Baseline 2 Agricultural Improvement Polygon Riverine 7,388 ha
B6 Cahama-Tchipelongo Baseline 2 PLUS Agricultural Improvement Polygon Rural Multi-System 3,160 ha
B7 Cahama-Gambos Commercial Farming Sustainability Scheme 164,400 ha
C1 Cavale-Colavango Riparian Rangelands 54,200 ha
C2 Cahama Productive Rangeland Collaborative Management 87,000 ha

Interventions related to:	Forest (mainly) 74,334 ha	Cropland (mainly) 174,948 ha	Grassland (mainly) 141,200 ha	Watershed 0 ha

*Areas are based on GIS shape files. More detailed larger scale maps of this landscape are provided in Annex E.

Indicative Activities under Output 2.1.1

Collect additional baseline information from the target landscapes and confirm project interventions and their respective LMUs, nine of which have been tentatively selected from each landscape based on preliminary PPG findings.

Review ILAM to verify intervention sites and SLM/SFM interventions pre-selected at PPG stage.

Also, cross-check pre-selected interventions against SLM/SFM databases and other nationally or internationally[71] available information to assess their suitability for specific LMUs and identify any needs for context-specific refinements.

Revisit pre-selected LMUs and update pre-selected interventions in alignment with project targets, following the same selection criteria as were applied at PPG stage (e.g. status of productivity - decline/stable - or land tenure status) in order to confirm the suitability of the respective intervention sites. Update management interventions for LMUs in Table 4.

Ensure that the updated set of interventions and related SLM/SFM practices to be applied to the LMUs are fully gender-sensitive with respect to both planning and implementation.

Scope the dissemination of these SLM/SFM practices among land users, including their spatial application and how they can be rolled out through an inclusive, integrated and multi-tiered planning process that applies the Landscape Approach.

Prepare LDN balance sheets for each target landscape, showing baseline status (without project interventions) and expected status by end of project (with GEF and co-financing interventions). This information should also be presented spatially for use as a monitoring tool and for awareness-raising purposes among stakeholders. Mapping LDN at start-up and end of project for the target landscapes will provide a holistic vision for promoting among the relevant stakeholder groups.

Output 2.1.2 *Integrated Land-Use Plans developed for LMUs in target landscapes*

Output 2.1.2 is focused on ILUP: land-use planning at LMU-level that is integrated across sectors, disciplines, communities and land-user and other interest groups in order to deliver LDN at a integrated landscape scale. The planning process will follow the guidance in the Stakeholder Engagement Plans for the respective target landscapes (Activity 1.1.1d)), which will be shared with stakeholders so that they understand the processes and mechanisms by which they will be informed on a wide range of matters (e.g. SLM, SFM and LDN principles, best practices, capacity building opportunities) and consulted for contextual information (including traditional knowledge) and their views (concerns, expectations, preferences). The ILUP process is likely to require up to one year of iterative planning and consultation, building consensus as it progresses. It will be essential to keep to the overall timeframe, which will have been agreed among those stakeholders involved in designing the Stakeholder Engagement Plans, in order to be implementing these plans by mid-term of the project.

ILUP within the prioritized LMUs will be lead by the respective districts and/or municipalities under an officer designated as the LMU Focal Point, as appropriate, and supported by the project, particularly with respect to the facilitation of the stakeholder engagement process as planned under Activity 1.1.1d). Planning and integration of the 9 LMU interventions in each target landscape (Table 6) will need be driven by a small ILUP Task Force (up to 10 persons maximimum and coordinated by a senior government appointee), comprising government planners and including land tenure expertise, sector specialists (agriculture, forestry, nature conservation/environment etc), and land user representatives (e.g. farmers). The Task Force will be supported by the LMU Focal Points and their field officers, who will regularly consult with the land users for relevant information, and a GIS specialist for producing land use and related maps. The project will provide a Landscape Coordinator for each Sub-basin, technically experienced in SLM and having an land management background (agriculture, forest, natural environment), who will support the ILUP Task Force and oversee preparation and implementation of their respective Integrated Land Use Plan and facilitate their respective stakeholder engagement process. The two Landscape Coordinators will report to the National Project Coordinator.

Due to challenging logistical field conditions, the *Self-Evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists* (SHARP) for Sub-Basin 1 (Cuchi-Okavango) was insufficent due to the small number of households surveyed. This will also need to be addressed during project inception, subject to risks associated with Covid-19. The need for additional SHARP surveys in sites other than Cuchi should also be reviewed at the onset of implementation.

Indicative Activities under Output 2.1.2

Confirm the LMUs and respective interventions pre-selected during the PPG phase. This will require completion of the following tasks:

- reviewing the updated information generated from ILAM under Outut 2.1.1 relating to LMUs and their respective interventions;
- identifying and addressing any shortcomings, such as the need for additional SHARP surveys in sites other than Cuchi; and
- visiting the priority LMUs to confirm that the lead authority and other key stakesholders are willing and ready to engage with the project and to confirm any updated interventions, revising Table 4 as necessary.
- This Activity should be completed within 3-6 months of project onset; and the Project Inception Workshop used as an opportunity to raise the profile of the LMUs selected and interventions prioritised among stakeholders. At least one of the 9 pre-selected LMUs per landscape should be confirmed by the Inception Workshop, so pilot work can begin in each landscape.

Initiate and deliver the Stakeholder Engagement Plan for each target landscape (sub-basin) in parallel, with coordinators collaborating closely so that each process benefits from lessons learnt by the other. The following are envisaged with respect to each target landscape:

- Establish the ILUP Task Force and initiate the ILUP process, focusing initially on establishing the consultation structures and mechanisms elaborated in the respective Stakeholder Engagement Plan for the relevant levels of governance necessarily involved in land tenure and land-use planning, from national to local authorities.

Inclusion of ILUP and the Stakeholder Engagement Plan in the Communicationss Strategy (Component 3) for awareness raising and dissemination, respectively.

Pilot ILUP in a single LMU in each target landscape: scoping the intervention(s) with the land owner(s)/manager(s), identifying the resources needed to achieve LDN, reviewing the costs and benefits, identifying indicators and agreeing monitoring protocols. Lessons learned can be incorporated in subsequent ILUP processes.

Draft and finalize the Integrated Land-Use Plan for each target landscape within a 12-month period, including monitoring protocols and GIS maps of baseline and end of project targets for LDN, and ensure it is subjected to the consultation protocols specified in the Stakeholder Engagement Plan. The final version should be signed off/endorsed by the key stakeholders, as appropriate and in accordance with municipality protocols. Land tenure issues will be adressed in the LMUs and/or ILUMPs when relevant for stackholders, as decided in the participatory processes.

Output 2.1.3 *Integrated Land-Use Plans under implementation in target landscapes*

SLM and SFM interventions are designed towards reducing pressures on existing Miombo-Mopane woodlands covering two landscapes of 1.3 million hectares in southern Angola by the following means:

avoiding the conversion of standing forests through protective measures, in particular where forests are at risk of being cleared, burned or used unsustainably to exhaustion;

strengthening and adding value to the yields of production forests, mostly through planned and monitored forest management with sustainable offtakes;

restoring forests/woodlands through a ?low-hanging-fruit approach?, as in the case of abandoned or degraded lands of little direct value to the land owners/tenants; and

complementary measures to increase the productivity, resilience and sustainability of croplands and rangelands with targeted sustainable forest management interventions to buffer and reduce the negative impact of production activities. Examples include the use of trees and woodlands as wind breaks from soil erosion and dessication, shade from the sun, sources of pollinators for crops and stabilization of water courses and irrigation channels.

These interventions (Table 6), will be mainly carried out through government funding in particular via the investments under PND Program #2.4.1: Climate Change (leaded by MCTA) and PND Program #2.3.2: Promoting Agricultural Production (leaded by MINAGRIP) which will be geared towards the implementation of the ILUPs? action plan). The capacity development programme (Output 2.4.1) will support government actors in decision making while the SLM and SFM demonstrations under Outcome 2.2 and Outcome 2.3 will provide concrete examples on suitable SLM/SFM interventions and implementation structures (e.g. FFS and FFF) within each targeted LUS that can be outscaled as part of the wider ILUP implementation.

As previously mentioned[199], 633,278 ha distributed in the two target landscapes (1,365,458.87 ha),will be subject to ILUP development and corresponding SLM/SFM interventions that reflect the LDN response hierarchy of ?*avoid, reduce and reverse*? land degradation. Project targets are summarized in Table 5, based on individual LMU intervention targets in Table 6 and, together with tracking the number of beneficiaries, will contribute to the project?s core indicators, which feed into the DSL IP program level indicators and targets. In terms of the 633,278 ha selected for integrated land sue planning and specific interventions in

the LMUs, 82.2% will be targeted for land degradation reduction, 16.3% for avoidance and 1.5% for reversal.

Table 5. Summary of LMU interventions in the target landscapes based on LDN response strategy

Intervention Landscape Land Use System	Area covered by ILUPs (ha)			Area under direct interventions (ha)		
	AVOID	REDUCE	REVERSE	AVOID	REDUCE	REVERSE
Cuchi-Okavango (sub-basin 1)						
Cropland		42,108		0	4,350	0
Forest		33,274	114	0	5,374	114
Multi LU	167,300			0	0	0
Cahama-Cunene (sub-basin 2)						
Cropland	164,400	10,548		0	1,972.25	0
Forest	2,000	72,334		2,000	9,336.8	0
Grassland		141,200		0	12,594.75	0
Total	333,700	299,464	114	2,000.00	33,628	114
Grand total	633,278 ha			35,742 ha		

Implementation of the two Integrated Land-Use Plans, which are essentially equivalent to Landscape Management Plans comprising a set of interventions within selected LMUs, will be overseen by the Landscape Coordinators based at the respective field offices. Working closely with the National Project Coordinator (NPC), they will ensure that the two Integrated Land-Use Plans are implemented in a timely and effective manner, focusing particularly on supporting the delivery of the capacity building program (Output 2.1.4), application of SLM/SFM production best practices, FFSs and FFFs (Outcome 2.2) and development of viable dryland green value chains (Outcome 2.3). Teams from MCTA, MINAGRIP and MINEA (minimum of 3 to a maximum of 6 staff) will be seconded to these locations, where

they will be expected to stay up to two years and then rotate to the other field office for two years, to allow for exchanges among teams.

Indicative Activities under Output 2.1.3

Prepare an Action Plan for delivering each of the nine interventions within their respective LMUs in the following manner, having first grouped interventions according to their LDN response strategy (i.e. avoidance, reduction or reverse land degradation)**:**

Identify, itemize, cost and schedule material, technical resources and financial investments required for each intervention, and summarise the requirements by group (avoidance, reduction and reversal). Compare resource needs between the two landscapes and identify opportunities for potential synergies.

Identify training and other capacity development needs (e.g. equipment, finance, land tenure) required for delivering each intervention (or group of interventions), focusing particularly on land owners, managers and other users and ensuring that information gathering is socially inclusive of gender, age, abilities and minority groups. Feed this information into the Capacity Development Program (Output 2.1.4). Compare capacity development needs between the two landscapes and identify opportunities for potential synergies.

Identify opportunities for training of trainers approach among outreach workers, especially at district, municipality, commune and farmer levels. Note that Farmer Forest Schools (FFSs) and Forest Farm Facilities (FFFs) are likely to fill important roles under Outputs 2.2.1 and 2.2.2 respectively.

Prepare a timetable for the respective Action Plans; monitor and review progress quarterly and revise/roll-forward the Action Plans annually.

Action Plans should be completed within 3 months of finalizing the Integrated Land-Use Plans.

Implement the Integrated Land-Use Plans in accordance with the respective Action Plans*, starting no later that the beginning of Year 3 to allow adequate time to have started delivery of all 18 interventions and completed the majority by project closure.*

Prepare a post-Project Landscape Strategy prior to the final 6 months of implementation that identifies any outstanding intervention tasks and how these will be resourced and completed post-project. The Strategy should identify lessons learned and, importantly, identify post-project priorities for scaling out (replicating) ILUP across the remaining LMUs within the target Sub-Basins and how this might be resourced. This Strategy will constitute part of the project?s Exit Strategy.

Output 2.1.4 *Capacity development program on integrated land-use planning, management and investment designed and delivered*

During the PPG, one of the barriers identified vis-?-vis the application of the *landscape approach*, is capacity and skills constraints. While there will be extensive training of local users through Farmer Field Schools/Agro-Pastoral Field Schools (FFSs/APFSs under Component 2), in Component 1 the focus will be on policy and decision makers involved in land tenure and land use and the fact that land-use planning can yield much better results when supported by spatial data, adequate training and capacity development.

The project requires the specific input of strategically positioned stakeholders in government, academia, civil society and the private sector to champion the LDN concept and facilitate the adoption of SLM/SFM practices on the ground. Champions in this context refer to those

who can lead, innovate and bring about transformational change in mainstreaming LDN, SLM and SFM across landscapes at river basin scale. They are also best placed to encourage their peers within a wider group of land users and managers to adhere to such principles.

To realise the above, the capacity of these stakeholders needs to be enhanced with respect to: acquiring, managing, interpreting and analysing spatial data related to land use and LDN; and developing strategic partnerships, conceiving projects, and mobilizing financial and human resources for the integrated, sustainable management of land.

More specifically, with reference to the criteria in Table 2 on creating an ?*enabling environment for LDN*?, **Output 2.1.4** is concerned with all four elements of the science- policy Interface (effectiveness of data and monitoring systems, in-country technical capacities, information on causes/effects of land degradation and the multiple benefits of SLM and LND) and the financial dimension (financial needs assessment, financing mechanisms and identified sources of finance).

It is proposed that the training element of the Capacity Development Program on Integrated Land-Use Planning and Management is modular, with ?stand-alone? modules or series of modules to address a specific topic. Modules will be designed and delivered by one or more specialists in the subject matter, ideally from within the country or region to minimize costs and build regional self-sufficiency.

The Regional Exchange Mechanism (REM) in Componet 3 should be able to source relevant expertise from within Miombo-Mopane countries. Indeed, one model under consideration is a training-of-trainers approach, whereby leading experts in specialist areas from different countries in the region are pooled by REM and deployed to deliver modules that they have designed to trainers from the child projects and remain available as a mentor over the life of the DSL IP.

Ideally, the design and delivery of the training element of the Program should be lead by an institution (research institute, academic/technical college or outreach/training unit within a ministry), supported by the project, for future sustainability of training elements of the Program to underpin the scaling out (replication) of ILUP across other LMUs and entire landscapes.

It may also be appropriate to introduce certification for certain combinations of training modules, especially if the lead agency for this Programme is an educational institution. Examples of certified training schemes might include: land-use planning and management methods and acquisition of GIS mapping and analysis skills; design and facilitation of participatory processes; and LDN monitoring and evaluation.

Some preliminary capacity needs assessment was undertaken during the PPG stage but it was limited by time and other constraints[72], hence this is built into the program below.

Indicative Activities under Output 2.1.4

Undertake and complete a Capacity Needs Assessment within six months of project onset, based on the following scope:

Capacity needs to relate to integrated land-use planning and management in pursuit of LDN, through avoidance, restoration and/or reversal of land degradation.

Capacity needs to focus on the enabling environment (Component 1); institutional and individual capacities across the different sectors having vested interests in land tenure and land use, with respect to their planning and management (Component 2).

Capacity needs to address awareness raising, training, facilities, equipment and other materials; and financing mechanisms with some funds as a catalyst to enable

individual land users (farmers) and communities to invest in managing their land, and harvesting, processing and marketing their produce.

Review and build on recent assessments of capacity needs, including FAO?s 2017 *iPartnership Level Capacity Needs Assessment - Angola* and preliminary findings from the PPG[72].

Consult key stakeholders, targeted directly and via the Communications Strategy (Component 3), including: policy and decision makers at national, provincial and municipal levels; outreach workers within government, NGOs and the private sector; land owners and their tenants (farmers, pastoralists, foresters) and other users of the land. Targeting of stakeholders should be aligned with the Stakeholder Engagement Plan of the respective target landscapes. Targeting should be inclusive of all social and adult-age groups.

Training needs should be clearly articulated, prioritized and checked against the preliminary list of module topics below (Activity 2.1.4b).

Assess the needs and opportunities for sustainaining capacity development post-project, notably the training modules and financing mechanisms.

Design an Integrated Land-Use Planning and Management Capacity Development Program, much of which will comprise training based on a modular structure to maximise flexibility for delivery and further development as needs arise. Each module will be accompanied by guidelines/resource manual for subsequent incorporation into a handbook. Such resources should also be available on-line. Tentative training modules include:

Raising awareness about land degradation, its causes, impacts (ecological, social, economic) and and how it can be avoided, reduced and reversed. Introduction to UNCCD and its LDN concept and the multiple benefits of the project?s interventions that seek to achieve LDN (and related SDGs) targets, including benefits for biodiversity, climate and livelihoods. Individual, community and corporate responsibilities.

Integrated Landscape Assessment Methodology (ILAM), including Land Use & Land Stratification Assessment, Land Degradation Assessment, Resilience Assessment (using SHARP), Contextual Asssessments. This will include specialist training in GIS tools for those familiar with GIS software.

Land-use planning and management at LMU and landscape scales: achieving LDN in theory and in practice using SLM/SFM, other sustainable best practices and learning lessons. Monitoring progress towards LDN. This module should be designed to meet the needs of stakeholders involved in planning and delivering interventions at LMU level, as well as those with interests and responsibilities at landscape level (e.g. ILUP Task Force, LDN Task Force).

Land tenure and land use: current policies and legislation, best practices and necessary changes in support of achieving LDN and its associated benefits.

Monitoring, evaluating and reporting on LDN: applying international best practice based on the UNCCD methodology to track progress towards LDN at municipality, landscape and national levels. This module will be particularly relevant for members of the LDN[73] and ILUP task forces.

Design and facilitation of stakeholder engagement plans with respect to integrated land-use planning at landscape/Sub-Basin scales. This module should highlight the importance of engaging with all social, adult age and minority groups in consultation processes and promote best practices that can enable such inclusion to be realized.

Conserving and enhancing biodiversity and ecosystem functioning/services within and around agricultural production systems, including best practices with regard to maintaining soil structure, minimizing water run-off, organic waste composting, use and application of chemical insecticides and fertilizers.

A series of modules tailored for specific farming and NTFP enterprises such as: cereals, fruit, vegetables, mushrooms, honey and medicinal plants, depending on local conditions and markets.

A series of modules focusing on enhancing the resilience and productive capacities of local communities through initiatives that support SLM/SFM, such as: community wood lots and seed banks; access to and use of dryland-appropriate, small-size agro-machinery; and water harvesting equipment. This element of capacity building relates to capacity needs to be identified under Output 2.2.2.

Identify and scope other capacity development initiatives, such as study tours, workshops to explore different options or scenarios (e.g. models of working: multi-sector coordination and cooperation, partnerships, joint management, community-based resource management) and collaboration with the PAEG Project on land-use decision making and other relevant capacity development activities.

Value chains and markets: design one or more modules that focus on value chain principles, branding, marketing and local experience and opportunities. The scope and content of these modules should be identified in the Drylands Value Chain Strategy (Output 2.3.1).

Develop an overarching strategy for coordinating the delivery of the Training Program across the project?s three components in a timely manner that is synchronized with the scheduling of relevant Outcomes and Outputs requiring capacity development.

The strategy should include a matrix showing the different stakeholder groups and their training needs aligned against the training modules and other capacity development initiatives, thereby enabling a calendar of training events to be scheduled on an annual basis. For example, under Ouput 2.1.3, training should initially focus on stakeholders involved in priority interventions in the selected LMUs of the two target landscapes and then be scheduled for stakeholders from other LMUs within these target landscapes.

It should also embrace training needs identified across other Outcomes identified in Components 1 and 2, in order to provide a comprehensive overview for coordination purposes and to maximise synergies in meeting common needs across this Child Project.

Procure a Capacity Development Coordinator, who will support the lead institution responsible for the Capacity Development Program and work closely with the two Landscape Coordinators based in their respective Field Offices, government outreach officers and others involved in capacity development.

Develop and implement a strategy for institutionalizing the Training Programme post mid-term. This should be tailored to support municipalities replicate ILUP across LMUs in other landscapes/sub-basins over the longer term.

Outcome 2.2	**Capacity and resilience of land users to apply SLM/SFM practices to production systems strengthened**

Outcome 2.2 is focused on building capacity among stakeholders, in terms of technical knowledge, skills and tools, to apply SLM/SFM practices across target LMUs and thereby

demonstrate how LDN can be delivered at landscape scales. It builds on key results of the PPG phase, specifically the preliminary findings of the Capacity Needs Assessment[72] and the Barrier Analysis, which highlight the many systemic, institutional and individual needs for capacity development. Managing croplands, pasture and forests sustainably are fundamentally part and parcel of an integrated approach to managing landscapes, particularly in Angola where land productivity is low. Agricultural land-use practices, livestock management, choice of crops, seeds and cultivars can all be significantly improved with cost-effective methods; and soil and water can be managed in ways that reduce land degradation and enable land-use systems (LUSs) to adapt to climate change and other environmental shocks.

Given findings from SHARP[74] that the levels of social organization are very low at the intervention sites, the project will adopt a step-wise approach and reinforce capacity building activities with additional measures as appropriate. This Outcome deploys tailored packages of rural advisory services to be rolled out in the selected project intervention sites, replicating the models generated by the following initiatives:

Farmer Field Schools / Agro-Pastoral Field Schools (FFSs/APFSs), which have been successfully implemented in Angola for over 10 years. The model brings together a group of farmers or livestock herders (in the latter case, it is often called an APFS) to learn on how to shift towards more sustainable production practices by better understanding complex agro-ecosystems and by enhancing ecosystem services on-farm. In practice, a FFS/APFS group meets regularly during a production cycle, setting up experiments and engaging in hands-on learning to improve skills and knowledge that will help members adapt their methods to their specific context, with technical inputs from advisory services. The model empowers individuals and groups to move towards more sustainable practices and improve livelihoods.[75] Considering the COVID-19 pandemic situation, the project will implement FAO?s guidelines on how to implement FFS in times of COVID-19: http://www.fao.org/3/ca9064en/ca9064en.pdf,**Forest-Farm Facility (FFF)**, which provides direct financial support and technical assistance to strengthen forest and farm producer organizations, representing smallholders, rural women?s groups, local communities and indigenous peoples? institutions. Collectively, forest and farm producers have the potential to achieve the Sustainable Development Goals and to respond to climate change at landscape scales.[76] The model has not yet been implemented in Angola, but it can potentially raise the potential of FFS and APFS models by introducing them to the benefits of social organization of production (cooperation) and generation of locally financed solutions.

Community Seed Banks (CSBs), which will be implemented in conjunction with both initiatives above and operationalized under Output 2.2.2. CSBs, as promoted by FAO and supported by world-wide experience[77], are an important means of sustaining agricultural and forestry production, ensuring that seeds from for improved yields and resilient to local conditions are banked for subsequent planting in the following season. This also generates self-sufficiency and reduces costs.

Output 2.2.1 *Gender-sensitive SLM/SFM practices identified/developed and promoted in target landscapes, and further enhanced by strengthening Farmer/Agro-Pastoral Field Schools network*

Output 2.2.1 will focus on establishing a network of FFSs/APFSs within the pre-selected LMUs of the target landscapes to support delivery of the interventions within the respective LMUs, through best SLM/SFM practices promoted and fostered by the farm and agro-pastoral field schools. This will be underpinned by training, establishing financing mechanisms and

other forms of capacity development identified under Output 2.1.4; and monitoring and evaluating the effectiveness of this network.

Indicative Activities under Output 2.2.1

Up to 100 (of which around 50 new) FFS/APFSs will be established in the two target landscapes, taking into account locations planned under Output 2.2.2 to establish CSBs and other Forest-Farm Facilities. Precise combinations of FFSs and FFFs will be decided during project inception and thereafter as implementation progresses. FFS Master Trainers will be selected from extension agents being part of the Institute of Agrarian Development (IDA) - agriculture, livestock or environment/forest services. Additionally, FFS facilitators will be selected farmers with some facilitation experience, such as lead farmers or farmers from an agricultural organization. The latter can be trained, backstopped and coached by Master Trainers throughout FFS implementation. The project will leverage on existing FFS structures in Cunene Province where only re-fresher trainings on project related SLM/SFM practices are required. In contrary, the project will establish a full Master and Facilitator capacity training program jointly with IDA in Cuando Cuvango, where no FFS are active. Activities involved in establishing and institutionalizing FFSs/FFFs include:

Determine FFS/APFS locations in the project intervention sites (LMUs), which can be classified according to land-use system (refer to Table 6). Determination should take into account the ILUP underway (or about to start) under Output 2.1.1 and location of FFFs and CSBs under Output 2.2.2. In Sub-basin 1, FFS will be newly created as there is not ongoing FFS programs in that area. However, in Sub-basin 2, the project will benefit existing FFSs to reinforce SLM/SFM approach throughout their curricula.

Prepare a FFS/APFS Strategy and Action Plan for each target landscape, the latter revised annually, for the creation of this network of farmer/agro-pastoral field schools, with details of their respective work plans in relation to LMU interventions and requirements for capacity development, including technical assistance, training, financial investments and other resources. This Strategy and Action Plan should be jointly developed with those implementing Output 2.2.2 in order to incoprate FFFs, such as CSBs; and it should feed into the Integrated Land Use Plans of the respective target landscapes.

Master Training and facilitator training program. A group of Master Trainings and facilitators will be fully trained on the job in Sub-basin 1 to developed the new FFS and for Sub-basin 2 existing Master Trainers and existing and new facilitators will benefit from shorter trainers adapted to Project?s topics.

Pilot the creation of one or more farmer-field/agro-pastoral schools in each target landscape, focused on a specific LMU and its respective confirmed intervention (Table 6 lists pre-selected interventions). This should be undertaken by IDA in cooperation with the respective municipality responsible for the LMU and during the preparation of the above FFS/APFS Strategy, in order to inform and groundtruth its development. In close collaboration with those responsible for developing the LMU Action Plan:

learn lessons from existing farm schools previously established in Angola;

second a multi-disciplinary outreach team of extension agents officers to facilitate and supervise field schools? development, training (by Master Trainers) and other activities;

identify and deliver the training and other capacity development needs to be promoted and provided by the schools in terms of SLM/SFM for the specific pilot LMU(s);

set up and monitor experimental trials with the land users (farmers/pastoralists);

design and pilot an M&E system, including LDN, gender and sustainability performance indicators, for tracking FFS across the target landscapes - building on FAO?s Monitoring Evaluation and Learning (MEL) tool, potentially for upscaling nationally;

undertake other tasks as appropriate; and

identify and share lessons learned.

Deliver the FFS/APFS Strategy by scaling out the expansion and strengthening of the FFS/APFS network across the 9 target LMUs in each landscape to support delivery of the respective interventions pre-selected during the PPG stage and confirmed during or subsequent to project inception, having incorporated lessons learnt from the above pilots into delivering this Output

Introduce Farmer Busines School (FBS)[78] aproach as part of the FFS in coordination

SLM and SFM Practices in place through FFS learning curricula implementation. The project team, will support extension services in the techncial advice and monitoring of the implementation of the FFS, including diferents steps and milestones of FFS methodology. Thise might include o**rganization of peer-to-peer exchanges and visits among FFS groups** (50) to share best practices and experiences among farmers who participate in the FFS training, subject to COVID-19 restrictions. This activity may include strengthening the network of Master Trainers, Facilitators and partners delivering FFS activities, by promoting exchanges, meetings and workshops and hosting of FFS community open days (2 visits for each FFS per season) to sensitize other land users (farmers) to FFS experiences, results, agricultural practices and technologies adapted to the local context and adopted by FFS farmers

Prepare a strategy to harmonize and integrate the FFS approach into national policies and programmes delivered by Rural Advisory Services (RAS). Coordinate this action with those under Activity 1.1.2b, Output 2.2.2 and other projects applying FFS and related models of RAS.

Prepare communication materials for inclusion in the project?s Communications Strategy (Component 3) to raise the profile of this initiative and secure regular technical inputs from the project?s Communications Specialist with respect to targeting FFS/APFS stakeholders.

Output 2.2.2 *Land users? resilience and production capacity enhanced by Forest-Farm Facility investments in communal assets*

The FFF model, yet to be piloted in Angola, can potentially raise the potential of FFS and APFS initiatives in Output 2.2.1 by introducing social organization to agricultural production that in turn can both generate revolving funds from within the land-user community and attract investments from local enterprises for essential tools, facilities and other resources for SLM/SFM, especially if kicked started by this GEF-7 grant and government co-financing. This in turn generates cooperation among land-users, investing in and sharing commonly needed goods to safeguard/improve/increase production, and enterprising partnerships within the wider community, thereby nurturing resilience and greater self-sufficiency.

The two Outputs under Outcome 2.2 are mutually reinforcing and have much in common with each other, including training and investment needs that are earmarked under the capacity development program (Output 2.1.4), awareness raising and targeting of stakeholders under the communications strategy in Component 3 and upscaling (mainstreaming) into national policy and programs under Activity 1.1.2b. Aditionally, output 2.3.2 (FBS) will also directly linck with both outputs of outcome 2.2

A key investment for this project is considered to be the creation of Community Seed Banks (CSBs); and others might include community tree nurseries, woodlots and fuel efficient cooking stoves (all of which link to charcoal/firewood VCs in Outcome 2.3), small agricultural machinery for harvesting and processing post-harvest waste, micro-irrigation and water harvesting equipment, silos (artisanal) for storing grain or silage, and refrigeration for storing harvested products. Many of these investments link directly to agri-environment best practices, and climate-smart agriculture (CSA) and irrigation that cut across Component 2 outcomes and can be delivered and enhanced via the FFF model under Output 2.2.1.

CSBs often serve as an emergency seed supply, when farmers experience a shortage of seeds due to failure or destruction of crops as a result of floods, droughts, pests and diseases. However, CSBs also have a more practical and dynamic use for communities in their management of surrounding landscapes, they help to maintain a constant supply of selected quality seeds for farmers and foresters. Seeds are obtained from the farmers in the community, selected and stored according to an agreed storage protocl.

Adequately implemented, CSBs will help safeguard the diversity and resilience of locally adapted cultivars of food crops as well as useful trees, enabling communities to successfully establish and maintain tree nurseries, arboreta and carry out ecosystem restoration initiatives. Establishing and maintaining a CSB program in country is also an important strategy that aligns with the International Treaty on Plant Genetic Resources for Food and Agriculture, providing further justification for using this project to pilot such an initiative in Angola?s Miombo-Mopane drylands.

Implementation of a CSB initiative in Angola, coupled with an adequate package of rural advisory services, is expected to contribute significantly to the agricultural intensification and the development of sustainable food systems locally within the targeted landscapes. The proposed activities for operationalizing the initiative in the targeted landscapes are identified below,[79] together with a number of small-scale individual seed enterprises that reinforce the CSB facility.

Other FFF initiatives, including those mentioned above, will be reviewed further and prioritized for scoping during project inception as described below under Activity 2.2.2a. Crucially important will be the establishment of one or more funding mechanisms under Output 2.1.4 to operationalize FFFs.

Indicative Activities under Output 2.2.2

Identify a small number (less than 10) of priority FFFs for potential implementation in the target landscapes, based on the following:

A review of the 18 interventions pre-selected for the target landscape and the draft FFS/APFS Strategy prepared under Activity 2.2.1b.

Consultations with key partners and stakeholders representing: agricultural, forestry and water resource and waste management sectors at national and local levels; municipality and provincial authorities; land owners and users, farmers, foresters, livestock owners and their respective associations; and communities and local NGOs within the target LMUs.

A tentative list of specific FFFs drafted on the basis of some basic criteria.

A workshop with the same key stakeholder groups represented at which the criteria are expanded, strengthened and agreed; and a priority list of FFFs generated by consensus. The Project Inception Workshop could be one opportunity to undertake this prioritizing.

Determine FFF locations within the project intervention sites (LMUs), which can be classified by land-use system (refer to Table 6). Determination should take into account

the ILUP underway (or about to start) under Output 2.1.1 and location of FFSs under Output 2.2.1.

Scope the priority FFFs in a similar generic manner to that specified for the CBS described below and, following approval by the Project Steeruing Committee, proceed with investing in the Facility using funds earmarked under Output 2.1.4 and linked to output 2.3.3 (Farmer Busines Schools)

Host FFF open days at least annually and more frequently as opportunities and demands arise to sensitize other land users (farmers) to FFF experiences and results.

Prepare a strategy to harmonize and integrate the FFF approach into national policies and programmes delivered by Rural Advisory Services (RAS). Coordinate this action with that for FFSs/APFSs and incorporate the combined strategies into Output 1.1.2b.

Prepare communication materials for inclusion in the project?s Communications Strategy (Component 3) to raise the profile of this initiative and secure regular technical inputs from the project?s Communications Specialist with respect to targeting FFF stakeholders.

Forest Farm Facility: Community Seed Banks

Scope the establishment of Community Seed Banks in the target landscapes, in the following manner:

Consult with relevant stakeholders about piloting a CSB program in the target landscapes; query the current status of existing seed banks at national, provincial and local levels.

Review current policy and legal regulations related to the establishment and/or management of seed banks in the country, including existing support mechanisms and requirements for strengthening or establishment of seed banks. Note the provision for this task under Activity 1.1.2b; and establish contact with FAO?s Community Seed Bank (CSB) initiative.[80]

Organize a National Seed Bank Workshop, together with FAO?s CSB initiative, to:

review a status report prepared by a consultant on current status of seed banks in Angola, government?s aspirations and the views of the agricultural sector incuding local farmers;

identify how a CSB initiative might strengthen agricultural production and sustainable local food systems in Angola;

deliberate the FFF initiative in the context of CSB regarding synergies, challenges and lessons to be learned from experience elsewhere with FFFs and CSBs;

consider the extent to which this CBS model is aligned with the International Treaty on Plant Genetic Resources for Food and Agriculture provisions and identify further refinements; and

review and strengthen this planned Output based on the workshop?s deliberations, within the context of Project?s integrated land management approach that will be rolled out across Angola?s Miombo-Mopane landscapes in order to achieve LDN.

Pilot a Community Seed Bank Program in the target landscapes in the following manner**:**

Develop a framework to support germplasm access, collection and documentation, using pre-established protocols in consultation with national genebank scientists, as well as accessing germplasm from national and international genebanks and breeding programmes.

Support conservation and use of farmers? varieties and landraces. Based on a developed framework, support conservation of farmers? varieties and landraces, including those of neglected and underutilized species, in CSBs and on-farm. Collaborate with with research institutions on the development of new varieties through participatory plant breeding, variety evaluation and enhancement and through FFSs.

Support exchange of seed and planting material. Based on a developed framework, facilitate seed multiplication and farmer exchange of seed and planting materials with those in need and integrate formal and informal (farmer) seed systems.

Scope, design and implement CSB training modules. Capacity development and awareness building will be enhanced through training activities, including extension staff and FFSs. This should be coordinated with and incorporated in the project?s Capacity Building Program (Output 2.1.4).

Pilot small individual seed enterprises within target communities that reinforce CSB facility:

Support establishment of legally recognized farmer seed production and commercialization enterprises (including tree nurseries) that offer effective and affordable information about climate conditions and crop diversity to smallholder farmers, with special attention given to women and youth entrepreneurs. Capacity development can be provided by FFSs.

Support the design and testing of innovative procedures for quality seed and tree nurseries control, following the general guidance of the Quality Declared System (QDS) promoted by FAO.

Promote adoption of and access to quality declared seed by raising awareness for the possible acceptance of QDS and trees seedlings to be sold at the community level. Create demand through different activities including processing and access to markets.

Build community level capacity in quality seed production by increasing capacity through FFS training that combines traditional knowledge of women and men with modern technology for improving quality seed production at household and community levels.

Outcome 2.3	**Sustainable harvesting of dryland products from target landscapes enhanced by green value chains**

Outcome 2.3 builds on a study targeting dryland green value-chains (GVCs) undertaken during the PPG in 2019 and early 2020 (parts of which are included in Annex X-2.2). This study mapped the project site relevant value chains locally and nationally, assessing their potential to create jobs and income at local level, and their economic sustainability and current environmental tradeoffs. The study found potential in off taker model, where rural farmers and informal entrepreneurs will deliver to existing and new market demand. It also mapped value chains that are relevant for women and youth and that could provide important income generation through development of rural micro enterprises and cottage industries. The PPG study will be updated during the project inception considering also the effects of the COVID19 pandemics through FAO value chain assessment tool.

This value chain outcome work will be closely linked to Outcomes 2.2, providing advisory for medium and long term strategy of commercialization of selected FFS, FFF and the CSB. It

will be also align with Integrated Land-use Plans developed under Outcome 2.1 to increase sustainability of the investment.

While several value chains were pre-selected during the PPG stage. Final selection for GEF-7 investments will be based on the following criteria:

Local and national VCs with potential to create investment return into the project area and locally driven inclusive growth;

Local and national VCs with opportunities for youth and women entrepreneurship in rural areas;

Local and national VCs with potential to stimulate compliance with the land use planning, use of available resources, sustainable production and sustainable harvesting of the NTFPs

Potential to contribute to land degradation neutrality and sustainable utilization of resources through change of behavior by local actors;

Potential for positively impacting rural people?s ability to improve their food security and nutrition;

Local and national VCs with potential to create added value in rural areas;

Value chains with currently high negative externalities and with potential to increase sustainability;

VCs aligned to Government PRODESI Program[81] priorities for development.

Three Outputs are foreseen under this Outcome: (i) a strategy for GVCs development in Southern Angola, including the investment proposals (ii) Development of selected GVCs through private sector engagement focusing on strengthening women and youth led micro and small rural enterprise growth and (iii) Youth and women led enterprises and value addition supported through FBS within FFS and FFF .

Output 2.3.1 *Drylands Green Value Chain Strategy for southern Angola and strategy for women and youth led rural agri-entrepreneurship developed*

Southern Angola agriculture sector is heavily underserved and underfinanced, in particular in rural areas. The 2018-2019 drought had affected in particular poor and vulnerable small farmers and their businesses. The drought caused decrease of all produce up to 50%. In Cuando Cubango at small holder/subsistance farm level, 87% less maize and 82% less millet was harvested in 2019, comparing to the previous year. It was reported that over 73 thousand heads of cattle died in Cuando Cubango, Cunene, Huila and Namibe during the 2019 drought and houndred of thousand were severaly affected. As an effect of this, more pressure to local resources and increase of degradation was observed as peole were seeking new pastures, more fertile land and new income generating activities, like charcoal, unsustainable wild honey harvesting and others.

While southern Angola has potential in developing dryland green value chains, currently the investments made are rather ad hoc and not coordinated. The Strategy for Drylands Green Value chains will use FAO Hand in Hand initiative approach in identifying investment opportunities in micro regions, while adopting participatory approach and public private dialogues for the strategy development. The Strategy will facilitate coordination of public private efforts to operationalize local value chains and increase sustainability in rural areas. Under the strategy, youth and women agripreneurship will be also assessed, with aim to understand barriers and define actions for the localy led growth through these actors. Specific section will be dedicated to sustainability of the FFS, FBS and FFFs.

Selection of VC interventions and matching livelihood options to date is based on the analysis of existing data during the PPG phase in 2019 and early 2020, prior to the onset of the COVID-19 pandemic. Sources included SHARP, key informant interviews and multi-

stakeholder focus group discussions at national and local level. Additional market assessment, VC assessment and MSMEs assessment will be undertaken to complete the rapid assessment results from the PPG and integrate effects of the COVID19 pandemic.

Indicative Activities under Output 2.3.1

Establish a Green Value Chains Investment platform or GVC Advisory Group including representatives from: national government, UN agencies, local government, land users, project?s Landscape Coordinators, and private sector ? national company and local enterprise. The Investment platform/ GVC Advisory Group will be serviced by the project, chaired by one of the Landscape Coordinators. The aim of the platform will be to develop and implement the GVC strategy and facilitate public and private investment into the selected GVCs. The Investment platform/ GVC Advisory Group Chairperson will inform the Project Steering Committee on the Group?s progress, receive their feedback and respond to any requests for advice.

Conduct the end market, value chain and MSMEs assessment, including COVID-19 impact and risk assessment. With specific aim to identify: (1) GVCs objectives: possibly competitiveness, reduced imports, increased exports, improved trade balance, affordable price for consumers, job creation, food and nutrition security; (2) the smallholder inclusive business models applicable to the GVCs; (3) Quantified investment needs and commitments by the private sector (farmers, firms, bankers etc?); (4) The enabling measures (regulatory, fiscal, infrastructure development, communicative, smart subsidies?) to be deployed by Government and the quantified required public sector investments; (5) Arrangements to build trust, ensure accountability and monitor implementation including related traceability systems in the GVCs; and (6) Review the work of the FFF and indicate the most suitable areas of work where private engagement has largest potential and design strategy for the MSMEs, FFS, FBS and FFF.

Assess different business models in linking farmers/NTFPs producers and pickers to market, andlocal and national MSMEs from perspective of operations, profitability, technology and marketing;

Identify skill gaps at different level of the value chain and beneficiary of the project;

Assess ongoing and likely future risks arising from COVID-19 and provide clear directions and guidance on how risks of transmitting this disease will be avoided, minimized or mitigated.

Draft the *Green Value Chains Strategy for southern Angola?s Drylands*, using experience from FAO AgrInvest initiative. Draft will be validated through the investmetn platform/GVC Advisory Group before it will be presented to Government of Angola and valaue chain stakeholders for signature.

Hold a workshop in the project area (either one of the target landscapes) with a wider group of key stakeholders predominantly from the target landscapes, to review the draft Strategy. Seek consensus from particpants on priority GVCs to be taken forward by the project, based on criteria in the Project Document and subsequent additions/modifications to them.

Finalise the *Green Value Chains Strategy for southern Angola?s Drylands* and facilitate the signature.

Output 2.3.2 *The Green Value Chain strategy implemented for selected Value chains*

PPG preparatory work identified several potential value chains for both project sites. Apiculture, NTFPs and small livestock have been identified as the most promising.

Bee products (honey[82]) are potentially the most promising product in the market place with a value chain that meets many of the project?s criteria for development. They include: its relatively high value at source (beekeepers receive USD 2 per kilo and produce 200-400 kg per year, which generates more income for land users (farmers) than most other agricultural activities; high potential for job creation (self-employment); national market demand (estimated at 10-20MT annually) exceeds production (Angola imports several tons annually) and much higher potential market (estimated at 70 MT per year). Moreover, the industry is well-coordinated by government and the private sector, with initiatives underway to certify Angolan honey for the export market. Dryland and forest honey is of high quality and there is a potential to develop a geographic indicator for the natural and sustainable dryland honey. Digitalization to enhance tracebility and thus increase rural beekeeper ability to produce quality honey that can get the right certification and enter the formal value chains, will be one of the strategy of the VC work. A key challenge to address is the unsustainable manner in which honey is traditionally produced, as bark from trees is used to make the beehive and fire is used to harvest the honey, which not only kills the debarked trees and the bee colony but can also result in far more damaging forest fires.

Other existing VCs identified during the PPG phase to consider prioritizing for greening in ways that reinforce and consolidate the landscape approach include dryland forest fruits, and charcoal/firewood.

Charcoal and firewood exploitation is common in the project sites: most firewood is used for domestic cooking, while charcoal is produced for sale to city markets where demand is higher. Charcoal producers are poorly compensated and the work is time consuming. As in other charcoal enterprises, the major part of the added value remains with the trader and retailers in the cities. In Cuchi charcoal is also produced from local trees for the ore industry. The DSL IP Project will closely work with GEF Project Promotion of Sustainable Charcoal in Angola through a Value Chain Approach GEF ID#5719 implemented by UNDP and MCTA, which is working on the policy framework to support a sustainable charcoal value chain and sustainable charcoal production technology, briquetting and energy-efficient charcoal stoves and capacity building. This project is already working on defining with the Government a certification scheme. The DSL IP Project will focus on demonstrating the charcoal green value chain in the targeted landscapes with focus on the sustainable production and efficient processing complementing UNDP?s charcoal project interventions.

Box 9. Honey ? Most promising value chain for green development [83]

Honey value chain has promising potential for ?greening? in project landscapes; and it fulfils many criteria, notably: current lack of safeguarding bee colonies and opportunities to improve quality and increase production of honey, benefitting livelihoods.

Honey and bee products: Currently, there are very few honey producers in Cuando Cubango and Cunene. They produce honey in traditional way inside the bark of the tree, using fire to harvest the honey, which kills the bee community, provokes bushfires and decreases honey quality and price at market. Processing is rudimentary and any marketing is limitied and through informal chains.

Despite the above, honey and bee products value chains are the most promising for the project area. While honey is the most commercialized commodity, bee products are new to Angolan markets, expensive for consumers and the supply is too limited for export.

Income generating and job creating potential: The sector is led by several processors, who directly source raw honey from small-scale beekeepers. The income for small beekeeper can surpass the income from other agricutlure act ivities, as one kg of honey in Luanda costs USD 2 and a producer averages 200-400kg per year.

Existing demand and economic sustainability: Angola still imports several tons of honey each year but the local honey is competitive considering price, branding and quality. It is estimated that with targeted marketing, consumption could increase up to 70 thousand MT per year. Currently Angola produces 10-20MT of honey per year.

Potential for export: In Angola, use of agrochemicals in Miombo and Mopane is low, hence associated pollutants are at low levels. Specific tree species provide opportunities to develop geographical indicators or other forms of certification. Angola also has opportunities to export honey. Currently, the lead honey processing companies, together with the IDF, are working together to get Angolan honey certified for export to EU and USA. Regional sector leader South Africa leads in the region: its honey business turnover reached USD 177 million in 2018. Angola, with its vast areas, could compete in the regional market.

VC Coordination and Governance: The sector is coordinated, exemplified by the above government-private sector collaboration to export Angolan honey. The sector has strong national leaders: COAPA, Maxi Mel, Dona Bia are the main processing companies. COAPA is the major leader and an advocate for an inclusive honey value chain, with strong management, professional branding, innovative products and strategic thinking for sector growth.

Private sector is interested in investing in the project site: During the key informant interviews, the private processing companies showed interest in co-investing with the project, source from the project site or collaborate in development of the local capacities to increase honey production.

Value chain constraints are not complex: The main needs of the sector can be substantively supported by the project, while private sector leadership will assure sustainability of the intervention. The GEF investment can accelerate sector competitiveness and resolve the main underlying challenges. These are: (i) cost, availability and accessibility of improved technologies and practices; (ii) low honey quality due to improper harvesting and processing techniques; (iii) exorbitant margins charged to national honey by some retailers (over USD 3.5/l difference between different retailers); (iv) unnecessary honey imports; (v) lack of investment in innovative practices, including packaging (currently Angola honey consumption is well below the regional average); and (vi) export certification and promotion.

High level support and interest in honey sector by Government of Angola: including banning the import of honey to the country. Tax or other innovative incentives to access production and processing equipment, for example, could result in an exponential rise in beekeeping in Angola.

Box 10. Forest fruits - potential NTFPs for green value chains development

Several local forest fruits are commercially used in juices, ice creams and jams. Jinguenga *(Aframomum Alboviolaceum)*, Maboque *(Strychnos Schumaniana)*, Loengo *(Plinia cauliflora),* Mucua (*Baobab)*, Mirangolo *(Carrisa spinarum),* Ngongo *(Marula)* and forest mushrooms are very popular and sought after by consumers. Some of them are sold dried or processed into traditional alcoholic drinks.

All products from the area are traded through informal channels and available in most of the main markets (Luanda, Lubango, Benguela, Huambo).

A few small and medium scale processors (Pingo de Mel, Frutos de Angola, Zinho) focus on processing Maboque, Loengo and other forest fruits into jams.

Some large-scale beverage companies (e.g. RefriAngo) produce juices and sodas flavoured with mucua or tamarindo flavours but it is unclear whether or not Angolan products are used.

Commercial products are traded through formal chains and sold at main retail stores. Given that most jams are imported, a jam GVC initiative substantive potential as Government is rationalizing the food import bill.

Nutri Boty is one of the main Angolan brands selling locally processed products. Based in Huila, it processes and sells baobab leaves (local name - imbondeiro) and powder, products of West Indian lemon grass (caxinde), and products of moringa and mopane oil. Its business model includes community engagement and sustainable sourcing. It also produces and processes all of its own moringa.

Indicative Activities under Output 2.3.2

Below list of activities is preliminary and will be updated and enhanced during and after the GVCs strategy development. Honey will be part of the strategy of dryland green value chains in southern Angola, which will further specify in more details needs and activities. The below are preliminary activities that were developed as a result of bilateral meetings with stakeholders in Angola and through assessment of local practices in honey production, harvesting and commercialization.

Apiculture

Support existing small and medium honey processing enterprises with technical capacity and mentorship, including quality and branding of their product and innovative practices in honey packaging to increase product quality, commercialization, shelf life and domestic consumption, mainly for the honey processed at micro and small scale;

Increase capacities of honey producers to deliver for existing markets, through blened extension and introduction of digital technologies that improve tracability and help to assure quality and fasibility of the honey production at local level;

With specific emphasis to the landscape, **assess potential for development of local branded honey or geographical indicator for honey** from Miombo and Mopane forests;

Support increase of financing for the sector by providing evidence on the business models, supporting local actors develop bankable business plans, supporting dialogue for enabling business in honey sector (includes tax reduction for import of honey equipment and deployment of smart

subsidy schemes) and propose dedicated credit line for beekeeping activities to spur honey production and increase investment in processing and downstream value chain at local level. Facilitate public finance into honey sector through proposal for development of grant mechanisms for new mainly youth and women led honey production and processing enterprises;

Leverage private investment at the project site to participate at the honey value chain.

Promote entrepreneurship in honey sector at local level, through (i) development of capacities of local carpenters and steel workers to produce equipment for the sector; (ii) development capacities of local micro and cottage industries for honey processing and packaging, pre-processing for off takers etc;

Reduce market failures and stimulate market development through dialogue between honey businesses, major retailers and Government of Angola to slowly decrease imports of honey, regulate margins on the product by major retailers, promote export and facilitate finalization of the certification for Angolan honey;

Provide mentorship to lead honey processing enterprises to improve their business models, product quality and profitability

Other NTFP GVCs (besides apiculture)

More in-depth feasibility assessments as part of the strategy development will bring details on the concrete activities to be performed by the project. For the dryland fruits , and potentially other NTFPs, such as medicinal plants. The following activities are tentative:

Support local, national and international private enteprises that process and sell NTFPs in improving their company operations, management and more inclusive and feasible busines models with local fruit or medicinal plant pickers;

From the perspective of the firm (MSMEs), using FAO Inclusive business models tool, prioritize the activities that will enhance the off take and value addition at local level;

In collaboration with the private sector develop training materials for collectors and forest users to complement the FFF trainings with more market and busines oriented capacity building;

Develop specific acitvities for charcoal and firewood VT chain in target landscapes to increase its sustainability through: restoration of degraded lands with native dryland trees to provide renewable wood supply; more efficient processing in the case of charcoal (e.g. pyrolysis - valued by-products additional to charcoal being wood oil and wood); and improved fuel-efficient stove designs to reduce firewood consumption.

Output 2.3.3. *FBS developed within FFS and FFF to support new value chain enterprises*

Further through the strategy of the Output 2.2., this output will enhance impact of the FFS and FFF activities. It will assist with strategic acitivites at FFS, FFF and seed enterprises. In particular to enhance effects of these approaches to women and youth income generation through value addition, post-harvest loss reduction and quality assurance in fruit sector and others. The business models where integrated production is implemented, with short term income generating activities that provide additional cash for more investment into agriculture production or agroforestry have shown good results in the past. Special attention will paid to encourage women and youth to participate in FSB and enterprises creation.

In Cunene, livestock is the main potential for rural economic empowerement. While the traditional agropastorist are reluctant to commercialize their livestock. The women led sustainable small livestock businesses have shown potential for impact. While

the agricutlrue production in Cunene is difficult outside irrigated areas, feed production can generate important source of income, when linked to sustainable small livestock activities. Small livestock like goats or guineafowls, are procured by comerciants from different markets including Luanda. The output aim at improving the value chain through fattening, market development, product development, branding and using of digital technologies to shorten the value chains. This will allow local women and youth capitalize better from their activities.

Additional MSMEs and cottage industries will be identified through the output 2.3.1. and strategic interventions developed in participative manner.

Indicative Activities under Output 2.3.3

Select the Micro and small women and youth existing and aspiring entrepreneurs, women groups and cooperatives and **develop a capacity development training and mentorship with aim to increase their profit**, optimize production and commercialization, iniciate growth;

Develop a database of existing and potential MSMEs in southern Angola and web profiles to facilitate investmetn and support by donors, Government and private sector;

Pilot digital technologies to enhance MSMEs access to credit or funding, information and market;

Develop collaboration with local education institutions and pilot incubation of selected enterpreneurs;

Implement Farmer Busienss schools, community saving and credit groups to enhance capacities of FFS, FFF and seed enterprise beneficiaries in business, management and finance literacy;

Enhance technical capacities of women and youth led businesses in both provinces;

Enhance commercialization, marketing, branding of selected products to increase income generation of the selected enterprises;

Organize sharing of experience and lessons engaging between the beneficiaries and with successful MSMEs in the region and sectors selected;

Component 3. Strengthening knowledge, learning and collaboration to support progress towards achieving national LDN targets

Component 3 draws on the UNCCD enabling-environment guidance for LDN, particularly with respect to: institutional aspects of national LDN coordination (vertically and horizontally); policy coherence and alignment; and the science-policy interface dimensions of information on the multiple benefits of SLM and LDN being considered in relation to biodiversity, climate change, livelihoods etc. (Table 2).

It is designed to address Barriers 6 (weak national and landscape-level LDN assessment, monitoring and information management frameworks), 7 (LDN-focused KM and learning initiatives largely absent in Angola and across Miombo-Mopane region) and 8 (Limited trans-boundary and regional collaboration/ coordination on addressing LDN among Miombo-Mopane cluster countries), as elaborated in Section 2.1. The underlying assumptions concern: a willingness among all stakeholders to engage across sectors in the governance of LDN (A.1); and there is value in committing to collaborate in regional activities to enhance the LDN agenda across the Miombo-Mopane ecoregion, as well as drive this agenda in-country (A.7). These scenarios are depicted in the ToC diagram.

Consequently, Component 3 has a strong focus on knowledge management, including information flow at and between district, national, regional and global levels, identification of lessons and best practice, M&E for informed decision-making and adaptive management, and

promoting regional and global exchange and collaboration to strengthen national efforts to address land degradation. Component 3 also seeks to promote programmatic consistency, cohesion and synergies.

Component 3 will support the systematic creation and sharing of knowledge related to best practices on sustainable dryland management and contribute to increasing the capacity of Angola to meet its national targets on LDN. Opportunities for exchange with other DSL-IP child projects in the Miombo-Mopane region and with the global IP platform will be an important aspect of this component. It also seeks to enhance collaboration between both DSL-IP and non-DSL-IP countries to achieve a less piecemeal and more coherent approach to dryland management regionally, including identifying and exploring opportunities for potential joint initiatives targeted at addressing common challenges across neighbouring country borders and throughout the Miombo-Mopane region.

Component 3 will also support project M&E for effective project coordination and adaptive management, and provide important information and knowledge on project results of relevance to national and global knowledge platforms on SLM/SFM and LDN. This will help the project in achieving the anticipated impact at wider (transboundary/regional/ ecosystem/global) scale.

Considering the caracteristics of component 3, FAO will lead the implementation and execution of this component in colse coordination with MCTA and collaborating closely with MINAGRIP and MINEA. Project Coordination (included in Outcome 3.2) is leaded by MCTA. **Three baseline programs will contribute co-financing to the project?s baseline,** as shown in the table below.

Baseline Project / Program / Initiative	Component 3	
	Baseline	Co-financing
MCTA (DNAAC) PND # 2.4.1: Climate Change	$12.2	$7.1236
AFDB Agricultural Value Chains ? Support to Sustainable. Development. & Growth	$4.0	$0.0
FAO	$0.35	$0.025
Totals US $ million)	**$16.5**	**$7.1486**

Outcome 3.1	**National land information framework strengthened to inform LDN-related policy, planning and management at landscape, national and global levels**

The project seeks to strengthen land information monitoring and reporting systems and tools, and management of the data collected within the to be created national LDN knowledge platform, to support assessing progress towards LDN targets. The LDN platform will support application of the LDN hierarchy, including tracking land use decisions with respect to maintaining (or exceeding) LDN, and where necessary helping to counterbalance LDN anticipated losses with planned gains elsewhere.

The project will support the development of a comprehensive monitoring and assessment system and define a process for regular monitoring of land use/land degradation and biodiversity in the target sub-basins, feeding into national reporting requirements on LDN achievements and targets, building on existing monitoring processes (e.g. for the agricultural, forestry and pastoral aspects). This will also help foster greater cross-institutional

collaboration on addressing land degradation and integrated land-use planning and management.

It is expected that the platform will serve as a national repository of information on sustainable production approaches and good practices that can help to avoid, reduce and reverse land degradation, including information on successful project experiences such as on ILMP design and implementation and the effectiveness of FFS as a channel for capacity development for SLM/SFM. Information may include data on land capability, condition and use, land value, land tenure and LDN status, and draw upon cadastral mapping, topographic mapping, land capability, resilience assessments and maps, land degradation maps, land use and populations maps. This will facilitate national LDN reporting responsibilities under the UNCCD, and the platform will also support scaling out of project experiences and results.

A key focus of this outcome is to improve the information needed to make more effective, evidence-based, feeding into decision-making structures and processes being addressed through Outcome 1.1, which addresses the strengthening/establishment of LDN Working Groups (WGs) at national and sub-national levels and the process of integrating LDN into broader national and landscape level development planning and decision-making processes.

Outcome 3.1 also supports the transfer of LDN-related information from national to regional and global levels.

Outcome 3.1 also responds to calls from the UNCCD Science-Policy Interface and GEF-STAP for consideration of the effectiveness of land degradation data and monitoring systems, as well as wider consideration of the three global LDN indicators.

Output 3.1.1 *National and sub-national LDN assessment, monitoring and reporting systems and tools, including LDN knowledge platform developed and operational, with relevant reporting to global level*

Angola suffers from the absence/limited presence of a centralized, publicly available database system hosting LDN-related information at the national level, which impedes the efficient and timely sharing (and reporting) of information between relevant sectors and agencies at both national and sub-national levels, as well as regional and global levels. This works against the adoption of effective SLM and SFM practices across sectors and scales to address degradation drivers in the Miombo-Mopane system and enable transformational change towards the sustainable management of the landscape. Strengthening the national knowledge management platform will help to better inform decision-making and scale out SLM/SFM and LDN practices to other Miombo-Mopane areas within the country.

The current national LDN monitoring framework needs additional effort to agree and/or refine measurable, achievable benchmarks for progress including the development of a system for collecting, storing and analyzing data. The project will support further definition of goals, core indicators, metrics, data sources, and some baseline data for monitoring progress on LDN in the target landscapes using LDN methodologies that can be scaled out for national reporting purposes to UNCCD. Two other identified needs - secure high-level buy-in for the LDN framework and associated monitoring system from multiple ministries and ensure that the multi-sectoral LDN Working Group oversees the development of an LDN monitoring under Outcome 1.1.

Indicative Activities under Output 3.1.1

Review current national LDN indicators, assessment and monitoring systems, and tools and their utility at national and sub-national (provincial, district, municipality, community/village) levels and identify improvements/standardisation where required, based on LDN checklist and core indicators.

Develop, establish and operationalise a participatory landscape level LDN data assessment, monitoring and reporting system, using a participatory methodological approach validated with local communities.

Support a digital platform/information clearing house mechanism for storage, management and analysis of LD and LDN-related data, practices and lessons learned to provide decision-makers at both landscape and national levels with accurate and timely information to inform decision-making, focused on national and sub-national level data but also open to other experiences and links to other relevant regional and global databases (e.g. SADC, the AFR100[84] countries, TRI).

Establish a specific ?dashboard? within the LDN knowledge platform targeted at government decision-makers to facilitate ease of reporting under international requirements.

Where necessary **update existing spatial planning/GIS-based systems/facilities** to provide robust data and information management capacity to support the knowledge platform, and link with relevant international and regional databases and tools that can support national spatial analyses of land degradation, such as Trends.Earth[85].

Further develop/refine the ILAM toolbox, piloted during the PPG process, for LDN monitoring and reporting purposes, including consideration of the Neutrality Mechanism Balance Sheet.

Develop/refine a decision-support system (DSS) based on LDN to guide LD and SLM/SFM assessments, including further development and promotion of the use of the ?avoid, reduce, reverse? concept (no net loss of land-based natural capital) employed in the ILM planning process (under Outcome 2.1)

Develop and execute a programme to integrate LDN monitoring into development planning and monitoring processes at the national and sub-national levels.

Develop and operationalise a plan for the sustainability (financial, institutional and human capacity) **of the LDN monitoring and reporting system** (by end of the project). The project will provide the assistance required for the Government to develop a strategy and ensure that project capacity building efforts endure.

The project will also support the process of further developing and integrating LDN indicators into relevant national development and adaptation frameworks, such as the National Adaptation Plan (NAP), and developing a harmonised, national system for collecting, monitoring, storing, analyzing and reporting on LDN indicators. This Output links directly with Output 1.1.1 (strengthening the LDN Working Group) by providing it with improved information sources to support evidence-based decision-making for LDN. This will help support the process of further developing and integrating LDN indicators into wider relevant national development and adaptation frameworks, such as the National Adaptation Plan (NAP), and developing a harmonised national system to support reporting on LDN indicators. Data collection methodologies and tools, roles and responsibilities, and ways to mainstream monitoring into SLM/SFM will also be part of the work identified in the ILUPs (under Component 2).

Field monitoring data will be matched with remote sensing data collected at national level. This will be facilitated by FAO, through capacity development of the DNAAC using a variety of relevant tools, including Trends.Earth or other GIS-based systems that combine high-resolution imagery with a cloud-based architecture and user-friendly interface for monitoring. The GCP/REM will also assist the PMU and the LDN Working Group to establishing a remote sensing data collection system that will complement field data where needed.

The design/strengthening and operation of the platform will be informed by experience and lessons emerging from the regional suite of SFM-DSL IP child projects, and itnational and international will draw on and consolidate information currently available from other existing knowledge platforms of relevance to SFM, SLM and LDN objectives (e.g., WOCAT, SADC, CAADP, DRIP, etc.), and be open to other experiences from SADC, AFR100 countries, TRI, and elsewhere.

This project will cover the operational costs, equipment, capacity development and technical assistance to enhance national capacity to monitor the impact of LDN in the long-term.

Output 3.1.2 *Capacity development program for improving LDN assessment, monitoring and analysis among key stakeholders at national and sub-national levels to support national LDN reporting, designed and delivered.*

This output aims to build knowledge and skills of key stakeholder groups, from national to community level. It will include technical training and provision of equipment/tools to local government officers and local volunteers for regular monitoring of land use/land degradation, biodiversity and other relevant indicators to support delivery of output 3.3.1 above and how to use this information to strengthen decision-making (linking particularly with Outcome 1.1).

Indicative Activities under Output 3.1.2

Develop and deliver training modules for key stakeholder groups ion LDN assessment and monitoring, the use of LDN-related indicators at landscape, national and international levels, and approaches to effectively incorporate LDN-related indicators into multi-sector, multi-level policy and planning processes at national and international levels. (Training will include: the definition of LDN indicators; LDN baseline mapping; data quality standards and specifications; methodologies and tools for estimating and measuring LDN indicators; mechanisms for validation on the ground; and data analytics).

Provision of training to government staff at the national and sub-national levels on global monitoring tools designed to support LDN assessment, including building capacities to identify, assess, monitor and report on land degradation trends and degradation hot spots. Potential tools to consider include Open Foris Collect, Collect Earth, SEPAL, and Earth Map.

Provision or upgrading of tools and equipment for monitoring LDN in the field.

Support the LMCs in the target areas to develop Landscape Monitoring Action Plans (LMAPs) and oversee piloting the use of LDN indicators defined under the national LDN framework.

The national LDN Working Group will assess the suitability of the proposed data collection and monitoring tools, based on costs, scope, data type and easiness of implementation, and adapt them, as needed, to the time- and capacity-constraints of the collectors, to ensure that monitoring does not involve too much extra-work to add to their daily tasks. Collaborative partnerships for LDN assessment and monitoring will be encouraged. Stakeholder groups targeted for training include: national and sub-national government staff, monitoring working groups of the Landscape Management Committees (LMCs), rural extension services (agriculture and forestry), representatives or involved FFS and FFPOs (where relevant), and other relevant civil society groups.

The GCP/REM will support the PMU in the organization of training workshops targeting the members of the LDN Working Group and other M&E officers from relevant ministries, research centres and civil society organizations. Training will follow a ?training of trainers? approach so that capacity building can be multiplied up (this approach is being applied generally across the project).

The project will also support the strengthening of existing, digital knowledge platforms that target FFS[86]/FFPOs/CBO/rural advisory services (which will act as a channel for technical know-how on SLM/SFM to the field practitioners and will collect results and good practices) and private producers to serve as a tool that can be used by extension officers and other stakeholders to help build private practice awareness and promote the adoption of sustainable practices. This will include information regarding value-chains and markets designed to incentivize adoption of sustainable practices. The knowledge platform will be presented in both English and Portuguese.

Outcome 3.2	**Knowledge and awareness enhanced to support progress towards achievement of national LDN targets**

Outcome 3.2 is concerned with the dynamic process of the generation, management and communication of information, including that from lesson learning/sharing and project monitoring and evaluation (M&E) activities, to facilitate the sharing, transfer and up-scaling and out-scaling of knowledge and best practice produced through the project (and DSL-IP) on SLM/SFM and LDN. This is aimed at key local, national and global stakeholders to inform decision-making and to raise awareness among wider audiences. These activities link to the capacity development, monitoring and reporting efforts promoted under Components 1 and 2.

The knowledge management and communication and awareness-raising activities will be linked to the capacity development, monitoring and reporting efforts promoted under Components 1 and 2.

Output 3.2.1 *Project knowledge management, communication and dissemination framework and strategy developed and implemented*

Documentation and dissemination of information and knowledge about SLM/SFM and LDN methodologies, tools, lessons learned and best practices is a critical component of the project. Knowledge management, communications and outreach activities will be guided by a Knowledge Management and Communications Strategy (KMCS), supported by a project web-based knowledge management portal and innovative information-sharing program.

Knowledge exchange at global level, facilitated by the GCP, will take place in two ways: the child project will actively ?feed? knowledge to the global and regional platforms while benefiting from recent scientific knowledge and global evidence-based good practices provided by the platforms/exchange mechanisms in return through the Regional Exchange Mechanism (REM). Further details about this Mechanism and how it is aligned with the GCP are provided in **Annex IV-2** and summary details in **Box 11.**

All communication and awareness-raising materials will consider the information needs and ambitions of women and minority groups in the generation of knowledge, its dissemination and the ensuing outreach that will ultimately take place.

Indicative Activities under Output 3.2.1

Develop a project gender-sensitive KMCS (based on a gender analysis to identify project-specific gender gaps/issues/constraints in relation to KMC and activities to address them) and associated financing plan, to guide all knowledge management, communication and outreach activities, as well as tailored knowledge management and communications plans for individual target landscapes and their respective districts/communities. (The Landscape Management Committees and agriculture and forestry extension services will disseminate information about the initiative among relevant stakeholders in each target landscape.)

Produce project communication materials and events (including final workshop) informing multiple stakeholder audiences (from national to community levels) about project aims, progress and results, using the most appropriate means to the target audience.

Synthesise all new project-generated knowledge acquired about SLM/SFM and LDN in Miombo-Mopane landscapes and publication of relevant results in academic journals. (It is expected that the project will generate and systematically document lessons learned that will contribute to understanding the complex dynamics of this ecosystem/biome, their values and the multiple demands placed upon them.)

Establish an online web-based platform for hosting and disseminating project-related communication materials, lessons learned and best practices from the project and wider SFM-DSL IP network; and disseminate them among relevant audiences.

Develop a framework/process for transferring key project reports, studies, experiences and lessons learned, ?best practice? documents, and other relevant material on LDN to national, regional and global databases/knowledge platforms, including the national LDN knowledge platform (identified in Output 3.1.1) and WOCAT.

Liaise with the GCP/REM to establish two-way flow of project-generated information and knowledge between the child project in Angola and the GCP and other SFM-DSL IP countries. (The GCP/REM will support the project to identify appropriate and standardized means of documenting lessons learned and best practices to reach the different audiences ? rural communities, NGOs, civil servants, researchers, policy-makers, donors ? in the most appropriate fashion.)

Design and deliver a training module on communication and outreach to **develop the capacity of the Project Management Unit and key stakeholders design and deliver effective social-media content.**

Participate in relevant Communities of Practice to exchange project knowledge and learning and sharing results with project stakeholders.

Participate in regional and global events of relevance for knowledge management in coordination with the GCP/REM.

The KMCS will address the systematic creation, documentation and sharing of knowledge on sustainable dryland management and LDN through local and national data platforms as well as contribute to global knowledge platforms. It will set out a systematic knowledge management process to capture and exchange lessons learned and best practices in SLM/SFM and LDN, and will support knowledge development and communication activities to systematize and disseminate them at local and national levels, as well as with other SFM-DSL IP countries. It will address the needs of practitioners, decision-makers and local stakeholders, making use of both traditional and new communication media and networks.

Project communication materials (culturally appropriate and in relevant languages) for dissemination to all relevant national and landscape-level government agencies and key stakeholders will include various digital and printed knowledge products (e.g. publications, leaflets, journal articles, booklets, case studies, best practice documents, presentations and audio-visual materials), as well as social media content and a quarterly electronic project newsletter. Communication events with stakeholders may include information days, on-farm demonstrations, local fairs and radio programs. TV and radio stations will be key partners in the dissemination of news about the project.

The KMCS will integrate innovative tools, including web-based and smart-phone applications designed to engage and inform stakeholders at multiple levels (e.g. easily accessible to farmers

and rural private producers), based upon best international practices such as farmer channels. It will also incorporate specific monitoring tools to ensure that key audiences are reached and engaged and can contribute and that the project is effectively communicating key messages and results.

At the local level, FFS, FFPOs and Forest Learning Groups will act as channels for technical know-how on SLM/SFM to the field practitioners and will collect results and good practices that will feed the awareness-raising and outreach work of the project and the Landscape Management Committees, and eventually the knowledge management structure and LDN platform at the national level.

The KMCS activities will be aligned with the GEF communication and visibility policy and FAO?s corporate communication strategy. All project knowledge, communication and awareness-raising activities will be tailored to the target audience and consider the information needs and ambitions of women and minority groups. A Knowledge Management and Communications specialist will be employed as part of the PMU, and working with other relevant specialists, e.g. journalists, to identify and create targeted products (e.g. ?success stories? for the media).

The KMCS for the project will be formed by, and closely aligned with, that at the program level, as well as harmonized with those of the other Miombo/Mopane child projects through the GCP/REM. This will facilitate the sharing of evidence-based good practices between countries and across the program. (The project will actively ?feed? into, and share knowledge with, relevant regional and global platforms, such as Committee on Forestry Working Group on dryland forests and Agrosilvopastoral systems, UNCCD, (SADC?s GGWI-S) knowledge platforms and exchange mechanisms, while benefiting from recent scientific knowledge and global best practices provided by the platforms in return.

Output 3.2.2 *Project M&E framework, supporting lesson learning and guiding adaptive management, developed and operational from national to community levels*

The project will develop and implement a detailed M&E framework (see Section 9), which includes the Mid-Term Review (MTR) and Terminal Evaluation (TE), to support an adaptive, results-based management approach to improve the efficiency and effectiveness of project management and delivery of project results and impacts. The project M&E framework will be consistent with the overall M&E framework and learning program of the REM established by the GCP.

The project?s M&E framework will generate and systematically document lessons learned (supported by the GCP/REM on methodology) that will contribute to the knowledge base on SLM/SFM approaches and practices and means to achieve LDN targets. The project will identify and share lessons through sub-national, national and regional level meetings, exchange visits and various knowledge products, with neighboring IP and non-IP countries. It is expected that the project will provide important lessons on land tenure and access, resilience, the role of women in the sustainable management of drylands, effectiveness of public-private partnerships in addressing land degradation, and the effectiveness of market-based instruments such as ?branding? to encourage and maintain sustainable land management practices.

Indicative Activities under Output 3.2.2

Further development and implementation of the project M&E strategy (Section 9 of Project Document), with the role of each project stakeholder group/institution involved in project-related monitoring, evaluation and reporting agreed (in a participatory manner); and,

where needed, training (including guidelines) provided on the implementation of the M&E strategy.

Support development of community-level participatory monitoring of project activities, with training in M&E methods as needed.

Review and revise the project objective and outcome-level indicators and their associated baseline and targets during the project inception period (first 3 months of implementation) to ensure that indicators are SMART[87], baseline data complete and targets realistic, particularly with respect to any prevailing COVID-19 limitations on the project at the start of implementation.

Develop a set of performance/process indicators to measure delivery and achievement of project activities and outputs, and incorporate a set of global platform indicators (provided by GECP/REM) during project inception period (first 3 months of implementation).

Establish a framework and methodology (process) for the identification and capture of best practices[88] and lessons learned from the project and disseminate the results through the KMCS under Output 3.2.1, with technical support from the GCP/REM.

Undertake MTR in year 3 and TE in year 5, results disseminated and deliver their respective management responses delivered. The MTR is particularly crucial, providing a vital opportunity for reviewing progress, identifying successes, shortfall, bottlenecks and any needs for re-alignment through adaptive management. Lessons learnt and recommendations produced by the Terminal Evaluation will inform discussions on sustainability/durability of project results and impacts and future replication and scaling up initiatives.

Organise annual 1-day project retreats for PMU staff and key stakeholders to provide an opportunity to reflect on project management, operation and delivery, and identify practical solutions to resolve issues and overcome barriers hindering project performance to support adaptive management.

Feed results and recommendations from project M&E activities into project Knowledge Management framework (Output 3.2.1) as appropriate.

The project will hire an M&E specialist during Year 1 to: (i) develop and oversee delivery of the M&E system; (ii) collect and collate information on progress in meeting targets and evaluate results; and to (iii) lead on the identification of project best practices and lessons learned and the systematization of experiences. Monitoring reports will be prepared by the PMU according to the M&E system throughout the duration of the project. As part of the Integrated Landscape Management (ILM) planning process, the project will also hire national experts to gather baseline information and elaborate the initial values of the GEF Core Indicators and selected LDN indicators once demarcation of the target areas is finalised.

The project is aligned with SFM-DSL IP objectives at regional and global levels and includes a number of relevant GEF-7 Core Indicators (namely: number 3 (area of land restored); 4 (area of landscapes under improved practices); 6 (Greenhouse Gas Emissions Mitigated in tCO2eq); and 11 (number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment). The project will also track contributions to the minimum set of UNCCD LDN indicators ? land cover/land cover change, land productivity (metric: net primary productivity), and carbon stocks above and below ground (metric: soil organic carbon) and SDG 15.3.1 ? proportion of land that is degraded over total land area.

Project M&E will also contribute to the LDN assessment and monitoring framework through the LDN Working Group (Component 1), providing important information to help populate the national LDN information platform (Output 3.1.1). Links will also be established with program-level monitoring organised through the GCP/REM, with relevant M&E data fed to

the GCP/REM to consolidate data at regional and global levels. M&E tools used by the individual child projects will be harmonised as much as possible to facilitate program-level reporting and monitoring, knowledge sharing and good practices identified and their successes highlighted. This will include agreement and harmonisation on the use of common indicators for LDN assessment and monitoring (piloted under Outcomes 3.1 and 3.2).

Outcome 3.3	**Collaboration and exchange at regional and global levels enhanced to support national/sub-national efforts to deliver LDN**

This Outcome seeks to enhance the Angola project?s national and sub-national delivery and impacts through engagement with additional opportunities available through collaboration with other DSL-IP countries and the global DSL-IP and at wider regional and global levels. It aims to ensure that the project and its partners can benefit from the additional up-to-date technical capacity development, knowledge exchange and mutual learning, and networking and potential market development opportunities provided through the SFM-DSL-IP. It focuses on three areas to achieve this:

Supporting regional collaboration and coordination on actions to identify and jointly address common challenges to the sustainable management of drylands in the Miombo-Mopane ecoregion;

Offering increased opportunities for market development of SLM/SFM products from the project target areas; and

Improving access for national and sub-national project stakeholders to knowledge and mutual learning opportunities available at regional and global levels, while leveraging the project?s results, experiences and lessons learnt for wider impact at the regional and global scales.

The Outcome will strengthen connections between the Angola project and its partners and the other child projects and the overall program, supporting networking and partnership development, as well as promoting South-South cooperation.

Activities under this Outcome are largely developed through partnership with and support from the GCP/REM, which aims to ensure that the project and its partners can benefit from these additional shared opportunities. As mentioned above (Box 11) and in Annex IV-2, the REM functions as a mechanism to strengthen national- and landscape-level project delivery through its service function across all components of the project, as well as facilitating national, regional and global exchange of knowledge, lessons learned and best practices to accelerate and amplify the uptake of such practices (see Output 3.2.1).

The project will use part of the SFM-DSL IP incentive to ?access? additional services and opportunities offered by the global project on a demand and adaptive basis, in order to support the child project in achieving the anticipated impact at wider (transboundary ecosystem) scale. This support will be available to meet technical capacity needs (e.g. improved access to SLM and SFM technologies, tools and practices) identified under Components 1 and 2, but also under Component 3 to access opportunities for exchange and knowledge sharing, explore and develop new commercial possibilities for SLM/SFM products promoted through the project, networking opportunities for market development, as well as support development of joint initiatives between the countries to promote sustainable drylands management of the Miombo-Mopane eco-region.

A very important contribution from the GCP/REM to the Angola Child Project in COVID-19 times will be to support efficient monitoring and dissemination of knowledge in the context of COVID 19. The efforts of the FAO South-South and Triangular Cooperation Division in promoting a systematic learning approach to document and disseminate knowledge resources through the initiative called "Making every voice count for adaptive management". The goal is to create a bridge between other teams and initiatives and work beyond the 11 countries involved in this program. Joint management and good practices to minimize negative inpact of COVID will be developed and shared.

Thus, as a member of a program (the DSL IP), the Angola child project has the possibility to access additional resources and opportunities that would not be easily available to a stand-alone project.

Output 3.3.1 *Actions and investments identified to address transboundary land and environmental degradation priorities in Miombo-Mopane ecoregion and bi-/multi-lateral initiatives strengthened/established to progress towards LDN*

This output aims to support initiatives to foster greater regional and cross-border collaborative efforts to maintain the ecological integrity of the Miombo-Mopane eco-region. This is expected to involve both DSL-IP countries and non-DSL-IP countries, with the aim to develop joint solutions to common challenges in sustainably managing the region?s natural resources, including exploring the possibility of new cross-border and regional initiatives and investments. In doing so it will also facilitate the sustainability and scaling up and scaling out of project results across the region. It begins with the identification of common or transboundary priority land degradation, sustainable drylands management and other environmental challenges, concerning geographical areas, communities, habitat sub-types, species, etc., and progresses to prioritizing and jointly addressing them. The GCP/REM will further support cooperation and collaboration between neighbouring countries through shared technical advisory provisions.

Indicative Activities under Output 3.3.1

National participation in regional review and identification of priorities for transboundary and regional collaboration to address: environmental and natural resource degradation and loss; sustainable resource use in the Miombo-Mopane region (e.g. veldt fires, invasive alien species, illegal mining, charcoal, extraction of indigenous plant resources, watershed management); and the identification of joint solutions to address them in a collaborative manner, with development of an action plan

Review and develop linkages with regional and global investment initiatives including private sector companies and institutions with a mandate including sustainable drylands management (e.g. Miombo Forum SADC-GGWI) in order to identify potential financing sources and innovative financial tools in support of both regional priorities identified through the activities above and the national LDN targets.

Identify and develop proposals for trans-boundary and regional initiatives to address common challenges to managing the Miombo-Mopane system (involving both SFM-DSL-IP countries and non-SFM-DSL-IP countries), such as biodiversity (e.g. endangered species? ranges covering several Miombo-Mopane countries), protected areas with a shared national border (e.g. Save and Runde Basin between Mozambique and Zimbabwe) and addressing common water systems shared between countries (e.g. between Angola and Namibia). It may also include: agreements on the use of a common set of methods and indicators for LDN assessment and monitoring (piloted under Outcomes 3.1 and 3.2); best practice approaches to

SLM/SFM and achieving LDN targets; and exchange between countries on LDN-related information.

Output 3.3.2 *Collaborative actions to support business and market development for SLM/SFM products across the Miombo-Mopane region undertaken*

This output addresses, through the support of the GCP/REM, the identification of, and networking with, cross-border, regional and global markets for LDN-compliant land-use products promoted by the project. Activities under this output support those under Outcome 2.3 on value chain development, but are focused on providing opportunities for selected SLM/SFM products from the project?s target areas to be marketed across the wider region and beyond.

Indicative Activities under Output 3.3.2

Provide national inputs into the proposed GCP/REM needs assessment surveys of private sector engagement, market analysis and business opportunities for further development of trans-boundary, regional and global markets (with a focus on linkages with DSL-IP countries) for SLM/SFM products, such as charcoal[89] and NTFPs (building on the preliminary work undertaken during the PPG period on value-chain activities), including identification of potential sources of commercial financing.

Engage with GCP/REM-promoted regional business networking events, regional commodity roundtables, multi-stakeholder platforms, relevant for value-chain development and promotion of products from target areas under SLM/SFM practices, and lead on country level engagement with producers, SMEs, local finance institutions to complement outreach and engagement at regional and global scale.

Provide national input to any proposed development and promotion of a Miombo-Mopane ?brand? for SLM/SFM products, delivered through the project to support market development.

The REM will provide a dedicated ?business development facility? function, supporting the (largely) underdeveloped value chains for SLM/SFM products from the target areas. Amongst other support the REM will compile information (on a database) on potential products, businesses, sources of financing and markets, which will be available to the Angola and other DSL-IP child projects. The REM will also explore the possibility of developing a Miombo-Mopane ?brand?, drawing on FAO?s experience with Geographical Indication (GI) schemes[90].

Products from areas under SLM/SFM practices with global appeal and markets are relatively limited, with some exceptions such as honey markets. It is expected that much of the business and market development will be relatively local (district or provincial or national) in Angola, such as wood fuel market.

Output 3.3.3 *Opportunities for national and landscape-level stakeholders to exchange knowledge, experiences, best practices,and lessons learnt at regional and global levels identified, developed and supported*

This output seeks to identify and promote opportunities for project stakeholders to exchange knowledge, experiences, best practices and lessons learnt and enhance mutual learning with other DSL-IP projects, as well as connecting project stakeholders with other relevant regional and global knowledge sources and learning opportunities. This will further strengthen evidence-based decision-making capacity for LDN in Angola. It will further assist, and add value to, project efforts in Angola through Outcomes 3.1 and 3.2 to inform and be informed by

the expanding body of global knowledge and practice on SLM and SFM practices and measures to achieve LDN.

The project?s framework is closely aligned with the SLM-DSL-IP?s global framework, and harmonized with those of the other Miombo/Mopane child projects. This should facilitate the sharing of evidence-based good practices across initiatives. The GCP/REM will play a major role in assisting the Angola child project to engage in and deliver this output.

Indicative Activities under Output 3.3.3

Liaise with the GCP/REM, other SFM-DSL-IP countries and other relevant initiatives and platforms to identify appropriate opportunities being offered through the DSL-IP to improve Angola?s access to regional and global knowledge and expertise in relation to sustainable drylands management and LDN

Identify and organise national and sub-national participation in regional and global ?cross-fertilisation? exchanges, study tours and peer-to-peer learning opportunities, including exchange-learning visits (with cross-site visits at local, national and regional levels) for key project participants and partners to other SFM-DSL-IP projects in the Miombo-Mopane ecoregion, and to other relevant projects providing best practices under the AFR100 network to improve mutual learning and increase opportunities for South-South cooperation (supported by GCP/REM)

Develop linkages through the GCP/REM and engage with key global forums and working groups on drylands and related platforms (e.g. Collaborative Partnership on Forests, Global Landscapes Forum, Global Soils Partnership, Global Agenda for Sustainable Livestock, FAO?s Family Farming Platform, and the World Overview of Conservation Approaches and Technologies) and regional-level platforms (e.g. SADC GGWI, Miombo Network, GEF-6 IAP Policy and Science Interface, World Overview of Conservation Approaches and Technologies ? WOCAT), with specific training provided on a demand basis to relevant departments on the use of existing sources of information (e.g. WOCAT, TerrAfrica).

Ensure close coordination with FAO?s Committee on Forestry (COFO) Working Group on Dryland Forests and Agrosilvopastoral Systems, including support for the country?s representative to participate in relevant meetings in order to help channel knowledge and policy support between the child project, regional level and GCP steering committee.

Organise the participation, facilitated by the GCP/REM, of the Angola project team and partners in the annual meetings of SFM-DSL IP and other capacity development events and networking opportunities organized by the GCP, SADC, UN COPs (particularly UNCCD), IUCN Global Congress, among others.

The project and GCP/REM will jointly identify the most suitable learning opportunities in other countries and organize at least two visits of approximately one week to relevant sites, with the help of the host partner. Visits are expected to involve between 8-10 participants from Angola. As a commitment of their involvement, participants will be required to prepare a report for dissemination and conduct workshops or meetings to share the knowledge acquired on returning to Angola and identify how it might be applied in a brief action plan. Actions can then be monitored and reported to the PSC. Conversely, the PMU will liaise with the GCP to host similar learning visits for other SFM-DSL IP partners, based on the most successful achievements of the project in Angola.

The Dryland Sustainable Landscapes Impact Program is a multifocal, integrated initiative that will create multiple benefits in the land degradation (LD), biodiversity (BD) and climate change (CC) focal areas. It is aligned with the general IP strategies to address key programmatic issues including transformation, impact, collaboration, coordination, and private sector engagement; and its goal is to address the nexus between local livelihoods, land degradation, climate change and environmental security.

This Angola child project of the GEF-7 SFM IP Program on Dryland Sustainable Landscapes is focused on achieving a paradigm shift towards Land Degradation Neutrality for Miombo-Mopane woodlands in southern Angola by applying SLM/SFM best practices at landscape (sub-basin) scales in an integrated manner that engages with all sectors and other stakeholders having vested interests. The integrated landscape approach will directly address barriers that have thwarted LDN, SLM, and SFM from being successfully realized to date and, alongside a focus on diversifying food production systems, will contribute to increasing the resilience of ecosystems and livelihoods. Hence, the project is directly aligned with the Impact Program?s three objectives:

integrated landscape management with particular focus on sustainable forest management and restoration, rangelands, and livestock production [predominantly via Component 2, Outcome 2.1];

promotion of diversified agro-ecological food production systems in drylands [predominantly via Component 2, Outcomes 2.2 and 2.3]; and

creation of an enabling environment to support the two objectives above [predominantly via Component 1 and enhanced by Component 3].

More specifically, the three integrated components of the Angola child project are aligned with two of the seven GEF Focal Areas of the Impact Program in the following ways:

GEF-7 Programming Directions	Alignment of Angola Child Project
LD Objective 1 **Enhance on-the-ground implementation of SLM using the LDN tool.** **LD-1-1: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM).** **LD-2-2: Maintain or improve flow of ecosystem services, including sustaining livelihoods of forest-dependent people through Sustainable Forest Management (SFM).**	**LD Objective 1 is directly supported by focusing on SLM/SFM at landscape (sub-basin) levels, in conjunction with land-use planning at local (municipality) levels in order to micro-manage the complexities of land use and land tenure realities through engaging with stakeholders by means of consensus-building processes.** **Both LD-1-1 and LD-2-2 will be addressed through SLM and SFM, respectively, under Component 2. Of the total area of 633,278 ha in the two target landscapes preselected for interventions aligned to the LDN response hierarchy of avoid, reduce, restore (Table 5), 17 % (107,722 ha) is forest and the rest is watershed (26.4%, which also includes forest), cropland (34.3%) and grassland (22.3%). While Outcome 2.1 is focused on integrated land-use planning and management towards achieving LDN, Outcome 2.2 addresses land users?production capacity and resilience, and Outcome 2.3 invests in matching green value chains with livelihood opportunities and fosters engagement with the private sector.**

Climate Change Mitigation Programmatic Approach **Mitigate the release of GHG emissions through avoided deforestation and by enhancing carbon stocks above and below ground** **CCM-2-7: Demonstrate mitigation options with systemic impacts for the Sustainable Forest Management Impact Program**	**Mitigation of GHG emissions is estimated to be 1,047,911 tCO2-eq over 20-year arising from avoidance of emissions and sequestration of carbon throughSLM/SFM best practices with respect to land (and soil) use, food production and greening value chains, as reflected under Component 2, enabled through changes in policy and regualtions under Componet 1 and both informed and scaled out through targeted communications and sharing of know-how under Component 3. Specific areas of intervention include:** **- climate smart agriculture;** **- emissions reduction from food systems and supply chains; and** **- innovations in soil quality improvement techniques that increase carbon storage in farmlands.**
IP SFM Dryland Sustainable Landscapes **[GEF-7 Impact Program: Sustainable Forest Management, Dryland Sustainable Landscapes (DSL)]**	**Multi-focal contribution to the Dryland Sustainable Landscapes Impact Program that addresses: degradation, desertification, and deforestation of land and ecosystems in drylands avoided, reduced and further reversed through the integrated, sustainable management of production landscapes.**

Enabling LDN. In the baseline scenario, land degradation will continue to be a serious problem in Angola, both in the project zone and nationally. Although Angola adopted a national LDN target in 2018, its achievement requires major operational efforts on the ground and in the creation of an enabling policy and regulatory environment, very little of which is yet in place. Moreover, institutional capacities, including cross-sectoral collaboration, remain weak and policies concerning land tenure rights require a concerted and innovative approach to align with LDN aspirations. Furthermore, tracking progress towards LDN requires a somewhat sophisticated and accountable monitoring system in place and institutionalized. Without the GEF-7 investment, adequate systems and an institionalised ?neutrality? mechanism will likely remain incipient.

Capacity for planning and implementing SLM/SFM on the ground will remain limited in the baseline scenario. The southern region of Angola will face increasing threats to ecosystem services, affecting biodiversity, soil, water and carbon. Land will continue to be managed largely in an unsustainable manner across landscapes in the project zone in the absence of a larger scale, integrated approach to planning land use and managing landscapes. In limited areas, short-term increases in production are possible when small-scale best practices and innovative techniques are applied but ecosystems will continue to degrade and become increasingly disfunctional in the absence of holistic, integrated (mulit-sector) planning and sustainable management at landscape scales. Given that government has recently signed up to the principle of LDN as a party to UNCCD, the GEF-7 investment is timely and likely to prove to be the catalyst that will set LDN in motion. In this respect, the GEF-7 investment of over US $ 5 million has leveraged in excess of US $ 45 million from three ministries ? Culture, Tourism and Environment (MCTA), Agriculture & Fishery (MINAGRIP) and Energy & Waters (MINEA) ? reflecting well the multi-focal nature of this project.

Landscapes, value chains and scale. Without an integrated and inclusive landscape approach to land-use planning, the potential for disseminating and scaling out SLM/SFM techniques and approaches among land users and decision-makers in southern Angola would be largely missed. Furthermore, such techniques and approaches have greater chances of success, if they are made economically ?attractive? to land users and build on market forces. In the baseline scenario, it is possible that agricultural modernization eventually gains traction in the project zone, but criteria of inclusiveness (including gender-based) and sustainability would not necessarily be mainstreamed into the agricultural value chains that would be developed. This targeted GEF contribution will help ensure that value chains are greened to the extent of at least aligning them with the LDN target, by adopting SLM/SFM practices, improving the livelihoods of land users (including women) and by making it easier for stakeholders to be part of the transformative change envisaged for the project.

Regional Cooperation. In the baseline situation, Angola?s efforts towards achieving LDN goals will continue to be largely isolated from potential collaboration with neighbouring Namibia and Botswana in respect of LDN-conducive measures, policies and practices to jointly and respectively address land degradation in shared river basins, quite apart from sharing knowledge, best practices, and lessons learned more generally, as well as engaging with other countries from the SADC region and contributing to initiatives such as the Great Green Wall Initiative for Southern Africa (GGWI-S). The same applies at global level, while recognizing and respecting priorities for South-South cooperation in the first instance. With GEF support, such collaborative learning, exchanges, synergies and and harmonized implementation of the national ?child projects? can be realized through the regional and global exchange mechanisms (R/GEM) developed under the Impact Program.

The project will deliver a range of Global Environmental Benefits (GEBs) by halting and reversing negative trends of land degradation and biodiversity loss in degraded areas of the Miombo-Mopane woodlands insouthern Angola by applying an integrated landscape management approach. Productive land under different land-use systems will come under improved management within two targeted landscapes (sub-basins) through the application of SLM and SFM techniques that embrace LDN as a long-term goal. The total area of productive land identified for improvement is 633,278 ha, representing 46% of the total area of the target landscapes. Improvements relate to 18 intervention sites, 9 in each target landscape, that have been pre-selected during the PPG phase, mapped (Figure 7 and Figure 8 for the respective landscapes) and subject to confirmation during project inception. They are targeted at croplands, grasslands, forest and watersheds (comprising forests and croplands), full details of which are provided in Table 4 and summarized by land use system and LDN response hierarchy (avoid, reduce, restore) in Table 5. In summary, the following results are anticipated in the immediate term:

217,056 ha of croplands covered by ILUPs , with 4,929 ha having reduced LD through direct agricultural improvement interventions;

141,200 ha of grasslands covered by ILUPs, comprising 13,988 ha of direct sustainable rangeland management interventions, will be subject to reduced LD;

107,722 ha of forest covered by ILUPs, with 16,825 ha under SFM aiming at avoiding deforestation and degradation . Assistened natural regeneration approaches coupled with

the estabilishment of nurseries and community seed banks will complement the SFM/SLM interventions.

167,300 ha of mixed land uses watershed, comprising 117,000 ha of Cuchi and 56,000 ha of Chinguanja commune, will be covered by ILUPs;

The medium term benefit will be 633,278 ha of land within the target landscapes covered by ILUPs, of which 35,742 ha will be under direct improved management, subject to best practices in SLM/FSM and other types of intervention demonstrated during the life of the project being replicated post-project. An Exit Strategy will be designed in the last year of the project to flag up what will need to be in place by way of the enabling environment (policies institutionalization of policies, mechanisms and platforms, best practices, continuing capacity development and sustainable financing by project end to secure continuity post-project and linkages to any potential new opportunities to rolling out the LDN agenda across other priority landscapes.

Together, these immediate and medium-term improved practices will lead to increased ecosystem and community resilience, and the sustainable provision of ecosystem goods and services at the landscape level. Moreover, they will contribute to the conservation of globally significant biodiversity in the Miombo-Mopane woodlands, contributing significantly to the African Forest Landscape Restoration Initiative (AFR100)[83] objectives by bringing degraded land into restoration by 2030.

A major co-benefit of these interventions to reduce land degradation and deforestation will be avoided GHG emissions and carbon sequestration, estimated at 1,047,911tCO2-eq over the 20-years project lifespan. Policy changes and behavioural changes associated with capacity-development activities are also expected to contribute to this co-benefit. The carbon benefit calculus takes into account the following:

Miombo and Mopane woodlands are considered to be dryland forests.

In Mopane vegetation, the above-ground density of live woody biomass is low and tree canopy is below 30%.

Miombo are comparatively richer in carbon stocks than Mopane landscapes but much more susceptible to fire.

Most of the carbon stocks in Miombo-Mopane landscapes are stored in the soil.

If the vegetation cover is removed and the soil is not protected from erosion, land degradation ensues and soil carbon will be lost over time. This process is avoidable and the current trends can be reversed through more adaptive and sustainable land uses/practices.

[redacted]

The Angola Child Project is part of the GEF/SFM DSL Impact Program, whose programmatic approach contrasts with the conventional model of country-specific projects. Although this element, in itself, is not fully ?innovative? as it is the second cycle of GEF Impact Programs, the IP affords two advantages to this Child Project (and others) pertaining to **scale** (potential to scale up and out) and to **sustainability**, which would not apply to stand-alone projects:

First, there are the advantages of ?scale? and commonality embedded in belonging to the ?Miombo Cluster? of child projects. As stated in the introduction, countries within the Miombo Cluster share not only similar ecosystems that are unique to Southern Africa?the Miombo-Mopane Woodlands?but also similar and common challenges, including transfrontier ones, with respect to land-use management. By taking a supra-national view on the SFM DSL topic, the program is able to address key regional and transboundary

issues through simultaneous actions by the respective child projects, increasing the impact indivual child projects and the program as a whole. The regional aspect can also facilitate local stakeholders? access to a wider range of different opportunities. Certain products are on high demand across the entire region and reaching global markets (e.g. marula oil). For private sector players, it implies broader connections and the expansion of their potential to reach multi-country supply partnerships. For the local value chain participants, the kind of scale enabled through the DSL IP will allow them have access to innovations they would otherwise not have imagined.

Secondly, there is the challenge of sustainability, especially financial. If countries in the DSL IP advance towards their LDN agenda, they will have proven a model that seeks to apply LDN across landscapes with shared, coordinated and relatively harmonized approaches. They can then collectively use the child projects as a ?springboard? for accelerating LD measures towards the neutrality goal at the regional level across the Miombo-Mopane ecoregion. Collectively, countries will be well positioned to access future funding for LDN and CCM and also impact investments for large-scale ecosystem restoration.

The Angola Child Project will be **innovative** in a number of related respects:[91]

The project is the first of its kind in Angola to embrace and apply the LDN response hierarchy across municipal land management units within a targeted landscape framework of sub-basins to avoid, reduce and reverse land degradation. Moreover, interventions will be tracked and, ultimately, enable the Government to report to UNCCD on its progress nationally towards LDN, using methodologies, tools and monitoring systems aligned with the LDN principles and demonstrated by the project. Application of the LDN response hierarchy will be based on carefully designed land-use plans developed through inclusive participatory processes that are cross-sectoral and integrated.

Application of a Landscape Approach involves choosing an area large enough to envelop multiple land units, comprising a variety of land types under different land uses, sectors and jurisdictions/administrative boundaries that are inclusive of different land tenure governance systems (communal, privately leased and public land).

The project will employ science-based, local and indigenous knowledge, as well as best practices including SLM that contributes to land-based climate change adaptation and mitigation. It will support and deploy technical innovations through improved extension services. Examples are use of drones to survey and map landscapes/terrain, alongside working with communities to fill in land-use details; and use of mobile technology for disseminating information on market prices of agricultural produce, crowd-sourcing among local communities and monitoring production in target LMUs.

Although practiced in other parts of Africa, community-based forest management (CBFM) is a novelty in Angola requiring innovative ways to overcome certain challenges to be overcome, such as anchoring CBFM at the national level while ensuring a sense of stewardship among the local communities through a joint land-use covenant.

Other innovative aspects of the project include the radical development of a network Farmer Field Schools as nodes of training and outreach, reinforced by Forest Farm Facilities set up with seed funds by the project. The latter has yet to piloted in Angola. These initiatives, together with a focus on green value chains, such as honey and charcoal production, will help to reinforce and consolidate SLM/SFM efforts towards LDN in the 18 project intervention sites.

Sustainability is inherent in the design of the project, key elements being: the institutionalisation of certain aspects of the Capacity Development Program, notably the

training modules, to ensure continuity post-project, and certain mechanism and platforms such as the LDN Working Group

Sustainability is inherent in the design of this project and underpinned by adopting existing land-use planning processes, and improving them to achieve LDN targets through SLM and SFM best practices applied at landscape (sub-basin) levels. Enhanced environmental resilience to anthropogenic and natural shocks, associated with the increased application of SLM and SFM at the landscape level, will enable ecosystems to continue providing essential services in the future. Long-term sustainability will also be ensured through the highly inclusive participatory process adopted by the project, which will contribute to resolving conflicts over land uses and secure ownership of the project?s interventions and objectives. In addition, the project will strengthen capacity at national and local levels to manage and restore dryland ecosystems through training and its institionalisation, which will ultimately help to ensure that SLM/SFM and LDN are well integrated into policy frameworks at all scales. Furthermore, the project will green value chains by linking them with sustainable land use management and production practices, thereby increasing the financial security of households involved in these value chains as they become more formally established, with robust business plans geared towards self-sufficiency within or just beyond the project implementation period.

Scaling upwards, outwards and **downwards** is a critically important part of the project?s strategy about which much has been stated above and earlier in the Component descriptions. In line with GEF STAP recommended guidance on scaling out, up and deep[92], the project is designed to generate models combined with system-wide capacity development that can be upscaled and amplified to increase impact. Particulary relevant will be the preparation of an Exit Strategy during the final year of the project to provide a road map for **scaling out** the successes demonstrated by the land-use planning processes and management practices to the remaining 54% of the two landscapes that is not targeted for specific interventions. There is also significant potential for **up-scaling**, given the need to mainstream best practices, experience and lessons learned into national policies, strategies, and plans, as well as to engage with stakeholders from multiple sectors having interests vested in the target landscapes. In particular, the project intends to work in partnership with the private sector as an agent for transforming markets in ways that are credibly aligned with the LDN agenda.

The project will design and support implementation of a **system-wide Capacity Development Program**, focusing on empowering people, strengthening organizations and institutions, and enhancing the enabling policy environment based on an inclusive assessment of country needs and priorities, some of which was done during the PPG stage but much remains to done at project onset. The system-wide capacity approach will maximize country ownership, sustainability and scale of intended results.[93]

Key capacity gaps currently identified include, but not limited to: general levels of awareness among stakeholders about LDN; technical understanding about LDN, methodologies for measuring and monitoring it at different scales; policy and legal frameworks for LDN, *landscape approach* and community-based approaches to forest/natural resources management; application of local land-use planning processes to landscape-scale LDN considerations (Integrated Land-Use Plans/Landscape Management Plans); developing and institutionalizing a modular training program that addresses a diverse range of stakeholders? technical skills and related needs; climate resilience considerations and synergies with LDN agenda; greening of value chains, markets and associated small-medium size enterprises; designing and facilitating stakeholder engagement processes; limited technical

capacities of farmers, limited knowledge and capacity of producers and limited institutional capacity to coordinate natural resources management and planning at landscape levels.

Capacity gaps and needs of all stakeholders from institutional, private, civil society, and community sectors will be reassessed to verify and complement these initial findings. The FAO Capacity Needs Assessment Tool will be used to assess the three core dimensions - individual, organizational and enabling environment. The assessment will inform the fine tuning of the Capacity Development Program as part of a dedicated capacity development strategy which is lodged in Component 2 for coordination purposes but inevitably cuts across all three components. A key strategy for delivering the Program will be a training-of-trainers approach linked to the Regional Exchange Mechanism to secure international specialists from within the region, as required, to design training modules and both train and subsequently support trainers from one more countries in the Miombo Cluster.

During the implementation, state-of-the art capacity enhancement methodologies will be applied. For instance, all envisioned training activities will apply effective learning practices including pre-event learning needs assessments, post-event follow-up support to facilitate the transfer of knowledge into practice as well as institutionalization of curricula through partnering with and enhancing the capacities of local universities and research centres. Efforts will also include organizational and institutional capacity strengthening efforts such as to strengthen multi-sectoral and multi-coordination and collaboration at all levels such as the LDN platforms at national and landscape. Taking a system-wide, country-driven approach, the project?s capacity development efforts will therefore result in a transformational and lasting change in the way Angola is able to address SLM and SFM needs.

All capacity enhancement activities will be aligned with a harmonized approach across the GEF IP Programme including the capacity enhancement strategy of the global coordination project and individual child project strategies.

The PMU will include a dedicated expert to follow the systemic capacity development components together with knowledge management and stakeholder engagement. FAO will provide overall quality assusrance through a dedicated member on the internal Project Task Force (PTF) who will be task with the knowmedge management, stakeholder engagement and system-wide capacity development components.

[redacted]

The project design has not changed conceptually with respect to the its objective of seeking a *transformational shift towards sustainable, integrated management of multi-use dryland landscapes in Miombo-Mopane ecoregions of* Angola, albeit the language has been changed from *?to support*? to ?*to initiate?* such a shift in order to highlight the catalytic significance and timeliness of the project.

The three Components now address 8 rather than 3 barriers, additions including:

inadequate institutional mandates and capacities for engaging stakeholders in delivering LDN through integrated management of landscapes;

ineffective management of land tenure;

poor masterly of SLM/SFM and access to production improvement inputs among local land users, and insufficient incentives for them to adopt more sustainable practices;

opportunities to strengthen local livelihoods hampered by limited access to finance and markets for SLM products ;

weak national and landscape level LDN assessment and monitoring frameworks; and

absence of a comprehensive, LDN-focused knowledge management and learning initiative across Miombo-Mopane,

Components 1 and 2 remain focused, respectively, on: the enabling environment; and implementing and scaling up/out SLM and SFM best practices at landscape levels. In the case of Component 3, the scope has been expanded from knowledge management, monitoring and evaluation to giving more emphasis to learning and the inclusion of collaboration to support progress towards achieving national LDN targets. Importantly a template for Component 3 Outcomes, Outputs and to a lesser extent Activities has been developed at Impact Program level in order to accommodate support from the Global Program to the Child Projects and, conversely, scaling up of knowledge gained and lessons learned from the Child Projects to the Global Program and on to GEF. Much of this reciprocal support and sharing will be facilitated through the Regional Exchange Mechanism, which is part of Component 3 (**Box 11**).

GHG mitigation target (Core Indicator 6) was reduced from 8,460,000 tCO2e at PFD stage to 1,047,911 tCO2e at CEO endorsement request (see updated Ex-Act calculation in Annex X-2.6 of the ProDoc). The current figure only reflects the benefits from the project?s direct interventions. It is expected that additional carbon benefits will be secured during the project implementation as part of the integrated landscape planning and implementation/financing of corresponding land use plans. The latter is difficult to calculate/estimate at this stage as the plans are not yet in place, finances not yet secured and targeted LUS not yet known.

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

Location of project sites (link to map) - refer to **Annex E** for the landscape profiles. Refer also to Part I, Section 1a Box 6.

Sub-basin 1 (Cuchi-Okavango)
Coordinates:- 14.72064, 16.88853

Sub-basin 2 (Cahama-Kunene)
Coordinates:- 16.31316, 14.31777

1c. Child Project?

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

The Angola child project of the GEF-7 SFM IP Program on Dryland Sustainable Landscapes is focused on achieving a paradigm shift towards Land Degradation Neutrality for Miombo-Mopane woodlands in southern Angola by applying SLM/SFM best practices at landscape (sub-basin) scales in an integrated manner that engages with all sectors and other stakeholders having vested interests. The integrated landscape approach will directly address barriers that have thwarted LDN, SLM, and SFM from being successfully realized to date and, alongside a focus on diversifying food production systems, will contribute to increasing the resilience of ecosystems and livelihoods. Hence, the project is directly aligned with the Impact Program?s three objectives:

i. *integrated landscape management with particular focus on sustainable forest management and restoration, rangelands, and livestock production*[predominantly via Component 2, Outcome 2.1];

ii. promotion of diversified agro-ecological food production systems in drylands [predominantly via Component 2, Outcomes 2.2 and 2.3]; and

iii. *creation of an enabling environment to support the two objectives above*[predominantly via Component 1 and enhanced by Component 3].

SFM-DSL Impact Program Objectives	Angola Child Project Alignment
1) Integrated landscape management with particular focus on sustainable forest management and restoration, rangelands, and livestock production	Through Components 1 and 2, the project will first prepare harmonized, integrated land-use plans (ILUPs) for two landscapes covering some 1.3 million hectares of Miombo-Mopane Woodlands, based on a participatory multi-sector engagement process, and then support necessary their implementation, including strengthening capacity and consolidating the Farmer Field Schools approach.
2) The promotion of diversified agro-ecological food production systems in drylands.	Component 2 will work towards the consolidation and scaling up of SLM and SFM best practices, which will contribute to the well-being of local communities and ecosystems. The above-mentioned robust stakeholder engagement processes will build awareness and national and local capacity to promote and adopt climate-adaptive and gender-sensitive SLM/SFM/LR approaches and techniques on-the-ground, including through the FFS approach and targeted training. Component 2 will also promote diversification through its green value chain strategy.
3) The creation of an enabling environment to support the two objectives above.	Component 1 is designed to address the enabling environment through introduction and strengthening of policies and regulations, as well as developing institutional capacities, multi-sector coordination and collaboration. Implementation of capacity-building and stakeholder engagement activities under all three components will contribute further this enabling environment to support the above objectives, as well as future sustainability of the ?integrated landscape approach? initiated by this project to address land degradation across Angola?s dryland forests, croplands and rangelands in partnerships with land-owners, land users and communities with a common goal of achieving LDN.

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:

STAKEHOLDERS

Select what role civil society will play in the project:
Consulted only;
Member of Advisory Body; contractor;
Co-financier;
Member of project steering committee or equivalent decision-making body;
Executor or co-executor;
Other (Please explain)

342. In line with GEF Policy on Stakeholder engagement and Implementation Guidelines guidance, meaningful and continuous stakeholder engagement during the project design and implementation is key to maximize country ownership and contribute to more enduring results at scale. Moreover, the project intends to strengthen polycentric, multi-stakeholder governance mechanisms within the identified landscapes beyond integrated spatial planning and management[1] to result in positive impacts within the productive landscapes and contribute to preserving the natural capital.

343. Existing **and potential stakeholder individuals, groups and entities** were identified during the project preparation process through various events and consultative meetings, including: the national inception workshop held on 24th September 2019, landscape-level consultations on 15th and 17th October 2019 in Menonqgue and Cuchi (Site 1, Cuando Cubango) and 25th and 26th November in Ondjiva and Cahama (Site 2 Cunene). Individual and organization capacities were assessed during these events by various methods of communication but such surveys were by no means comprehensive in their coverage of those who participated and further consultation will be undertaken during project inception.

Stakeholder Analysis Exercise

344. A participatory Stakeholder Analysis Exercise was undertaken during the PPG phase, based on FAO?s methodology, to identify key, primary and secondary stakeholders in respect of Angola?s national LDN agenda across national and sub-national (i.e. landscape) levels. The method is described in **Figure 12** and has been applied to existing and potential stakeholders listed in **Table 7**, together with a brief synopsis of their potential role. A structured **list of stakeholders** engaged (and to be engaged) is included in Annex I2.

Figure 9. Results from the Stakeholder Analysis Exercise

Who are the main stakeholders?

Category	Description
Veto Player	*Have power to stop project implementation*
Key Stakeholder	*Have skills, knowledge and/ or position of power to significantly influence project*
Primary Stakeholder	*Directly affected by the project*
Secondary Stakeholder	*Only indirectly or temporarily involved*

From FAO?s Stakeholder Analysis Methodology

At the centre is the LDN agenda, which concerns the planning and management of land use and related topics.

Key stakeholders are the institutions that have a highly central role in implementation and hold the power of veto power within the project, which includes FAO by default of its role. The project?s operational partners lie within this category, which includes the national institutions responsible for the environmental portfolio, focusing on land degradation and climate change, those in charge of the agrarian sector (agriculture, forestry and livestock) and members of the LDN Committee. Direct beneficiaries are also considered key stakeholders.

Primary stakeholders include institutions that are important for the project and could add value through collaborative implementation arrangements. Co-financiers, if not already key stakeholders, fall into this category as do direct beneficiaries.

Secondary stakeholders are those having an interest in the project but participating from a peripheral context.

[1] See ?Strenghtening civic spaces in spatial planning processes- A technical guide on regulated spatial planning and tenure to balance societal priorities in the use of land, fisheries and forests?. http://www.fao.org/documents/card/en/c/cb0422en/

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Table 6. Project stakeholders and their potential role in the project

Stakeholder	Role in the Project	Classification
	Institutional Stakeholders within Central Government	
Ministry of Culture, Tourism and Environment (MCTA)	MCTA will be the leader of project at national government level. The ministry has the overall responsibility for the coordination of land management and environmental policies. It will support the project with institutional and legislative frameworks, and other important elements. Under MCTA, the following institutional set up: ? National Directorate for Environment and Climate Action (DNAAC): This office will host the focal government taskforce for the project, with close collaboration with National GEF OPF. This body will be responsible for leading and coordination the project in national level, as well as monitoring and evaluation and promote synergy between any existing or foreseen projects.	Key Stakeholder and Co-financier
Under MCTA	National Institute for Biodiversity and Conservation Areas (INBAC): This institute is responsible for implement the policies and strategies of biodiversity and the management of the national protected areas. In both provinces that the project will be implemented has a national park. Provincial directorate of environment, waste management and community services of Cunene and Cuando Cubango: They will be the key liaison entity of the provincial governments in accompanying the project. This department was responsible for issues related with Spatial Planning, Urbanism and Environment. Recently it was divided, and only the issues related to environment are under of his responsibility. Center Agro-Ecologic of Cuando Cubango (CAECC): The center was inaugurated in 2017 and aim training farmers, especially women, is several sustainable practices of SLM and SFM, as well as the teaching of good practices for environmental protection. The Polytechnic Institute for Environment, in Menongue, Cuando Cubango: This rural high school education institute, located near the Landscape #1, is under MCTA, and started as from January 2019 to offer several courses related with sustainability and environmental management, with the special emphasis of developing the skills of ?environmental monitoring agents (*fiscais*, and inspectors), environmental management agents, in addition to technicians in environmental protection and control, and waste management and nature guides. The project draws on the existing and potential capacity formed through the Institute to help to with train at site site level, particular around Cuchi, and in support of beneficiaries in other project sites.	Primary or Secondary
Ministry of Agriculture and Fishery (MINAGRIP)	MINAGRIP has the responsibility over the agriculture and forestry sectors. It also has a mandate over a number of rural development issues. Along with MCTA, MINAGRIP will be engaged in the execution of the project, and the organization of the project?s activities.	Key Stakeholder and Co-financier

Stakeholder	Role in the Project	Classification
Under MINAGRIP	National offices for Forest, Agriculture and Livestock (DNF, DNAP,): These offices are responsible to elaborate the policies for Forest, Agriculture and unsure the Food Security. They will be the key stakeholder at national government level, once they play a very relevant role to the project and deal directly with policies for SLM and SFM. The DNAP is also responsible for the collection of agro-meteorological data and could participate by sharing its data. Forest Development institute (IDF): IDF is responsible for coordination and implementation of the forest policies, management and license all forest activities. It is present in at local level, and are one of the key stakeholder for the project. Agrarian Development Institute (IDA) & the Agro-Development (Field) Station (EDA): IDA and EDAs will work on building capacity, integrating at local level and to promote and monitor SLM, as well as to collect data and contribute to monitor and evaluation. Provincial Directorates for Agriculture and Forestry in Cunene and Cuando Cubango: Have had a presence for a few years and work closely with Provincial Directorate for the Environment. The will be closely articulated with the provincial IDA regarding the involvement of the municipal EDA?s in the project?s implementation.	Primary and Secondary
Ministry of Energy and Water MINEA	**MINEA** is responsible for energy and water management policies. The provinces where the project will be implemented are suffering with drought and his ministry has programs to fight drought and can be used to leverage the activities of the project. Under MINEA, there is the **Office for Administration of watersheds of Cunene, Cuvelai and Cubango (GABHIC)**, which is responsible for integrated management of natural resources in the watersheds where the project will be implemented. It is not expected that GABHIC will have an executive role in the project, but rather a collaborative one through multi-stakeholder commissions, task forces and other related constellations. As a co-financier, MINEA will be part of the project steering committee.	Key or Primary Stakeholder (tbc) and Co-financier
Ministry for Public Works and Spatial Planning (MINOPOT)	**MINOPOT** play a relevant role for the project, once they deal with land tenure issues and are responsible for approve the land-use plans. Under MINOPOT: National Institute for Territorial Planning and Urban Development (INOTU): will help with the engagement of different levels of government in land-use planning (central, provincial and municipal). They also play important roles in statutory commissions that are relevant for the endorsement of plans produced under the legal umbrella of the 2004 LOTU and its 2006 regulations. Angolan Institute for Geodesy and Cartography (IGCA): Is responsible for the ongoing national land cadaster initiative and could participate by sharing its geographic data.	Secondary

Stakeholder	Role in the Project	Classification
Other Central Government Agencies	**Ministry of Territorial Administration and State Reform (MAT): MAT** is the central government structure that the local governments are under. MAT does play a direct role in project, but can influence the local structures in appropriation of the project. **Ministry of Women, Family and Social Action (MINFAMU):** MINFAMU is responsible for the social assistance and women inclusion policies. It will be a relevant player in approach of the existing gaps regarding the limited access of women to productive resources (forest resources), services and employment opportunities; and invest in their technical and leadership skills so that they can better participate in decision-making and fully benefit from the project?s interventions. **Ministry of Telecommunications,Information Technologies and Social Communication (MTTICS):** The National Institute of Meteorology and Geophysics (INAMET) is the national institution in charge of monitoring the weather and climate. It is also a research organization, which provides scientific services in the fields of meteorology and geophysics under the Ministry of Telecommunications and Information Technologies (MTTI). INAMET is represented across the country through its provincial departments. Jointly with DNAP and IGCA, INAMET will be engaged by a partnership to encourage the sharing of geographic data.	Secondary
	Institutional Stakeholders within At the Sub-national levels	
Provincial Governments of Cunene and Cuando Cubango	Mostly through the interfaces of the provincial directorates of MCTA and MINAGRIP, provincial governments will be engaged in the planning and implementation of the project and support its activities in the demo landscapes. They will support the project in all its phases and will ensure linkage with local development strategies. They are key beneficiary of project?s capacity building interventions. One important fact to refer is that, at local level has different consultation councils like, community auscultation council, social concertation council, community oversight council.	Secondary
Municipal Governments	Together with provincial governments, the municipal governments will be working on the project?s execution and provide support throughout the entire time of its implementation and planning. The two target municipalities are: Cahama in Cunene and Cuchi in Cuando Cubango. The respective municipal administrations are also a key project beneficiary.	Primary
	Local Stakeholders	
Family Farmers	The family farmers are responsible for the most of the country's agricultural production. In project's sites, these groups will be the first and direct beneficiaries of the project on the ground, with special emphasis on gender inclusion.	Secondary
Farmers Associations	They are very relevant for the project, once the farmers are organized in association and for the project?s implementation they can be mediators, enabling communication between local groups engaged in the project. They will also monitor the project?s activities..	Secondary
Traditional Authorities	In rural areas, traditional authorities play a very import role in communities. They will be direct beneficiary and the first interlocutor of communities for the project.	Secondary
	Funders and Civil Society Organizations	

Stakeholder	Role in the Project	Classification
Resource Partner/Donor	The group includes funders, financiers and others alike. Wherever relevant the project will to collaborate with possible donors and private sector. Co-financing with multilateral partners is being leveraged and more details will be provided in due course. In AnnexA3 (Baseline & Co-financing: All initiatives, in USD million), initiatives with synergies and collaboration with IFAD SREP - Smallholder Resilience Enhancement Project AFDB Agric Value Chains ? Support to Sust. Dev. & Growth	Primary or Secondary
NGOs and CBOs	The project will be implemented with the participation of NGOs, in particular those that are currently helping build the capacity of local land users and managers in from forest and agricultural sector. Project, during preparation and implementation, will collaborate with a wider network of NGOs working in the region like, DBDS (Association for the Defence of Biodiversity and Sustainable Development), ACADIR (Association for Environment Conservation and Integrated Rural Development), Environmental Network Mayombe (RAM) which is an association of 47 registered environmental ONGs and CSOs, ADRA (Association for Angolan Rural Development), World Vision and Foundation Codespa.	Key, Primary or Secondary
	Funders, Civil Society and supra-national Organizations	
SADC ? Southern Africa Development Community	SADC is an inter-governmental organization with headquarters in Gaborone, Botswana, composed of member States. Its goal is to further the socio-economic cooperation and integration as well as political and security cooperation among 16 southern African countries. Through the organ?s Council of Ministers a number if important sectoral decisions are made, including on environmental matters. The sub-regional dialogue that would be generated from the activities related to LDN and the DSL IP, would be instrumental in leveraging SADC?s decision-making power to help create an investment friendly environment for LDN. Such measures would also enhance implementation of the GGWI-S, including with the support from other partners.	Secondary
River Basin Commissions, etc.	Transboundary Commission for Watershed Management (OKAKOM, KUNENECOM): The project's sites are located in watersheds of Cunene and Okavango. These transboundary watersheds are shared between Angola and Namibia in case of Cunene, and Angola, Namibia and Botswana in case of Okavango. These watersheds are managed by permanent international commissions, KUNENECOM and OKAKOM. These bodies can give a lot support for the project, once it already implements several projects in these watersheds, that we can highlight, Climate Resilient Infrastructure Development Facility (CRIDF); Environmental monitoring and Future of Okavango. Other important thing to refer is the transboundary project Okavango-Zambezi (KAZA) that can strength the project.	Key, Primary or Secondary
Academic and research institutes	Where applicable, project?s activities will be developed in cooperation with local research institutions. The potential academic and research institutes for this project at local level can include the Institute Polytechnic of Ondjiva in Cunene, Institute Polytechnic of Environment 31th of January, University Cu?to Cuanavale in Cuando Cubango and others.	Secondary
Entrepreneurs in relevant domains	Entrepreneurs providing services or products that can contribute to SLM/SFM and to the diversification of rural economy have an interest in the sustainability of the resources base of rural areas and could contribute to SLM/SFM through their businesses.	Secondary

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

345. Different budget lines have been allocated to ensure the identified stakeholder are meaningfully involved throughout decision making process. This includes several capacity development workshops at local, and regional levels, regular consultation meetings and surveys, communications strategy, among others. The engagement of the stakeholders related to lessons learned of other participant countries in the program will be made through regional exchange mechanism (REM).

346. The results framework has been structured to include indicators that ensure stakeholder participation in all components of the project (see Annex A1). The engagement of national and local institutions is also reflected in the results of institutional capacity development, strengthening of policy, regulatory and planning frameworks. At local level, the communities, farmers, entrepreneurs will be engaged through FFS, FFF as main actors in sustainable land management of drylands. At landscape level, the development and implementation of integrated land use plans will involve extensive consultation of local stakeholders. At the regional level, the engagement of stakeholders will be through transboundary approaches as LDN dialogue platforms, intergovernmental agreements and sharing of lessons learned.

347. The PMU will be responsible for implementing all stakeholder engagement activities including outlined in the Stakeholder Engagement Matrix (Annex I2). It will also be responsible for monitoring and reporting on stakeholder engagement through the annual project implementation reports (PIRs). Relevant tasks have been incorporated into the Terms of Reference of the project staff and budged for accordingly (see Annex M).

348. In the annual PIRs, the PMU will report on the following indicators:

1) Number of government agencies, civil society organizations, private sector, vulnerable groups and other stakeholder groups that have been involved in the project implementation phase.
2) Number of engagements (such as meetings, workshops, official communications) with stakeholders during the project implementation phase.
3) Number of grievances received and responded to/resolved.

Select what role civil society will play in the project:
Consulted only;
Member of Advisory Body; Contractor; Yes
Co-financier;
Member of project steering committee or equivalent decision-making body; Yes
Executor or co-executor; Yes
Other (Please explain)

1) Stakeholder Consultation in project formulation[1]

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
Ministry of Culture, Tourism and Environment (MCTA)	Key Stakeholder and Direct Beneficiary	**Implementation Partner and National Government Institution body**	Face-to-face meetings and PGG inception	MCTA as the project proponent and the leading institution vis-?-vis the project, housing the PMU and ensuring the project?s alignment with governmental policies and priorities Under MCTA, The National Directorate for Environment and Climate Action (DNAAC) will be the focal point for the project	Chairs the PCS from the outset, leading consultations with governmental stakeholders, including the validation in times of COVID-19.	Participation of all directorates
Under Ministry of Culture, Tourism and Environment (MCTA), including DNAAC and INBAC and other directorates of former Ministry of Environment and bodies (DNA, DNB)	Key Stakeholder and Direct Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception and validation workshops	Interested in the project and supportive of its agenda. Will act providing, inputs and support, in consultation with DNAAC and the Minister?s Office.	Participate in the validation	
Ministry of Agriculture and Fishery (MINAGRIP)	Key Stakeholder and Direct Beneficiary	**Implementation Partner and National Government Institution body**	Face-to-face meetings	MINAGRIP recognizes that the project will be very useful tool to concretize its programs	Co-chairs of the PCS from the outset	

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
			PGG inception	Proposed partnership with IDA and IDF		
Under Ministry of Agriculture and Fishery (DNF, DNAP,)	Direct Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception and validation workshops	Interested in the project and supportive of its agenda.		
Forest Development institute (IDF)	Direct Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception Face-to-face meetings PGG inception and validation workshops	The IDF identified several activities that project could support like, trainings and the promotion of non-timber forest products, etc.	From the onset as key hosting institution and partner to implement the activities	
Agrarian Development Institute (IDA)	Direct Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception	The IDA will be the hosting institution to carry out climate change adaptation practices like smart agriculture, resilient seeds, etc	From the onset as key hosting institution and partner to implement the activities	

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
			Face-to-face meetings PGG inception and validation workshops			
Minister of Water and Energy (MINEA)	indirect Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception	The INRH under the MINEA is building several water infrastructure in project's sites	During the implementation phase	
Office for Administration of watersheds of Cunene, Cuvelai and Cubango (GABHIC), under the Ministry of Energy and Water (MINEA)	Direct Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception Face-to-face meetings PGG inception and validation workshops	The GABHIC host several projects financed by different donors and has a lot possibility to make activities in coordination with the project	From the onset as key hosting institution and partner to implement the activities	
Ministry of Urban and Housing Affairs	Indirect Beneficiary	**National Government Institution body**	Face-to-face meetings PGG inception and validation workshops	IGCA recognize the importance of cadaster of land tenure issues and are receptive to establishing partnerships for this purpose.	During the implementation phase	

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
Provincial Governments / Provincial Authorities	Indirect Beneficiary	**National Government Institution/body**	PGG inception and Face-to-face meetings Consultation workshop Face-to-face meetings	The provincial governments of Cunene and Cuando Cubango are committed to support the project, as local point through Provincial directorate of environment	During the implementation phase	
Municipal Authorities	Direct Beneficiary	**Local Government Institution/body and Beneficiary**	Face-to-face meetings Consultation workshop Face-to-face meetings	The Administration of Cuchi and Cahama helped to identify the places of land degradation and deforestation and the causes	During the implementation phase	.

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
Traditional Authorities	Direct Beneficiary	**Local Communities**	Face-to-face meetings Consultation workshop Face-to-face meetings	In Tchipelongo and Canona village, the traditional authorities (soba) reported the main problems in the villages and the solution in their perspective	During the implementation phase	
Non-Governmental Organizations	Partner and Indirect Beneficiary	**Implementation Partner**	Face-to-face meetings PGG inception workshop Face-to-face meetings	The NGOs consulted already has activities in the project's sites, and has the possibility to be a implementation partner	During the implementation phase	ONG consulted: ADRA, ADPP, World Vision, Association of Organics Products, COSPE
Family Farmers and Farmer Associations	Direct Beneficiary	**Local community**	Face-to-face meetings Consultation workshop	The farmers recognized that the project will contribute to sustainable productions	During the implementation phase	
Center Agro-Ecologic of Cuando Cubango	Indirect Beneficiary	**National Government Institution body**	Face-to-face meetings Consultation workshop PGG inception	the project foresees the engagement of the academy and this institution can be one of them	During the implementation phase	

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
Provincial Directorates for the Environment	Indirect Beneficiary	**Provincial Government Institution body**	Face-to-face meetings Consultation workshop PGG inception	The project will have the institutional support of the local government	During the implementation phase	
Provincial Directorates for Agriculture, Livestock and Fishery	Indirect Beneficiary	**Provincial Government Institution body**	Face-to-face meetings Consultation workshop	The project will have the institutional support of the local government	During the implementation phase	
Ministry Public Works and Spatial Planning (MINOPOT ? INOTU - IGCA)	Indirect Beneficiary	**National Government Institution/body**	PGG inception and validation workshops Face-to-face meetings PGG inception and validation workshops	The Ministry recognizes the importance of land use planning and the receptive to establishing partnerships for this purpose.	During the implementation phase	
Ministry of Territorial Administration (MAT)	Indirect Beneficiary	**National Government Institution/body**	Face-to-face meetings PGG inception and validation workshops	MAT will give institutional support for the engagement of local government and traditional authorities that are under its tutelage	During the implementation phase	

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
Ministry of Social Action , Family and Women Promotion (MASFAMU)	Indirect Beneficiary	**National Government Institution/body**	Face-to-face meetings PGG inception and validation workshops	Gender engagement is a priority for the project	During the implementation phase	
Ministry of Telecommunications, Information Technologies and Social Communication (MTTICS - INAMET)	Indirect Beneficiary	**National Government Institution/body**	Face-to-face meetings PGG inception and validation workshops	INAMET will support the project with the meteorological data needed.	During the implementation phase	
Foreign Embassies	Partner	**Resource Partner/Donor**	Face-to-face meetings PGG inception workshops	Potential partnership with other projects funded by the embassies	During the implementation phase	
Private Sector	Partner	**Resource Partner/Donor**	Face-to-face meetings PGG inception workshops	The leverage of value chains will engage the private sector	During the implementation phase	
Academic and research institutes	Partner	**Resource Partner/Donor**	Face-to-face meetings PGG inception and validation workshops	The academy will be engaged in project implementation	During the implementation phase	

Stakeholder Name	Stakeholder Type	Stakeholder profile	Consultation Methodology	Consultation Findings	Expected timing (for Stakeholder Engagement Plans Only)	Comments
African Development Bank	Partner	**Resource Partner/Donor**	Face-to-face meetings PGG inception and validation workshops	Potential partnership with other projects funded by the bank	During the implementation phase	

[1] See FAO Operational Guidelines for Stakeholder Engagement.

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

GENDER EQUALITY AND WOMEN'S EMPOWERMENT

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women?s empowerment? (yes X /no) ***Refer to Section 3b. Gender Analysis and*** Action Plan **Sources**.[1][1]
If possible, indicate in which results area(s) the project is expected to contribute to **Gender Equality**: X closing gender gaps in access to and control over natural resources; X improving women?s participation and decision making; and or X generating socio-economic benefits or services for women. Does the project's results framework or logical framework include gender-sensitive indicators? (yes X /no)

3a. Gender Equality

349. ***Anational gender equality policy has been in place in Angola since 2013***. According to World Bank data, between 2000 and 2018 there has been a significant increase in representation of women in decision-making positions in the higher political sphere (WB 2019, AfDB 2008[2][2]). Women today make up 30.5% of Members of Parliament as compared to 15.5% in 2000. By 2008, at least 19.5% of Ministers, 16.4% of Secretaries of State, 11% of Governors were women. By 2018, there is indication that women occupied 34.4% of ministerial level positions, compared with 3-5% political representation in the first decade of the millennium. The Ministry of Social Action, Family and Promotion of Women was created in 2017 with to promote the integration and mainstreaming of woman and family as the fundamental pillar of society. Nevertheless ***the further the distance away from the center of power, the less influential are women voices***in government bodies: at municipality and village level they still tend to be quasi non-existent. Although legislation is beginning to address gender equality,with revision of the Criminal Code andlaws against gender-basedviolence, customary laws remain effective and tend to exclude and discriminate against women, perpetuating patriarchal norms and social and cultural practices such as child marriage,polygamy, lack of legal protection on inheritance and property, as well as the prevailing dowry practice.92

350. According to World Bank data, in 2017 women represented almost 51% of Angola?s population, 53% of the population in rural households, and nearly 58% of the work force in

agriculture. Angola has a high fertility rate, with 5.9 children per woman over the period of 2012-2015. ***Literacy rates among female adults (?15 years old) is 53%, compared with up to 79.9% in 2014 among men***. Such a young population as in Angola, with 70% of its people under the age of 18, provides great hope for the future but also presents a lot of challenges. Of particular concern is girls? access to education, including to science, technology, engineering, and mathematics, and all forms of violence often exclude them from education and other opportunities. During the 2013-2017 period, net school enrolment rates for both sexes stood at 71% in primary school but in secondary school, rates were 43% for boys and 37% for girls (CEDAW 2019[3]).

351. Given the social, cultural, economic and political situation in Angola, ***poverty impacts women and children particularly hard***. About half of the population (48%) still live in poverty and risk being excluded from development processes. Additionally, poverty has gender dimensions: most of the poor are women, especially in rural areas92. Poverty is greater in female-headed households; and many women (34% of all households) are also *de facto*household heads because of polygamy, male labour migration or conscription ongoing on their households (World Bank, 2017).

352. Gender gaps in Angola are large and challenging, for example: women have lower access to productive inputs such as land and credit; they are often only able to access land through their husbands or sons; they are less likely than men to borrow money to start or expand a farm or business; and existing customary law reduces women?s chances of accessing credit, as land is often required as collateral. Gender roles concerning child and elderly care also negatively impact on women?s economic empowerment, as the expectation that women must care for children hinders their participation in the labour force.91

353. According to the constitution, land belongs to the state although it can be transferred to individuals and corporations.Smallholder farming communities are mostly affected by gender conflicts regarding the control of land. ***Generally, women have restricted access to and control over land in most parts of the country***, although the situation differs from region to region, and between ethnic groups according to their social organization (mainly patrilineal) and the farming systems introduced in colonial times. There have been profound changes in land tenure due to the war and subsequent displacement of millions of people. Today, land tenure patterns are in the process of being transformed, as social and economic relations have undergone profound changes. In overpopulated peri-urban areas, survival fighting is leading to open land struggle. New land rights legislation and regulations for its implementation were approved by Parliament in 2018 after long public and political debate. Private land titles can now be acquired from municipalities but the system is not in place everywhere and barriers hinder its functioning.

354. In the context of rural Angola, women traditionally take care of agriculture and contribute most to the household economy. Their role is fundamental and includes livestock grazing, raising small animals, vegetable gardens, fetching water, collecting fuelwood and collecting medicinal plants; while at the same time, they are caring for the young, elderly and sick, and are also bearers of traditional knowledge. Rural women in dryland areas play a key role in natural resource management and achieving food security. They often grow, process, manage and market food and other natural resources.

355. While the predominance of women in the family farming sector is widely recognized at all levels, this is not reflected in the numbers of women in leadership positions, such as extensionists, presidents of farmer associations and cooperatives. In recent years, Government has registered private landowners and given particular attention to women in rural areas, offering diversified training support through over 800 centers in villages across the country and literacy campaigns. Poverty reduction efforts targeted over 59,000 families in rural areas. A present focus of government is encouraging the role of women within community management of land, who otherwise are often socially marginalized from such opportunities.92

356. ***Reliable sex- and age-disaggregated statistics on gender roles*****in dryland management activities**are lacking. In general, men are responsible for decision-making and planning farming activities, while women have little authority and have to seek their husbands? permission before they commit family resources or make decisions (FAO). Women tend to have a heavier workload, with less leadership roles. ***Local power structures are traditionally male-dominated; among the ?Sobas?, charged with the task of land distribution, virtually all members are men.***It is only recently that the *Jango*? committees of the village elders where decisions are made ? accepted the participation of women. **Hence, resolution of agricultural problems in Angola, especially family farming, needs a gender-sensitive approach**.

357. As gender equality is at the core of the proposed project, a gender-sensitive approach and analysis were adopted during the PPG process and will be embedded within project implementation. Particular attention will be given women and their specific vulnerability in women-lead households. Gender gaps Identified in the agricultural sector are:

- access to economic resources, such as productive land, cash and credit;
- tools, agricultural inputs such as seeds, fertilizer, etc.;
- skills and technological knowledge;
- market institutions and market access, including transportation; and
- income-generating projects in innovative agricultural and non-agricultural sectors.

358. During the PPG phase a *Self-Evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists*(SHARP) was undertaken in the two project intervention landscapes of Cahama and Cuchi. The SHARP results highlight a picture of gender-based inequality in the project landscapes with respect to the labour burden within households, land tenure, other socio-economic patterns and, importantly, decision-making processes on farms. Findings are highlighted in Box 10and full details are in the draft report.[4]4These findings provide the basis to identifying gender entry points for monitoring during project Implementation in Table 7and the Gender Analysis and Action Plan that follows in Section 3b.

359. The gender equality tag applied to the project is G2A:

GENDER MARKING: The current project has been tagged as **G2A** (see cover page) i.e. it ?*... addresses gender equality in a systematic way, but this is not one of its main objectives*?.[5]5

Box 10. SHARP results summary, including self-assessed priorities, from project target landscapes

Baseline Household and Resilience Assessment Report, FAO, ROME JANUARY 2020

A baseline survey was conducted in Cuchi and Cunene, Angola during the PPG phase using the SHARP tool, which was adapted to fit the context and objectives of the project. Particular attention was paid to crops, trees, land access, resource management (land, forest, water and energy) and selected socio-economic indicators. As such, a core set of 19 question-modules comprised the standard survey, with seven additional modules used to capture relevant aspects aligned to project objectives and its M&E system.

In Angola, women tend to be more reliant on land for natural resources. Thus, land degradation negatively affects them disproportionately. Gender inequality is also often reflected in intra-household relationships and in land tenure and its governance more generally.

SHARP results confirm a picture of **gender-based inequality** in the two project landscapes ? inequality that is also reflected in how decisions on land use and natural resources are made within households by men and women. Inequality patterns in economic and political opportunities based on gender were noted in 31% of household interviews, as against 64% where this was not noted. There was no further specification on whether this inequality was based on ethnic group kinship or religion ? hence, it is assumed to purely gender-based.

Household revenue is spent mainly on food and breeding livestock, with men spending more money on livestock and women dedicating most of their income to food. ***The main gender gaps include:***

- Land tenure security reported by 63% of male respondents, against 36% of female ones.
- Most of men-headed households (71%, 12 households) have two income sources, while this is true for 47% women-led families (7 households) and 41% of jointly led households (12 households).
- Men make most household budget-decisions (87% of men and 43% of women), while decisions on food purchase are mostly made by women (57% of women stated this fact, while 92% of men declared that women made over half of the decisions.
- Majority of decisions linked to reproductive labour (e.g. housekeeping, childcare) are made by women.
- Financial decisions: most respondents (87% of men and 70% of women) made their own decisions about their engagement in employment outside of agriculture and on how to spend their own income (when applicable).

Gender-differentiated priorities, sorted in order of priorities perceived by women for ease of comparison between genders:

	Priorities - aimed to increase agricultural production, house revenue and food security: scored 1 (high) to 10 (low)	**Men**	**Women**
a)	Improved access to enough and clean water sources	1.3	1.0
d)	Enough and good meals, food security	2.3	1.2
e)	Better knowledge on pest management practices	2.3	1.4
c)	Water conservation	2.0	1.6
g)	Improved access to energy for household and agriculture	2.4	1.6
f)	Higher diversification of on-farm agricultural activities	2.3	2.0
h)	Better access to information on weather and adaptation practices	2.9	2.1
j)	Land management	-	2.6
i)	Strengthening their households? capacity to deal with changing climate patterns (climate change)	3.0	3.0
b)	Increased access to forest resources (trees)	1.9	-

Table 7. Gender Entry Points for Monitoring during Project Implementation

#	Question	Answer	Comment

#	Question	Answer	Comment
1	*Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women?s empowerment?*	Yes	Following a gender-analysis during the PPG process, gender-responsive measures were designed to increase women?s participation and promote their empowerment and leadership in the agricultural sector through project activities, especially in family farming, understanding LDN and related climate-smart agriculture, improved land, water and energy management, green value chains and product marketing, and cooperative mechanisms.
2	*Which area(s) the project is expected to contribute to gender equality:*		The project will contribute to all three areas by creating specific opportunities for women to participate in project activities and benefit from the project?s outcomes. Assist women in attaining private land ownership titles (political and legal support); negotiate mechanisms for full participation of women in communal land and forest use; foster engagement of women?s groups in LDN. Encourage women to learn about SLM, SFM, CSA; as main agricultural producer support their lead in community resilience, diversification of agricultural production, alternative products and income strategies, thus empowering women to engage in higher decision-making levels. Water and energy management, improved cooking stove for every household; improved charcoal kilns, credit lines for women?s groups, marketing strategies for alternative agricultural products (according to value chain assessments), dry-land gardens, enterprises for non-agricultural women.
2a)	*Closing gender gaps in access and control over natural resources*	Yes	
2b)	*Improving women?s participation and decision-making*	Yes	
2c)	*Generating socioeconomic benefits or services for women*	Yes	

#	Question	Answer	Comment
3	*Does the project?s results framework include gender-sensitive indicators?*	Yes	Specific gender-sensitive indicators are included in the project?s Results Framework in order to assess its progress in promoting gender equality and improvements in women?s participation in decision-making processes, as follows: - Several gender sensitive indicators were included in the Results Framework, which has 21 indicators. - Of the 21 indicators, 3 include explicit gender disaggregation. - Of the 21 indicators, 12 are unsuitable for monitoring gender mainstreaming (e.g. they monitor number of hectares), leaving 9 indicators where gender can be potentially included. Among them, 3 include the gender aspect in one way or another. The above is a strong token of gender mainstreaming for a project tagged as ?G2a? for its gender mark.
	Source: GEF Guidance to Advance Gender Equality, 2018		

3b. Gender Analysis and Action Plan

Key Findings from the ***Gender Analysis (or equivalent socio-economic analysis)***

Components 1 and 2 gender-related analysis:

1. **Men and Women have unequal socio-economic conditions at the national level**, which reflects also on conditions at local levels, in particular in Cuando Cubango and Cunene provinces, where gender inequality conditions are aggravated by demographic and income-related patterns, coupled with traditions and cultural practices. This includes:

a. differentiated literacy rates (adult literacy rates are 10%[6]6 lower for women than men at national level ? and worse still in Cunene and Cuando Cubango);

b. 69% of women earn less than their husband or partner (Nationally). In Cunene: 66,2% and Cuando cubago 38.7%;

c. unequal access to natural resouces and security of tenure (12% of women own land in partnership with husband or partner and 20% of men own land individually ? no data available for women owning land on their own);

2. The LDN Strategy, including the PANCOD, has only incorporated gender mainstreaming in an incipient way. The same applies to other related policies, plans, strategies and practices at the national level.

3. The national gender strategy is outdated, incipiently implemented and it has had minimal influence in the above cited conditions and/or policy-planning frameworks. Official national data, including demographic, poverty and market-related data are scant and/or biased, setting limits of accuracy and scope on gender-based analyses in general.

4. Women?s participation in LDN National Committee is marginal (15% female). In local land management committees (existing ones are the Councils for Social Consultation and Concertation - CACS), women?s participation is marginal and no gender mainstreaming mechanism is in place for the functioning CACS in target landscapes.

5. Gender-sensitive results from the SHARP carried out during the PPG appear balanced:

a. Household decision-making and leadership (male/female) is generally balanced: dual household leadership 47.5%; female-led households 24.6%; male-led households 27.9%, while the national average is 32% of rural households are led by women (2014 Census), but noting that the Census (i) did not consider the ?dual leadership category? and data on household leadership at sub-national level remained unpublished).

b. Food security and nutrition appears balanced: men appear to be worse off by a small margin, considering that: (i) both project sites have a generalized low HDDS incidence (39% for women; 42% for men and 41% for both) and (ii) the statistical difference between HDDS rates for men and women may not be significant, based on SHARP data from PPG.

6. **Women?s participation in dryland value chains** in Angola shows that in local communities they are more engaged in taking products to markets than men (62% of households sold at least a few of their products in the market, 58% of men, 70% of women); most primary level aggregators are women; but the more capitalized aggregators (with access to own transport) are mostly male. There is otherwise no information on local producer organizations, nor on their composition, let alone the gender aspects. +

Component 3, Angola-related gender analysis with respect to the regional and global components of the DSL IP Child Project:

7. **Women?s participation in the regional river basin committees is more or less balanced**, according to the data:

- Okavango Basin Steering Committee (OBSC): (members: n=7, of which 3 are female).
- Permanent Okavango River Basin Water Commission (OKACOM Secretariat) (members: n=14, of which 7 are female).
- Angola-Namibia Joint Permanent Technical Commission on the Kunene River Basin (PJTC): (members: n=6, of which 2 are female).

Gender Action Plan			
Strategic Goal/ Activities	**Detailed description / timeline**	**Indicators and targets**	**Budget**

Gender Action Plan			
Strategic Goal/ Activities	**Detailed description / timeline**	**Indicators and targets**	**Budget**
1. Ensure sustainability of land use and agricultural and pastoral production	***[as below]***	***[as below]***	
1.1 Collect national and regional level gender-parity data and gender participacipation	Targeted surveys (electronic where needed)	Inception	Allocated under Outcome 2.1
1.2 Conduct a new round of baseline SHARP with due gender and ethnicity sensitivity	Household (HH) surveys using SHARP+ methodology, covering statistically significant number of (HHs). Results at project inception will replace existing SHARP results, which have limitations.	Conclude at least 2 rounds of SHARP survey with due methodological stringency: - 1 round at mid-term - 1 round at project end	Allocated under Outcome 3.2
2. Reduce land degradation impacts among the most vulnerable social groups by making use of their traditional knowledge base to better cope with LD impacts and improve food security	***[as below]***	***[as below]***	***[as below]***
2.1 Taylored FFS curricula to include traditional knowledge and its ties to gender	Methodology to be developed. Year 1 preferred.		Budget allocated under Outcome 2.1 / FFF-FFS
2.2 One scoping study on gender and NTFPs collection and use	Methodology to be developed. Year 1 preferred.		Budget allocated under Outcome 2.3
3. Foster women?s full access and equal participation in learning and implementing activities of the Agricultural Support Services	***Throughout implementation: foster women?s full access and equal participation in activities of the Agricultural Support Services***	***[as below]***	***[as below]***
3.1 Supply 1000 improved cooking stoves to households and communal pyrolysis stoves for producing biochar / *terra-preta*, followed by training on maintenance	500 in Cunene, 500 in Cuchi 1 pyrolysis stove per community assisted by FFF, for which specific training will be delivered and custodianship entrusted to women		Budget allocated under Outcome 2. 2 / FFF-FFS
3.2 Local production of improved cooking stoves with women community association, training and testing, start-up credits	Target 2,000 cooking stoves		Budget allocated under Outcome 2.2 / FFF-FFS

Gender Action Plan			
Strategic Goal/ Activities	**Detailed description / timeline**	**Indicators and targets**	**Budget**
3.3 Identify 10 community water retention installation sites and construct with villagers and farmers, community associations; and provide training on water disinfection methods	5 in each project landscape		Budget allocated under Outcome 2.2 / FFF-FFS
3.4 Construct wells, if applicable, with solar pumping mechanism	5 in each project landscape		Budget allocated under Outcome 2.2 / FFF-FFS
3.5 Test and train 50 women/50 men on improved charcoal kilns, later implement 10 kilns	1 in each project landscape		Budget allocated under Outcome 2.2 / FFF-FFS
4. Women and men learn together how they become more resilient to LD and CC	***Throughout implementation: foster women?s full access and equal participation in activities of the Agricultural Support Services***	***[as below]***	***[as below]***
4.1 Functional alphabet courses for young girls, women, boys and men, as applicable for the project zone; raising education levels through formal school, agricultural training	As per FFS methodology	Participants: gender parity is the goal	Budget allocated under Outcome 2.2 / FFS
4.2 Agricultural extension mechanisms through the FAO mechanism: information/training on crop and livestock production and management, post-harvest food storage, pest management practices, pests and crop diseases, adaptation practices overall	As per FFS methodology	Participants: gender parity is the goal	NA ? already included in respective budgets for the FFS / FFF
4.3 Special training of women and men on integrated management and use of sustainable alternatives, such as natural pesticides, crop rotation, increased biodiversity, irrigation and reforestation activities.	As per FFS methodology	Participants: gender parity is the goal	NA ? already included in respective budgets for the FFS / FFF
4.4 Community training: women/men parity participants on the use of climate information services, Climate Smart Agriculture, including e-sources, to improve climate shock preparedness and capacity of small farmers against climate shocks, droughts etc.	As per FFS/ FFF methodology	Participants: gender parity is the goal	NA ? already included in respective budgets of FFS / FFF

Gender Action Plan			
Strategic Goal/ Activities	**Detailed description / timeline**	**Indicators and targets**	**Budget**
4.5 Foster due consideration of multiple roles of women in dryland landscape management, including establishment of a corps of female extensionists and agro-value chain technicians.	Rural extension: Disseminate appropriate techniques, in which women?s positive role in the selection of crops, seeds and techniques agro-sylvo-pastoral land-use management practices can be enhanced and steered towards sustainability. Agro-value chain: As part of value chain development activities, assist women and men with business planning, organization and efficiency tools.	For rural extension: Target quota 30 ? 40% female participation in overall rural extension activities through FFS and FFF packages For Agro-value chains: Target quota 60% female	NA ? already included respective budgets of FFS / FFF Included also under Outcome 2.3

[1]Sources:GEF Gender Equality Guidelines, Guide to mainstreaming gender in FAO's project cycle, GEF Gender Guidelines.
Mor, Tzili (2019). A Manual for Gender-Responsive Land Degradation Neutrality Transformative Projects and Programmes, UN Women, The Global Mechanism of the UNCCD, and http://catalogue.unccd.int/1223_Gender_Manual.pdf, accessed on 01/04/2020.
[2]AfDB, 2008, Angola -Country Gender Profile. African Development Bank/Fund; World Bank Group, 2019, Angola: Systematic Country Diagnostic Creating Assets for The Poor, http://documents.worldbank.org/curated/en/337691552357946557/pdf/angola-scd-03072019-636877656084587895.pdf
[3]CEDAW, Committee on the Elimination of Discrimination against Women considers Angola's report,
January2019, https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=24225&LangID=E.

[4]FAO Angola, GEF, Baseline Household and Resilience Assessment Report, Draft Report January 2020, with the *Self-Evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists*(SHARP), conducted in the two project intervention areas of Cunene and Cuchi.
[5]With reference to FAO?s Guidance Note on Gender Mainstreamingin project identification and formulation.
[6]Report of Multiple Indicators and Health (IIMS 2015-2016)

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.

PRIVATE SECTOR ENGAGEMENT

360. The project?s engagement with the private sector follows the guiding principles of the GEF?s 2019 Private Sector Engagement Strategy (PSES)[1]:

- strong in-country networks and relationships;
- specificity that is useful for the private sector: geographies, metrics, transparency; and
- insight into the major and gender-sensitive understanding of developing markets.

361. Strong participation with the private sector will be promoted by the project, particularly with respect to greening value chains under Outcome 2.3, underpinned by a strategy to be developed in partnership with key players. Moreover, the strategy will draw onthe analysis of the local economy and potential value chains in the target landscapes, details of which are extracted from the PPG report[2]and provided in Annex X-2.2. The analysis covers four sub-topics, discussed in relation to Barrier 2 elsewhere in this document: (i)maladptive local production practices; (ii) Technology, know-how and production diversification challenges; (iii) gender gap; and (iv) upscaling and market access. Various ago-value chain stakeholders were identified through the PPG Value-Chains Assessment.

362. The private sector is a key stakeholder and essential to delivering part of the project?s strategy to develop green value chains. However, they face a series of barriers to achieve its development, as presented in the statement below:

> *?Farmers are poorly organized and face difficulties to access markets, improved seeds, useful agronomic know-how and basic mechanization, resulting in low income, low resilience and incipient technological progress, sustaining gender-based inequalities and ultimately resulting in maladaptive land management at farm and community levels).?*

363. The Gender Action Plan includes women?s participation in dryland value chains, thecontext being that women in local communities are more engaged in taking products to the market (70% of women) than men (58%). Also, most primary level aggregators of local produce are women but the more capitalized aggregators, with access to own transport for example) are mostly male.

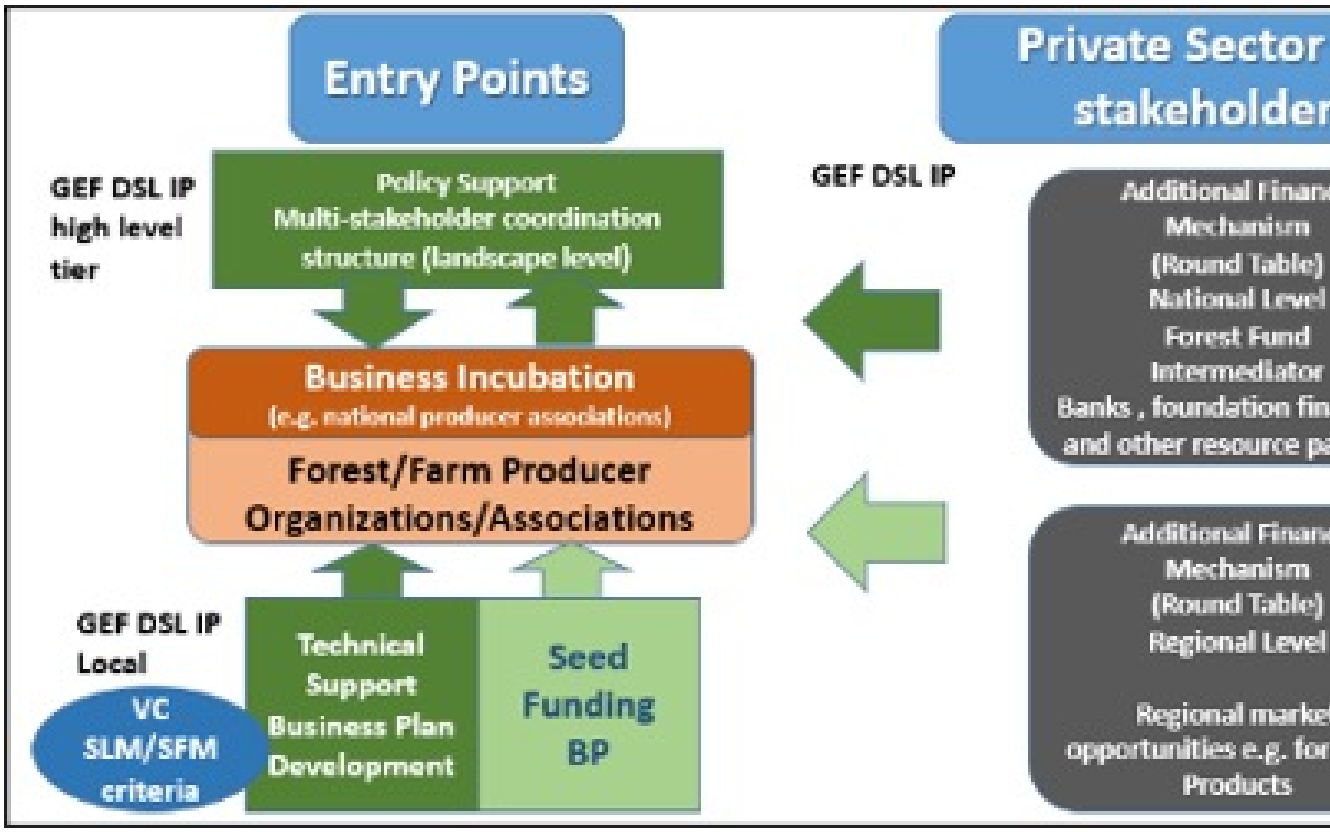
364. A possible strategy for private sector engagement is summarized in Table 8;and a more specific example showing how private sector involvement in dryland commodity value chains and capacity development will be targeted is provided in Figure 10.

Table 8. Private sector stakeholder engagement modalities

Through / With ...	**Private Sector**	**Government**	**Local producers**	**?Catalysts?**

Through / With ...	Private Sector	Government	Local producers	?Catalysts?
Strategic Analysis	Help stakeholders understand conditions of market access sustainability for different GVCs *PURPOSE*: conditions of market access and sustainability for different GVCs	Help stakeholders identify policy barriers to sustainable development of local drylands economy *PURPOSE*: identify policy barriers to sustainable development of local drylands economy	Providing data and being willing recipients of assistance PURPOSE:Providing data and being willing recipients of assistance	Conveying results of the analysis. PURPOSE: Conveying the results of analysis
Capacity development	Identify opportunities and risks through gender-sensitive business incubation /development *PURPOSE*: Leverage opportunities and risks gender-sensitive business incubation	Help remove policy barriers to sustainably develop local drylands economy *PURPOSE*: Remove policy barriers	Technical support: FFS/APFS and other rural extension models to improve techniques, choice of crop *PURPOSE*: Technical Assistance (convey it).	Identify best suited technologies / practices to develop GVCs in any given context in dryland landscapes PURPOSE: Fostering technologies and practices
Facilitation	Match supply/ demand and producers / buyers. Provide seed funding (co-financing) *PURPOSE*: Leverage seed fund, match-making, etc.	Negotiate land-uses and their implications. Facilitate access to seed funding *PURPOSE*: Negotiate land-uses, assess implications	Help local Business Plan development PURPOSE: All of those before it.	Link needs to solutions, including technologies and practices PURPOSE: Linking needs to solutions

Figure 10. Engaging private sector stakeholders in agro/forests value chains



[1]https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF_C.57_06_GEF?s%20Private%20Sector%20Engagement%20Strategy_1.pdf

[2]Baseline andFeasibility Report on Value Chains, Baseline Content, FAO 2020.Refer toextract in Annex X-2.2 in Project Document.

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):

RISKS

Section A: Risks to the project

Table 9? Risk Description and mitigation actions

Description of risk	Impact *	*Probability of occurance	Mitigation actions	Responsible party
Insufficient political will and commitment to address LDN in the face of other political and economic pressures, and thus limited engagement and collaboration by national and local authorities with project implementation, failing to guarantee the successful achievement of project results	M	L	The fact that the LDN target has been mainstreamed into Angola?s climate change and national development policy frameworks, puts it high on the policy agenda. In any case, the project must leverage political will through active stakeholder engagement. Through a series of meetings, field visits and interactions with national stakeholders during the PPG process, the project?s objectives and results were developed to continue to be closely aligned with Angola?s national priorities and strategies, to the evolving policy agendas and the country?s international commitments under relevant MEAs and as articulated by the Government. Additionally, a strong stakeholder engagement and empowerment plan will be implemented in order to raise awareness of the government institutions about the importance of a successful project implementation and the government?s engagement. Finally, awareness raising will be continuous throughout the project to ensure that awareness levels are maintained even if there are changes in key political figures, government technical staff, etc.	PMU
Lack of capacity and expertise from local institutions to successfully engage, implement and integrate SFM/SLM in relevant policies, plans and sectoral frameworks of action.	L	L	Activities under components 1 and 2 (e.g. Outcomes 1.1 and 2.1) were developed specially to strengthen the national capacity and effectively engage local actors in the implementation of SFM/SLM best practices). A brief but focused Capacity Needs Assessment (CNA) has been carried out during the PPG. The some of the results are directly included in PRODOC Annex X-2.3. The general strategy embedded in the project?s outputs include have built on the CNA results and other sources (e.g. the description of the general context included in PRODOC Annex W-2. capacity development Component 3 will also dedicate efforts to the capacity building through knowledge sharing and learning among the other countries in the Miombo and Mopane landscape.	PMU

Description of risk	Impact *	*Probability of occurance	Mitigation actions	Responsible party
Lack of coordination and engagement between the project team and local communities on the implementation of the project?s activities.	M	L	The participative project design process, which included intensive consultations on project sites, helped to raise awareness and create a sense of ownership of local communities towards the project and its outcomes, reducing the risk of lack of engagement. Project interventions also foresee a strong stakeholder engagement plan to continue and improve the involvement and relationship between the project team, government institutions and local communities.	PMU
The consequences of the global Covid-19 pandemic can impact the project?s financial support, partnerships, and interactions.	M	H	It is likely that the project will suffer with operational impacts from the global Covid-19 pandemic. Given the timeline of the PPG process, the project team was able to consider the potential impacts on the project design. Measures such as the consolidation of co-financing sources and adjustments to the methodologies used in interactions between project participants, at least on the short term, were included. Furthermore, in line with an adaptive management approach, project activities, targets and operational arrangements will be reviewed at the project inception stage and changes made to mitigate Covid-19 impacts if required. . In this sense, GoA launched initiatives such as the PIAAPF will be considered for synergies and coordination creation.	PMU

Description of risk	Impact *	*Probability of occurance	Mitigation actions	Responsible party
Current and future climate change impacts will threaten the sustainability of the project?s investments and results	M	M	The potential impacts of current and future climate change impacts on the project sites were considered in project design; therefore, the activities, outcomes and outputs were developed in order to minimize take these impacts into account. Various techniques and approaches aligned with Climate Smart Agriculture/SLM/SFM practices and livelihood diversification will be promoted and adopted through the project help build resilience to CC impacts. In addition, by introducing effective government support, scaling up best practices and incorporating a strong knowledge management and sharing mechanism. By mainstreaming and expanding the knowledge about SLM/SFM best practices in Angola the project?s results will be able to achieve sustainability. Component 1: Climate risks will be systematically incorporated in the integrated land use planning process to anticipate future extreme weather events and plan positive actions of sustainable land management. This joint planning process will benefit from climate change related assessments conducted during the PPG (SHARP) as well as available climate change analysis (e.g. IFAD/ACDI climate analysis) and other available data sets. The National Meteorological Authorities (NMA) and other institutions leading the collection, analysis and use of climate data should be engaged in the development and implementation of LDN strategies. Trainings and capacity building of relevant stakeholders should include activities on the use of climate information for informing strategies and planning, certain activities can be led by the NMAs. Component 2: The selection of evidence-based climate smart SLM/SFM practices will follow the results of the joint planning process (component 1) to ensure they are adapted to local contexts and supported by scientific evidence of project climate conditions. The identified practices should be integrated in the forest and farm producers? training manuals and be part of the Famers Field Schools curricula. The newly developed global note for FFS facilitators on integrating climate change adaptation into farmer field schools can inform this process as well as lessons learned from participatory engagement approaches such a PICSA. Climate field schools can link to demonstration plots of sustainable intensification practices and resilience measures post-harvest. The selection of dryland value chains should also consider climate related risks. Their selection should be based on (i) their viability under climate change in the mid to long term; (ii) their contribution to drivers of climate-related impacts; and (iii) their ability to increase the resilience of the most vulnerable populations. Development of green value chains, including appropriate infrastructure or technologies to climate proof food value chains, should be based on results of climate impact assessments. Planning around drying, storage and transport can be informed by climate impacts at each stage. A detailed climate risk summary for the DSL-IP Miombo cluster (Angola, Botswana, Malawi, Namibia, Tanzania and Zimbabwe) can be found	PMU

*__H__: High, __M__: Moderate, __L:__Low

Section C: COVID19

365. The first cases of Covid-19 in Angola were registered from passengers that landed in Angola on 16Th and 17th March. on 27th March the government declared an emergency state that imposed restrictions on mobility and in the economy. On 26th May the government declared the calamity state reducing the restriction measures. The epicenter of the cases is in capital Luanda that is in the sanitary fence. The number of cases in the other provinces is very low compared with Lunada. The number of cases has been increasing daily. By November the country registered 11.813 cases among which 6.251 active, 5.266 recovered, 296 dead.

366. As other countries, Angola's economy is not immune to the harmful effects of COVID-19, especially because it is very dependent of importations of goods and services. The outbreak of the COVID-19 pandemic has significantly slowed down economic activity and created uncertainties in the short- and medium-term outlook of the Angola economy. It has affected economic activities through both demand and supply-side shocks. On the demand side, the containment efforts and the consequent policy actions, such as physical distancing and lockdowns, have led to reduced demand for Angolan commodities both domestically and internationally. On the supply side the labour force remained at home to prevent infection and spread of the virus, this led to a decline in domestic economic activities.

367. Angola is facing an economic crisis that started in 2014 years and up to here has been weakened and its growth has been slowed down because of: 1). reduction of the price of oil in international markets, which is its main source of financial resources through exportation.; 2). The drought and low level of agricultural production which exacerbated food and livelihood insecurity for the communities across the country. The pandemic is expected to disproportionately affect vulnerable groups. It is exposing and deepening previously existing vulnerabilities such as poverty, inequality, unemployment and overall human insecurity.

368. The government is taking measures to recovery from the pandemic impacts. Among these measures are health and economic measures. This could have some implications on the DSL project in Angola, for example the already identified co-financing for which the big share is coming from the government could be affected. As explained in the baseline, the Government of Angola launched in April 2020 a Presidential Decree (98/20) to support families, enterprises and informal economy sector affected by COVID ?19 with TAX reduction and access to financial mechanisms. Additionally, the ?Family farming and fisheries Acceleration Integrated Program (PIAAPF)? launched by Ministry of Agriculture and Fisheries in June 2020 and with a budget of 450 Million US$, is aimed to support family farming in 3 areas: Support Value chains to increase production, strengthen human resources and support agriculture inputs sectors.

370. It is also worth to mention that due to COVID-19, implications on the DSL project in Angola, for example the already identified co-financing for which the big share is coming from the government could be affected.

Category	***Risks***	***Measures***

Implications at national level		
Short to medium term	**Reduced financial (co-financing) support from Government, development partners, and private sector, due to limited overall funding availability resulting from the COVID-19 related economic downturn, and/or the diverting of available funding to actions directly related to COVID-19 Government budget and expenditure and prioritization of different programs and sectors, including agriculture, food security and natural resources might change as results for diverting funds to pressing health matters.**	**If there are changes in co-finance, then partners to work closely to seek alternative options for co-financing and ensure continuity of resource allocation to ongoing initiatives in project target areas. It is expected that the project activities will support the Government?s interventions (e.g. PIAAF) in responding to COVID-19 through its activities aimed at improving livelihoods of rural communities in the three project intervention areas through value chains development of indigenous plant. The project activities will be discussed and refined during the planned validation with stakeholders as well as during project inception workshop and also during project implementation .This will be opportunity to mainstream COVID-19 responses in the project implementation.**
Implications for project activities (on the ground)		

Short to medium term	**Uncertainty with COVID-19 including temporary closure of government offices, restrictions on people movement from one region to another or within regions could delay launching and implementation of the project.** **Limited opportunities for face-to-face interactions with project beneficiaries** **Constraints on conducting face-to-face baseline surveys**	**Temporary closure of government and UN offices from time to time as results of confirmed COVID-19, restrictions on people movement as well as limitations on number of people gathering for meetings/workshops could impact smooth project implementation. To mitigate this the project will put measures in place such as having local facilitators/moderators to work with local project partners to ensure field project activities are effectively implemented. The facilitators will also ensure use of virtual platforms to conduct meetings and workshop when physical meetings are not permitted.** **Set out engagement plans with limited number of participants mainly representatives /leaders of constituencies/communities and ensuring provision of sanitizers and face masks.** **Introduction of digital technologies and innovative approaches in support of sharing of knowledge virtually and ensure social distancing. For example; tablets that were introduced for the SHARP household surveys will be used to take footages on different SLM/SFM approaches that will be disseminated to wider groups of stakeholders as well as for monitoring and evaluation purposes. This approach will be complemented by the "Making every voice count for adaptive management" initiative facilitated by the Global Coordination project. This initiative promotes a variety of communication tools, focusing on a participatory video approach as an interactive platform that supports networking and knowledge generation, and in later stages documenting and disseminating knowledge assets and lessons learned ? especially those identified by the local communities and stakeholders at landscape level. The goal is to create a bridge between other teams and initiatives and work beyond the 11 countries involved in this program. The activities will be complemented by specific activities and tools to ensure access to agriculture and forestry advisory services during COVID-19 pandemic, such as the use of radio, print media, videos, mobile vans, and social media (e.g. WhatsApp) to overcome barriers related to social distance, travel limitations and possible lockdown periods.**

Short to long term	**Potential for community transmission of COVID-19**	**To measures in place to raise awareness of COVID-19 transmission and prevention. Provide guidance on steps to be taken by institutions (public and private) when exposure to COVID-19 occurs or is suspected to have occurred. Provide social support to COVID-19 affected families and communities.**

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.

INSTITUTIONAL ARRANGEMENTS AND COORDINATION

6a. Institutional arrangements for project implementation

The Government of Angola?will have the overall executing and technical responsibility for the project, with FAO?as the GEF Agency?providing oversight?in the manner?described below.? The Ministry of Culture,?Tourism?and d Environment (MCTA)?will be responsible?as the lead executing agency, with responsibility for the day-to-day management of project results?entrusted in?full compliance with all terms and conditions of the Operational Partnership Agreement signed with FAO.

For Component 2 and 3, MCTA, as leading executing partner, will stablish agreemnets (mainly through Letters of Agreements) with NGOs in coordination with decentralized institutes of MINAGRIP and technically backstopped by FAO. A Capacity assessement will be carried out to MCTA to confirm their capacity for subcontracting NGOs. In case it is positive LoAs with local partners organizations will be stablished by MCTA. In case it is negative, this LoAs will be established by FAO. In any of the casesfull coordination between FAO and MCTA will be assured for LoAs establishment. The MCTA and the?NGOs?are?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.?

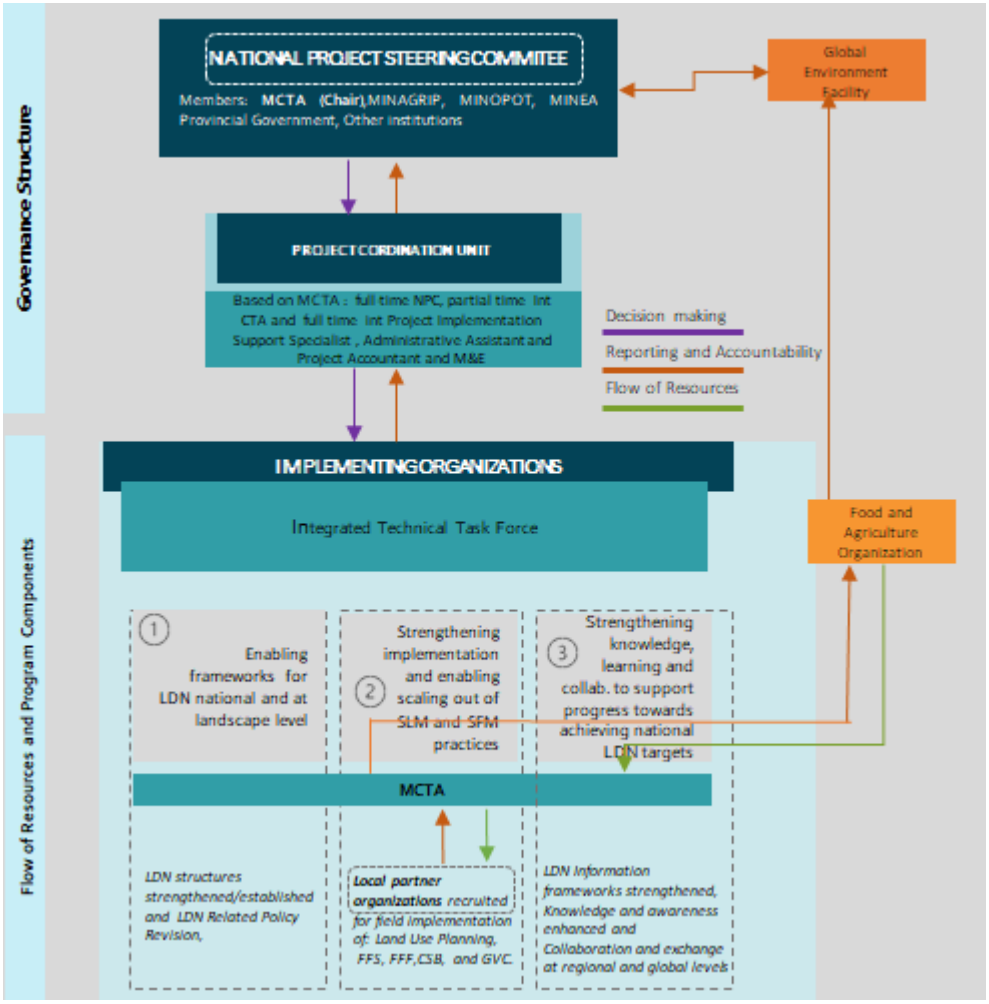
The two important bodies for project governance are the National Project Steering Committee and the Project?Management Unit.

The National Project Steering Committee (NPSC) corresponds to the highest level of decision-making vis-?-vis project implementation and will be established for the oversight of project activities at a national level. It is proposed that the NPSC is chaired by the MCTA with the participation of a member of the MINAMB?s GEF unit, MINAGRP, MINOPOT, MINEA, representatives of the Provincial Governments, FAO, one representative from each municipality, and observers from civil society organizations. The members of the NPSC will each assure the role of a Focal Point for the project in their respective institutions with full decision making. Hence the project will have a Focal Point in each concerned institution. As Focal Points in their agency, the concerned PSC members will meet at once per year and will have the following responsibilities: (i) technically oversee activities in their sector or jurisdiction, (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, (iv) taking decisions in the course of the practical organization, coordination and implementation of the project in order to address implementation problems identified by the PPR; (v) facilitating cooperation between government institutions and project participating partners and enabling a sufficient degree of project ownership by national authorities at the central, provincial and local levels; (vi) ensuring that co-financing support is provided in a timely and effective manner; and (vii) reviewing six-monthly Project Progress and Financial Reports and approving the AWP/B (Annual Work Plan and Budget). Moreover, the PSC shall ensure the project?s sustainability (in view of upscaling, replication and mainstreaming).

The Project Governance and Implementation Structure is?shown in?Figure 11.?

Figure 11. Project organizational structure



The National Project Coordinator (see below) will be the Secretary to the?Project Steering Committee. As mentioned before, the involved Ministries will designate one or more Focal Points, who will be responsible for participation in the NPSC and coordinating activities with all the national bodies related to the different project components, as well as with the project partners.?S/he will also be responsible for supervising and guiding the?National?Project Coordinator (NPC),?based in?the Project Management Unit (PMU), on government policies and priorities.?

The?Project Management Unit will be funded by the GEF. The main functions of the PMU, following the guidance of the Project Steering Committee,?will be?to ensure overall efficient management, coordination and monitoring of the project through the effective implementation of the annual work plans and budgets (AWP/Bs). The PMU will comprise?a?full-time?NPC for the?duration of the?project that will be supported by a Technician for Stakeholder engagement, Knowledge managemet and institutional capacity building. Additionally, the PMU will be supported by a full-time Administrative and Accountant Manager and part-time finance officer and M&E officer. Field based staff will include two full-time Field level facilitators to provide technical assistance, who will report to the NPC, each supported by an Assistant (full-time).?A National Project Coordinator (NPC) and the Execution Capacity development Support and ESS monitoring specialist will ensure that activities are well coordinated and?aligned??at?programme?level and?assist the PMU in preparing project monitoring reports (PIRs).?

The National Project Coordinator (NPC) will?be in charge of?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?of?relevant initiatives;??

ensuring a high level of collaboration among participating institutions and organizations at national and local levels;??

ensuring compliance with all OPA provisions during implementation, including 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 project national consultants hired with GEF funds, as well as products generated?from?implementation of the project;??

approve and manage requests for provision of financial resources using?templates/formats provided 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?such?supporting documentation to FAO and designated auditors when requested;??

implementing and managing the project?s monitoring and communications plans;??

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?review?and?terminal?evaluation?of the project?in close coordination with the FAO Budget Holder and FAO Independent Office of Evaluation (OED);??

submitting the OP six-monthly technical and financial reports to FAO and facilitating information exchange between the OP and FAO, if needed;??

Informing?the PSC and FAO of any delays and difficulties as they arise during?project implementation to ensure timely corrective measures?and support.??

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:??

The Budget Holder, which is usually the most decentralized FAO office, will provide oversight of day to day project execution;??

The Lead Technical Officer(s), drawn from across FAO will provide oversight/support to the project?s technical work in coordination with government representatives participating in the Project Steering Committee;?and?

The 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.?

?

FAO responsibilities, as GEF agency, will include

Administer?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;?

Report?to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, Mid-Term Review, Terminal Evaluation and Project Closure Report on project progress;??

Conduct at least one supervision mission per year; and?

Financial reporting to the GEF Trustee.?

Another relevant body of the Project Governance and Implementation Structure is the Integrated Technical Task Force. This Task Force, facilitated by FAO in coordination with the PMUs will assure a coherent, integrated and coordinated implementation of the project. This Task force will meet a minimum of twice a year, however, the spirit of this Task force is answer in an effective and immediate way to the day-by-day challenges. The PMU will be the secretariat of the ITTF and the Execution Capacity development Support and ESS monitoring specialist will provide direct and specific guidance to this tasks force.

.All stakeholder involved in the project can be called to participate in the ITTF. Agenda and participants will be decided by PMU and FAO according to the project execution needs.

6b. Coordination with other relevant GEF-financed projects and other initiatives

The project will coordinate with ongoing GEF and non- GEF initiatives in Angola to ensure synergies are generated, particularly with the GEF projects described below in Table 9. Coordination with these initiatives will focus on exchanging lessons learned, sharing technical expertise and, where appropriate, establish partnership agreements and joint work plans. The same applies to other non-GEF recent and ongoing baseline initiatives described in Annex 3.

Table 11. Other relevant GEF Projects: lessons, potential collaboration and synergies

Project Title	Description and purpose of collaboration / synergy	Duration and Status	Sector

New FAO GEF Project ZAEC: Sustainable Land Management in target landscapes of Central Angola **(*Gest?o Sustent?vel de Terras em paisagens seleccionadas da Regi?o Central de Angola -ZAEC*)**	**Project ZAEC aims to develop and apply Agro-Ecological Zoning (AEZ) methodologies techniques by focusing on a 1.6 million Wider Landscape in the provinces of Huambo and Benguela. LDN is also a central concept in the project. Along the above-mentioned relevance of these landscapes for land degradation and the proximity to CETAC to one of the four AECs in Angola (Chipipa), there is a growing network of AP/FFSs in Huambo and Benguela and neighboring provinces, which are already delivering community-level extension services on a regular basis with the support from both government and a series of international projects set on upscaling the approach. This creates opportunities, which the project will seize, for actively engaging land users in local spatial planning of SLM based on AEZ and adopting SLM practices on the ground. *Purpose: Work together towards developing MCTA?s capacity for GIS and related analysis. The collaborate on stakeholder engagement in the southern regions. and rangeland management, including the application of tools such as GreeNTD.***	**Starting up in 2020** **Total project cost (US $ million): 2.639** **Implementing GEF agency: FAO**	**Land rehabilitation, Agriculture, including GIS based tools for Landscape level planning and development of AEZ results**

UNDP-GEF Project: Promoting climate- resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin	**The project is focused on strengthening the capacity of national and sub-national entities to monitor climate change, generate reliable hydro-meteorological information (including forecasts) and to be able to combine this information with other environmental and socio-economic data to improve evidence- based decision-making for early warning and adaptation responses as well as planning. Purpose: Learn lessons and piggy-back on contact in view of improving the processes of stakeholder engagement, in particular in the region where the project is implemented.**	**On-going since 2015, ends in 2020** **Total project cost (US $ million): 37.179** **Implementing GEF agency: UNDP**	**Early warning systems. Disas ter risk management**

UNDP-GEF Project: Promotion of Sustainable Charcoal in Angola through a Value Chain Approach	**The objective of this project is to reduce the current unsustainable and GHG-intensive mode of charcoal production and utilization from Angola?s Miombo woodlands via an integrated set of interventions in the national charcoal value chain.** **Component 1 focuses on strengthening policy framework to support a sustainable charcoal value chain in Angola by developing a certification scheme for sustainable charcoal, including a mechanism to monitor, re porting and verificationy (MRV) of charcoal production, distribution and commercialization. It will Incorporate certified and sustainable charcoal and fuel-efficient stoves into national poverty reduction and rural development programs.** **Component 2 on technology transfer will demonstrate and introduce improved charcoal kilns among selected rural communities and energy-efficient technologies (briquetting and efficient stoves) in selected peri-urban municipalities of Luanda. Additionally, improved charcoal production technology will be integrated with sustainable forest management and rural development initiatives in rural communities** **The project is implemented in rural areas (Huambo and Kwanza Sul) focusing on production, as well as in the urban and peri-urban areas of Luanda to focus on consumption.** **Purpose: collaborate in strengthening the enabling environment including sustainable charcoal certification and complement efficient**	**On-going since 2016** **Total project cost (US $ million): 23,331,700** **Implementing GEF agency: UNDP**	**Sustainable w oodfuel**

AfDB GEF Project: Integrating climate change into environment and sustainable land management practices	**The project will disseminate sustainable land management and adaptation practices in agro-forestry and land ecology in 350 communities. Purpose: Seek collaboration on the forestry aspect, in particular with respect to the legal review.**	**On-going since 2019 Total project cost (US $ million): 24.831 Implementing GEF agency: AfDB**	**Agriculture and food security**
FAO-USAID-OFDA Regional Project PIRAN: Disaster risk reduction/ management to support agropastoral communities affected by recurrent droughts and other natural disasters in southern Angola and northern Namibia (Project PIRAN)	**The objective is to strengthen food security and DRR/M, and increase the resilience of agro-pastoral livelihoods by increasing capacity to manage risks related to natural disasters at the level of communities and local institutions. The expected results are: improved agricultural and livestock production, health and animal nutrition, soil and water management and management of early warning systems. Purpose: Learn lessons on stakeholder engagement, in particular cross-border ones, including on and rangeland, water and communal forest management, management in southern Namibia.**	**Closed Total project cost (US $ million): 1.600 (1.180 for Angola) for the first year Implementing GEF agency: FAO Donor: United States of America (USAID/OFDA)**	**Disaster risk management. Agriculture and food security**

FAO GEF Project: Land Rehabilitation and Rangelands Management in Small Holders Agropastoral Production Systems in Southwestern Angola (Project RETESA).	**To enhance the capacity of southwestern Angola?s smallholder agro-pastoral sector to mitigate the impact of land degradation processes and to rehabilitate degraded lands by mainstreaming SLM technologies into agro-pastoral and agricultural development initiatives. Purpose: Learn lessons on stakeholder engagement and rangeland management, including the application of tools such as GreeNTD.**	**Closed** **Total project cost (US $ million): 15.397 Implementing GEF agency: FAO**	**Land rehabili tation, Agricu lture**
Other DSL IP Child Projects	**Refer to Regional and Global Exchange Mechanisms in description of Component 3.**	**Same as this project**	**Same as this project**

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:
NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

CONSISTENCY WITH NATIONAL PRIORITIES

379. The project strategy and proposed outputs are consistent with national development priorities, complementing primary national and international development strategies and plans. As the project relates to land degradation and climate change (mostly resilience), it is fully aligned with, and supportive of, the **National Action Program to Combat Desertification (PANCOD)**, **LDN target setting**(Box 2.) and other relevant policies, plans and frameworks under **UNCCD**and the **UNFCCC**. More specifically, the project is consistent with the **National Communication to the United Nations Framework Convention, National Action Plan for Adaptation (NAPA)**and the **National Strategy and Action Plan on Biodiversity (NBSAP)**.

380. **Climate Change:**By virtue of contributing to Climate Change Mitigation (mostly by maintaining and increasing soil carbon levels) and Resilience/Adaptation (by preserving or increasing the resilience of Miombo-Mopane Woodland ecosystems and resident communities to climate change), the project is strongly aligned with the objectives/strategies of the following:

- **Intended Nationally Determined Contribution**(INDC), released by Angola in 2015 for COP-21, which prioritizes the implementation of adaptation measures in the agricultural sector, as well as for the forest, biodiversity and national resources sectors.

- **Angolan National Adaptation Plan**(NAP), launched in July 2015. The NAP process is supported by the GEF-founded NAP Global Support Program (NAP-GSP) and seeks to facilitate effective medium and long-term climate change adaptation planning, as well as budgeting such planning through institutional support, technical support and knowledge brokering. The proposed project provides a way forward on the NAP process by developing strong partnerships at national and local levels and contributing to the integration of CCA sustainable Natural Resources Management and SLM.

National Development Plan (PDN) 2018-2022

381. In 2018, Angola?s LDN target was mainstreamed into the **National Development Plan 2018-2022**, so it is no surprise that this current PND is the main instrument that promotes sustainable management of landscapes to address land degradation. The PDN is innovative, having being prepared in consultation with sectoral and provincial planning bodies, thereby maximizing their ownership of the national development process. Furthermore, each sector was invited to interact with the provinces, and relevant private sector and civil society partners in their areas of interest and expertise. Thus, the project is consistent with national and local development plans. Furthermore, the PDN has been scrutinized during the PPG in order to assess its co-financing element with respect to this project. Much of the evidence relating to the consistency of this project with national priorities has already been provided in Section 1.a 2.B.

382. The project is aligned with several of the PDN?s programs related to the development of agriculture, environmental protection, spatial planning, forestry, integrated water resource management and decentralized rural development. Each program contains specific targets, policy linkages and actions. Those that directly promote sustainable management of landscapes (primarily drylands) were selected as baseline co-finance vis-?-vis this project. The results of this analysis, summarized in Table 9, provide the basis for calculating the baseline and co-financing from public investment budgetary allocations, indexed by program and included in the Central Government Budget (OGE) for 2019, the base year for the calculations. Further details are provided in the notes at the foot of the table.

National Action Program to Combat Desertification (PANCOD)

383. PANCOD is a national program that essentially provides a mechanism for Angola?s compliance with its commitments to UNCCD. It has been described previously in paragraph43. Importantly, this GEF-7 project will be instrumental in supporting government implement PANCOD.

Land Degradation Neutrality Target Setting Program (LDN-TSP)

384. LDN TSP has been assisting countries since 2014 to make the LDN concept a reality by 2030, by providing practical tools and guidance for the establishment of voluntary LDN targets, and accelerating the implementation of transformative programs and projects. Angola is among more than 100 countries participating in the Program[1], having joined in November 2018 and effectively signed up to the general LDN goal of ?*achieving neutral land degradation by 2030 compared to degradation levels for 2015*?.

385. The LDN Fund was launched as an impact investment fund blending resources from the public, private and philanthropic sectors in support of achieving LDN through sustainable land management and land restoration projects undertaken by the private sector worldwide. The LDN TSP is defined as having four building blocks: **1. Leveraging LDN**, **2. Assessing LDN**, **3. Setting LDN targets and associated measures**and **4. Achieving LDN**. Assessment of the current status, trends and drivers of land degradation is based on a set of**three indicators**that reflect land-based natural capital and its associated ecosystem services:

- land cover;
- land productivity (metric: net primary productivity); and
- carbon stocks above and below ground (metric: soil organic carbon).

386. These indicators are part of a set of six progress indicators used by UNCCD to track progress in the implementation of the Convention through national reporting. They have also been recommended as sub-indicators for the global UNCCD indicator 15.3.1, ?Proportion of land that is degraded over total land area?, adopted to measure progress toward the SDG target 15.3 and intended to reduce the reporting burden on country Parties. The indicators monitor changes in different yet highly relevant ways:land cover provides a first indication of a reduction or increase in vegetation, habitat fragmentation and land conversion. Land productivity is indicative of ecosystem health and sharpens the focus on ecosystem services. Soil organic carbon denotes overall soil quality. These indicators may be enhanced and complemented as necessary.[2]

Angola?s other environmental management topics and spatial planning frameworks

387. **Biodiversity.**The project is consistent with the National Communication to the United Nations Framework Convention, the National Action Plan for Adaptation (NAPA), the National Strategy and Action Plan on Biodiversity (NBSAP) and with the main national public policies for development and fight against poverty, many of which contain specific guidelines on the environmental sustainability of the agricultural and livestock sectors and on reducing vulnerability.

388. The project also directly contributes to specific priorities and results set out in the Partnership Framework between the Government of Angola and the United Nations System (UNPAF 2015-2019) and in the FAO Country Program Framework (CPF) for 2018-2023.

389. **Land-use management and spatial planning.**The project is also well aligned with the implementation of the ?Spatial Planning Law? or LOTU (3/04). According to this framework law, municipalities have the duty to develop municipal planning instruments which include Municipal Master Plans (PDMs), Environmental Land-Use Plans (POAs) and Rural Land-Use Plans (POR). The latter in particular are of great potential for structuring an organized system of SLM but it is still underdeveloped. This project could provide essential support for creating the mechanisms and enabling environment for the development of the PORs (see section on Land Tenure Policies and Practices).

Agricultural Sector Mid-Term Plan (PMPSA) 2018-2022

390. The PMPSA[3]agenda has been integrated within the PDN, which recommends creating enabling conditions for more agricultural data: ?Indeed, it is imperative to pay particular attention to the creation of conditions at the central (capital) and local level (areas of agrarian activity) for the rigorous production of data, which, after treatment, would become important agricultural statistical information. This information would serve as a reliable basis for drawing up coherent plans, projects and work programs, i.e. to quantify and qualify the necessary investments for the

Sector as well as to plan imports so as to reduce waste.? Refer to Annex W-3for a fuller description of PMPSA and its context. For more details in of Government baseline and co-financing investments estimated from the National Development Plan (2018-2022) please refere to ANNEX A3

391. The project framework for Angola is closely aligned with the DSL IP?s global framework, as well as harmonized with that of the other Miombo/Mopane child projects through the Regional Exchange Mechanism (REM), further details of which are provided in Annex IV-2. This will facilitate the sharing of evidence-based good practices across investments, which will be done through existing global (e.g. COFO Working group on dryland, UNCCD) and regional (SADC?s GGWI-S) knowledge and exchange structures. The project will actively ?feed? and share knowledge to the global and regional platforms, while benefiting from recent scientific knowledge and global best practices provided by the platforms in return. Moreover, the child project will use part of the DSL IP incentive to ?access? additional services that are provided by the global project on demand and adaptive basis (possibly through SADC?s GGWI-S) in order to support the child project in achieving the anticipated impact at wider (transboundary ecosystem) scales.

392. The Global Coordination Project of the IP will promote coherence among the multiple initiatives operating across the Miombo-Mopane dryland ecoregion by (i) establishing mechanisms for coordinating and prioritizing initiatives and investments across countries; (ii) channeling global knowledge and expertise in relation to sustainable dryland management by linking the project to relevant global initiatives and platforms; (iii) managing and capitalizing on knowledge on dryland management experiences; and (iv) introducing M&E systems at project and programmatic levels supporting learning and adaptive management. Project Component 3 will build knowledge management, monitoring and evaluation, harmonizing M&A tools, and approaches from a regional perspective through SADC?s GGWI-S, and with the assistance of the global network.

393. Improvement of the policy and governance system at multiple levels (national, district, community) and the development of knowledge management and monitoring schemes embedded in the wider regional framework spearheaded by the GEF-7 initiative will have a positive impact beyond the target landscapes, developing capacity among a broad range of stakeholders. Implementation of integrated management plans will have a long-term impact on the target landscapes, inspiring similar future exercises in other parts of the country. The linkage with GGWI/SADC and other transboundary frameworks such as the KAZA and under basin committees (OKACOM, KUVECOM) will ensure an impact at a larger ecosystem level through effective knowledge management.

394. Moreover, the project management unit should make an effort to collaborate and partner with national institutions and other initiatives working with subjects and topics that will contribute to the implementation of the project?s activities through knowledge-sharing mechanisms. GABHIC (MINEA), for example, is an institution that has been producing important information about the Cunene, Cubango and Cuvelai basin, which, if shared, can be very useful during the project?s implementation phase, contributing to the development of knowledge about the best practices in the region. The GEF 6 project ?Sustainable Land Management in target landscapes of Central Angola? is another potential partner for knowledge sharing. The DSL project will be able to build upon the GEF 6 project?s foreseen outcome of developing CETAC?s monitoring capacity, for example.

395. Besides the potential partnerships and collaborations, through the implementation of outputs and activities under Component 3, the project will ensure the achievement of an effective knowledge management and coordination, monitoring and evaluation, as well as south-south cooperation enhanced through the REM. More specifically, Output 3.2.1 is focused on the development of a Knowledge Management and Communications Strategy (KMCS), supported by a project web-based knowledge management portal and innovative information-sharing program, all of which will underpin knowledge sharing and the collection and dissemination of evidence-based best practices. Moreover, activities as the project?s inception and final workshop and a strong communication strategy will be used as opportunities to engage with key experts and stakeholders in order to disseminate lessons learned and results from similar projects and initiatives.

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[1]This global program is implemented in cooperation with numerous partners, including the Global Environment Facility (GEF), International Union for Conservation of Nature (IUCN), Food and Agriculture Organization of the United Nations (FAO), United Nations Development Program (UNDP), United Nations Environment Program (UNEP), European Space Agency, International Soil Reference and Information Centre, Joint Research Centre of the European Commission, World Resources Institute (WRI), Soil Leadership Academy (SLA).

[2]This overview is based on different UNCCD publications. More details and various resources are available at: https://knowledge.unccd.int/knowledge-products-and-pillars/ldn-target-setting-building-blocks/land-degradation-neutrality-ldn-0.

[3]Plano M?dio Prazo do Sector Agr?rio (PMPSA).

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.

KNOWLEDGE MANAGEMENT

396. In line with GEF Knowledge Management Guidelines[1], knowledge generation and management will be an essential component of the project. Knowledge and knowledge management is reflected across all components, however specifically in component 3, Outcome 3.2 and Output 3.2.1.

397. Part of this knowledge management approach includes working to integrate lessons learned from past and on-going projects. During the baseline data generation process, the project design took a very inclusive look at on-going investments and programs by the government, donors, and other stakeholders. This was done to not only make certain the proposed project is aligned with this on-going baseline and will provide incremental improvements, but also to ensure that certain lessons learned are reflected and pathways are in place to bring new knowledge and lessons within this proposed project?s actions and innovations to build synergy and scale.

398. Building on the indicators developed during PPG and in coordination with the global IP Program, the project will establish systems for M&E, knowledge management and knowledge sharing including a methodology to capture good practices and lessons learned contributing to national, regional and global IP implementation. the project will develop a knowledge management and communications strategy (KMCS) to support implementation, replication and scaling of project activities.

399. Knowledge will be created, documented and shared systematically throughout the project closely aligned to the global IP DSL coordination project. More specifically, the GCP will facilitate global level knowledge exchange in two ways: the child project will actively ?feed? knowledge to the global and regional platforms while benefiting from recent scientific knowledge and global evidence-based good practices provided by the platforms/exchange mechanisms in return through the Regional Exchange Mechanism (REM). Further details about this Mechanism and how it is aligned with the GCP are provided in **Annex IV-2**and summary details in **Box 11.**

400. To highlight the importance of documenting change management approaches and innovative solutions, and to help show results and impact, FAO?s South-South and Triangular Cooperation Division and its partners are documenting the baseline status of the targeted landscapes in every country, using a participatory video approach. This interactive, dynamic and powerful monitoring tool includes local communities and different stakeholders. Moreover, it provides a wholesome view of the project?s progress at every stage, including changes within the local community, the local governments and other stakeholders that may occur throughout the lifetime of the project. Through this in-depth observation, the initiative aims to point out what impact these changes may have on dryland management and degradation. Once the baseline is established, each country will continue this monitoring process until best practices are identified and each project reaches its completion. The final product will then be translated and disseminated among the 11 countries involved, cross pollinating and sharing the identified best practices, the supporting knowledge and the lessons learned. The dissemination will occur through various international and regional mechanisms by leveraging on the convening power of the Working Group on Dryland Forests and Agrosilvopastoral Systems. In the long term, this participatory approach will feed into a digital library containing an array of different contexts and paths, serving as a pragmatic learning platform for contributing partners and members achieving the objective of making every voice count for adaptive management, at every level.

401. The PMU will include a dedicated person to follow the knowledge management components to assure that the KMCS is implemented. FAO will provide overall quality assurance through a dedicated member on the internal Project Task Force (PTF) who will be task with the knowledge management, stakeholder engagement and system-wide capacity development components.

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[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

MONITORING AND EVALUATION

402. The project?s monitoring and evaluation will be undertaken throughout project implementation through different measures that include oversight, reporting and close monitoring, which will be carried out by different actors involved in the project development. Moreover, the project will ensure transparency in the preparation, conduct, reporting and evaluation of its activities. This will include full disclosure of all non-confidential information, and consultation with major groups and representatives of local communities. The disclosure of information shall be ensured through

posting on websites and dissemination of findings through knowledge products and events. Project reports will be broadly and freely shared, and findings and lessons learned made available.

403. Project oversight will be carried out by the Project Steering Committee (PSC), the FAO GEF Coordination Unit and relevant Technical Units in HQ. They will overview GEF-financed activities, outputs, and outcomes largely through the annual Project Implementation Reports (PIRs), periodic backstopping and supervision missions. Oversight will ensure that: (i) project outputs are produced in accordance with the project results framework and lead to the achievement of project outcomes; (ii) project outcomes lead to the achievement of the project objective; (iii) risks are regularlyidentified and monitored and mitigation strategies are appliedas appropriate; and (iv) agreed project global environmental benefits/adaptation benefits are being delivered.

404. Project monitoring will be carried out by the Project ManagementUnit (PMU) and the FAO budget holder. Project performance will be monitored using the project results matrix, including indicators (baseline and targets) and annual work plans and budgets. At inception the results matrix will be reviewed to finalize identification of: i) outputs ii) indicators; and iii) missing baseline information and targets. A detailed M&E plan, which builds on the results matrix and defines specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis, etc.) will also be developed during project inception by the M&E specialist.

405. The project reports developed during its implementation will include:

? **Project Inception Report.**It is recommended that the PMU prepare a draft project inception report in consultation with the LTO, BH and other project partners. Elements of this report should be discussed during the Project Inception Workshop and the report subsequently finalized. The report will include a narrative on the institutional roles, responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B and detailed project monitoring plan. The draft inception report will be circulated to the PSC for review and comments before its finalization, no later than one month after project start-up. The report should be cleared by the FAO BH, LTO and the FAO GEF Coordination Unit and uploaded in FPMIS by the BH.

? **Results-based Annual Work Plan and Budget (AWP/B).**The draft of the first AWP/B will be prepared by the PMU in consultation with the FAO Project Task Force and reviewed at the project Inception Workshop. The Inception Workshop (IW) inputs will be incorporated and the PMU will submit a final draft AWP/B within two weeks of the IW to the BH. For subsequent AWP/B, the PMU will organize a project progress review and planning meeting for its review. Once comments have been incorporated, the BH will circulate the AWP/B to the LTO and the FAO GEF Coordination Unit for comments/clearance prior to uploading in FPMIS by the BH. The AWP/B must be linked to the project?s Results Framework indicators so that the project?s work contributes to achieving the indicator targets. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The AWP/B should be approved by the Project Steering Committee and uploaded on the FPMIS by the BH.

? **Project Progress Reports (PPR).**PPRs will be prepared by the PMU based on the systematic monitoring of output and outcome indicators identified in the project?s Results Framework (Appendix I). The purpose of the PPR is to identify constraints, problems or bottlenecks that impede timely implementation and to take appropriate remedial action in a timely manner. They will also report on project risks and implementation of the risk mitigation plan. The Budget Holder has the responsibility to coordinate the preparation and finalization of the PPR, in consultation with the PMU, LTO and the FLO. After LTO, BH and FLO clearance, the FLO will ensure that project progress reports are uploaded in FPMIS in a timely manner.

? **Annual Project Implementation Review (PIR).**The BH (in collaboration with the PMU and the LTO) will prepare an annual PIR covering the period July (the previous year) through June (current year) to be submitted to the FAO GEF Coordination Unit Funding Liaison Officer (FLO) for review and approval no later than (check each year with GEF Unit but roughly end June/early July each year). The FAO GEF Coordination Unit will submit the PIR to the GEF Secretariat and GEF Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. PIRs will be uploaded on the FPMIS by the FAO GEF Coordination Unit.

? **Technical Reports:**Technical reports will be prepared by national, international consultants (partner organizations under LOAs) as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the PMU to the BH who will share it with the LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of said report. The BH will upload the final cleared reports onto the FPMIS. Copies of the technical reports will be distributed to project partners and the Project Steering Committee as appropriate.

? **Co-financing Reports:**The BH, with support from the PMU, will be responsible for collecting the required information and reporting on co-financing as indicated in the Project Document/CEO Request. The PMU will compile the information received from the executing partners and transmit it in a timely manner to the LTO and BH. The report, which covers the period 1 July through 30 June, is to be submitted on or before 31 July and will be incorporated into the annual PIR. The format and tables to report on co-financing can be found in the PIR.

? **GEF Tracking Tools:**Following the GEF policies and procedures, the relevant tracking tools will be completed/updated and submitted on three occasions: (i) with the project document at CEO endorsement; (ii) prior to the mid-term review; and (iii) with the project?s terminal evaluation or final completion report. The TT will be uploaded in FPMIS by the FAO GEF Coordination Unit. The TT at the baseline were developed by the Project Design Specialist, in close collaboration with the FAO Project Task Force. They are filled in by the PMU and made available for the final evaluation.

? **Terminal Report:**Within two months before the end date of the project, and one month before the Final Evaluation, the PMU will submit to the BH and LTO a draft Terminal Report. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions, and recommendations of the project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results. It is also best practice to draft a **Project Exit Strategy**3-6 months prior to the end of the project to guide closure and ensure post-project continuity of activities, mechanisms and processes that need to be sustained, institutionalized, replicated and mainstreamed. This Strategy can accompany the Terminal Report.

406. The table below provides a summary of the main M&E reports, responsible parties, and timeframe, wth costs estimated for inmclusion in the budget

Table 12. Project Monitoring and Evaluation Plan Activities and Budget

Type of M&E Activity	Responsible Parties	Time-frame	Estimate of costs
Inception, mid-term and final workshop	PMU in consultation with the LTO, BH, PSC	Within one month after start-up, mid-term and 2 months prior to project termination respectively	USD 25,950 Project staff time
Results-based Annual Work Plan and Budget	PMU in consultation with the FAO Project Task Force	3 weeks after Start-up and annually with the reporting period July to June	Project staff time
Project Inception Report	PMU in consultation with the LTO, BH. Report cleared by the FAO BH, LTO and the FAO GEF Coordination Unit and uploaded in FPMIS by the BH.	One month after start-up	Project staff time
Execution Capacity development Support and ESS monitoring specialist	Cost shared between Component 3, M&E and PMU	Annually	USD 45,000
M&E Expert	Full-time expert as part of the PMU	Annually	USD 78,750
Supervision visits	FAO	Annually	Project staff time
Project Progress Reports (PPR)	PMU based on the systematic monitoring of output and outcome indicators identified in the project?s Results Framework. The PPR will be submitted to the BH and LTO for comments and clearance. BH to upload the PPR on the FPMIS.	No later than one month after the end of each six-monthly reporting period (30 June and 31 December)	Project staff time
Project Implementation Review report (PIR)	LTO (in collaboration with the PMU) will prepare an annual PIR covering the period July (the previous year) through June (current year) to be submitted to the BH and the TCI GEF Funding Liaison Officer.	August 1, of each reporting year	Project staff time
Co-financing Reports	PMU	On a semi-annual basis, and will be considered as part of the semi-annual PPRs	Project staff time

Technical reports	Project staff and consultants, with peer review as appropriate.	As appropriate	Project staff time + consultant costs
Mid-term Review (MTR)	MTR: FAO Angola, External consultant, in consultation with project team, including FAO-GEF Coordination Unit and others	At mid-point of project implementation	USD 40,000
Final evaluation (including accessible report on ?best-practices? and ?lessons-learned?)	Responsibility of FAO Office of Evaluation in consultation with project team including GCU and other partners	At the end of project implementation	USD 40,000
Terminal Report	PMU with assistance of other project staff and the FAO LTO	2 months before project end	USD 6,550
M&E meetings (x6)	PMU, LTO, TCSR Report Unit	Annual or as required	USD 15,000
Total Budget			**251,250**

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)?

BENEFITS

407. The project will work towards the implementation and mainstreaming of sustainable and integrated approaches to the management of dryland landscapes and decision-making regarding land-use in selected landscapes in Angola. By scaling-up SLM and SFM best practices in priority landscapes in the south of the country, the project will have a transboundary focus and impact (Cunene basin) complementing existing interventions, which will in turn contribute to the achievement of both the project and the Impact Program main objectives. The strengthened national policy and capacity on LDN and the empowerment of stakeholders on SLM/SFM/LR/IWRM planning and implementation in combination with the establishment/strengthening of inclusive dryland commodity value chains will have a positive impact beyond the target landscapes.

408. Global benefits from the project?s successful implementation will include:

? The project will apply the LDN response hierarchy to 633,278 hectares of production systems located within the two target landscapes that cover 1.3 million hectares of Miombo-Mopane woodlands.

? Carbon benefits: Through the land management strategy mentioned above, the project will both sequester carbon and avoid emissions in the AFOLU sector, totaling 1,047,911 tCO2-eq.

? Co-benefit of GEF investment: At least 2,000 households, comprising approximately 10,000 individuals, will benefit directly from the GEF investment within the two project landscapes.

409. Project activities will focus on enhancing key stakeholders? capacity for handling spatial data, develop strategic partnerships, mobilizing finance, and conceiving projects, all related to

SFM/SLM practices, creating conditions for collaborative landscape management. The project expects to train approximately 2000 land users in multiple locations across the landscapes of southern Angola (targeting at least 35% are women) with focus on skills development for SLM/SFM practices through the Farmer Field Schools and Forest Farm Facility approaches as applicable. Within the landscapes, the project expects to engage with 10,000 local stakeholders at the level of households. Efforts will be made to enlist the participation of female-headed and dual-headed households at higher rate than male-headed households (target 65% for female plus dual)

410. SFM/SLM practices mainstreamed in the country: Principles and evidence-based best practices of SFM/SLM will be disseminated among project beneficiaries, including local communities and national institutions. By implementing activities related to it, the project will be able to reduce key policy barriers currently challenging the country?s enforcement to prevent causes of land degradation and will bring a positive long-term impact on a part of Angola where LD is the most critical issue.

411. GreenValue chain development:The project foresees the strengthening of viable and sustainable promising value chains identified during the PPG process. Producer organizations will be able to participate in capacity building activities, as well as have access to finance and market mechanisms which will allow their business to develop. Therefore, it is also foreseen that the project, by contributing to the productivity and sustainability of agricultural practices and green value chain development, has the potential for **indirectly**contributing to long-lasting improvement of livelihoods and food security, particularly in direct beneficiary communities of the demonstration landscapes.

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

The project is reclassified from low to moderate risk mostly due to the fact that although the foreseen environmental and social impacts of project are likely to be positive considering the nature of the interventions, the project includes the following risks factors under the Environmental and Social Risk Identification Screening Checklist:

(i) ESS 1 - Natural resources management: The project will work to improve land tenure security and access rights through policy dialogue and multi-stakeholder policy and support implementation of participatory land use planning. This may result in changes to existing tenure rights (formal and informal) of individuals, communities or others to land, fishery and forest resources which triggers ESS 1.

(ii) ESS 3 - Plant and Genetic Resources for Food and Agriculture: The project interventions on crop diversification and community seed banks will involve the provision and transfer of seeds and planting material for cultivation which triggers ESS 3.

The identified risks are mostly temporal, localized and reversible. Considering the impact, appropriate mitigation measures have been developed to address and mitigate the identified risks above. The developed risk management plan in the table below will allow managing risks by monitoring mitigation actions throughout implementation.

The risks to the project have been identified and analysed during the project preparation phase and mitigation measures have been incorporated into the project design (see Table below). With the support and oversight of FAO, the Project Steering Committee (PSC) 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 PSC 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.

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.

Table 10 - Environmental and Social risks

Risk identified	Risk Classification	Mitigation Action (s)	Indicators	Progress on mitigation action

ESS 1 NATURAL RESOURCES MANAGEMENT Tenure	Moderate	During implementation, the project activities will address tenure rights by applying an integrated landscape/territorial approach resolving insecure or inequitable tenure (right to use and benefits of ecosystem services), weak common property regimes, and natural resources management institutions. Conflict resolution measures to address land conflicts and boundary disputes will be applied as part of an inclusive engagement of all relevant stakeholders in this process. For this purpose, the project will follow the stakeholder engagement plan (Annex I2) as well as core elements of the Integrated Landscape Assessment and Management Methodology (ILAM), in particular the multi-stakeholder workshop approach which was successfully applied during the project?s preparation. The project will apply and adhere to the principles/framework of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT) and stakeholders will be trained in its use.	# of beneficiaries trained on the implementation of the VGGT Level of influence and engagement with government around the principles enshrined in the VGGT # of land use plans in place and regulations effectively implemented # of communities with secure tenure rights to land, with legally recognized documentation (CCROs) and who perceive their rights to land as secure, by sex and by type of tenure # of land based conflicts resolved and # of people that have actively participated in the conflict resolution activities (disaggregated by gender)	N/A

ESS 3 Plant and Genetic Resources for Food and Agriculture	Moderate	As part of the integrated landscape management approach the project will promote sustainable agricultural intensification through the diversification of the agricultural production. The focus will be on drought tolerant, nitrogen fixing and soil stabilizing pulses (and other neglected and underutilized species/NUS) to increase resilience and productivity, strengthening sustainable local food systems and mitigating the negative effects of land degradation and climate change. ` Community Seed Banks (CSB) will serve as hubs where local communities can conserve and exchange seeds that can be used for diversifying the agricultural systems locally. The selected seeds and planting material will be largely derived from locally adapted crops and varieties and will be suitable to local conditions and preferences of farmers and consumers. The CSB and associated trainings will enable the targeted farmers and their families to conserve local varieties of their preference, multiply seeds, and distribute them within across farming communities. The CSB management will ensure that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the IPPC. The transfer of seeds across borders will take place, if needed, following international regulations on plant health (IPPC) and access and benefit-sharing, for example through a Standard Material Transfer Agreement (SMTA). The project (with support of the Regional Exchange Mechanism) will further support communities? increased access to genetic diversity and greater	# of smallholder farming households who are applying sustainable agricultural intensification and diversifying their production. # of farmers involved in CSB activities and benefiting in resources # of crops and varieties per crops conserved and exchanged through the CSB. # of training beneficiaries (management of CSB and seed conservation, Participatory Plant Breeding (PPB), small-scale seed production and climate change adaptation strategies) National level analysis and recommendations produced on policy and legal environment in relation to access and benefit-sharing, conservation, use and exchange of germplasm. # of training beneficiaries on the mutual implementation of ITPGRFA and Nagoya Protocol and national implementation of Farmers? Rights)	N/A

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Climate Risk Screening ANNGOLA	**CEO Endorsement ESS**	
FAO ES Screening Checklist ANGOLA	**CEO Endorsement ESS**	
Angola Risk Certification Updated Nov2020	**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).

Results Chain	Indicators	Baseline	Mid-Term Milestone	End of project (EoP) Targets	Means of Verification	Assumptions

Objective: To initiate a transformational shift towards a sustainable and integrated management of multi-use drylands landscapes of the Miombo and Mopane ecoregions of Angola (Okavango and Cunene river basins) following Land Degradation Neutrality (LDN) principles.	**1. Area of managed production system landscapes under ILUPs and applied ?LDN response hierarchy?** **Area under practices to (1a) AVOID Land Degradation:** **Area under practices to (1b) REDUCE Land Degradation:** **Area under practices to (1c) REVERSE Land Degradation:** **Total:**	**Indicative (ha):** **0** **0** **0** **0**	**Indicative (ha):** **100,110** **89,839** **34** **189,983**	**Indicative (ha):** **333,700** **299,464** **114** **633,278**	**- ILAM/ILUP reports** **- Project progress reports (PIR, FAO PPR)** **-Web-based GIS database including ILUPs and LDN Indicators** **- MTR and TE reports** **- UNCCD and UNFCCC convention reporting by Angola** **- ProDoc Annex F: GEF TF / LDCF/ SCCF Core Indicator Worksheet?**	**Not applicable[108].**

	2. Greenhouse Gas Emissions Mitigated (metric tons of CO2e)[109] (corresponding to GEF Core Indicator 6.1):	**206,096 tCO2-eq emissions generated without the project, indexed at 100% at the baseline**	**- 314,373 t CO2-eq sequestered**	**- 1,047,911 tCO2-eq sequestered as a result of the project**	**- Application of the ExACT Tool - ILAM/ILUP reports - Project progress reports (PIR, FAO PPR) - MTR and TE report**	

	3a. Number of direct beneficiaries[110] as co-benefit of the GEF investment (corresponding to GEF Core Indicator 11) **3b. Percentage of women beneficiaries**	**(a) 0** **(b) 0**	**(a) 1,750 individuals** **(b) At least 45% of total number of individuals**	**(a) 5,000 individuals** **(b) At least 45% of total number of individuals**	**Workshop and capacity building activity reports** **- Interviews with project stakeholders and identified beneficiaries** **- MTR and TE reports** **- Project progress reports (PIR, FAO PPR)**	
Component 1. Enabling frameworks for LDN at national and landscape levels						

Outcome 1.1 Strengthened policy-regulatory and decision-making frameworks for LDN at national and sub-national levels	**1. Number of revised policy, regulatory and planning frameworks into which LDN principles are mainstreamed.[111]** ***The following 6 frameworks have been identified as potential targets for review and LDN mainstreaming:*** **Spatial planning (LOTU related legislation), including the management of sub-basins as special areas** **Land Tenure management policies and practices** **Regulation of collection firewood for charcoal production and marketing** **Regulation of Community Based**	**The review of policy, regulatory and planning frameworks, in view of mainstreaming LDN principles has not yet started.** **0 target frameworks with LDN principles mainstreamed**	**Scoping studies completed for all relevant frameworks.** **2 frameworks with LDN principles mainstreamed**	**Review and revision process completed for at least 6 frameworks.** **At least 6 frameworks with LDN principles mainstreamed**	**- Copies of policy, regulatory and planning documents** **- Project progress reports (PIR, FAO PPR)** **- MTR and TE reports?** **- UNCCD and UNFCCC convention reporting by Angola**	**National and sub-national government agencies, community groups, civil society and the private sector are willing (see the value) to participate in cross-sectoral governance for LDN?** **?** **There is political will across government to address Angola?s land tenure issues (in line with its policy to promote more responsible land care across**

	2. LDN working groups/LDN focal points included within institutional frameworks at municipal level in project?s target landscapes	**0**	**At least one municipality in one target landscape with LDN working group or LDN Focal point integrated into institutional structure**	**All four municipalities across both target landscapes with LDN working group or LDN Focal point integrated into institutional structure**	**- Copies of LDN working group/focal point reports and minutes of meetings -Annual reports of key institutions hosting LDN working groups/ focal points - Project progress reports (PIR, FAO PPR) - MTR and TE reports? - UNCCD and UNFCCC convention reporting by Angola**	**landscapes)**
Output 1.1.1) LDN stakeholder participatory and decision-making structures at national level strengthened/established, with vertical integration to landscape level multi-sectoral working groups? Output 1.1.2) Policy and regulatory frameworks relevant for land-use planning and management reviewed and revised to incorporate and promote LDN principles and SLM/SFM interventions						
Component 2. Strengthening implementation and replicating SLM and SFM practices						

Outcome 2.1) Landscapes in Southern Angola under Integrated Land-Use Planning (ILUP) for LDN	1.Number of integrated land-use plans (ILUPs) for targeted sub- with corresponding action plan and aligned with government investments (PND)	Plans not developed. Only a Prototype Database for Land Management Units (LMUs) targeted by the Project is in place for indicative development of ILUPs and derived local area plans	At least 1 ILUPdeveloped, endorsed by relevant authorities and communities	At least 2 ILUPs for targeted sub-basins developed and endorsed by relevant authorities and communities with respective action and government investment plans in place	- Copies ILUPs -Annual reports of target landscape/ municipal authorities - Project progress reports (PIR, FAO PPR) - MTR and TE reports?	?National and sub-national government agencies, community groups, civil society and the private sector are willing to participate in cross-sectoral governance for LDN? There is sufficient, continuing political support and resources from national and local government to address gaps in capacity for integrated land-use planning and management

Output 2.1.1) Land Management Units and respective interventions selected, landscape level assessments expanded and deepened **Output 2.1.2) Integrated Land-Use Plans developed for LMUs in target landscapes** **Output 2.1.3) Integrated Land-Use Plans under implementation in target landscapes?** **Output 2.1.4) Capacity Development Program on integrated land-use planning, management and investment designed and delivered?**						
Outcome 2.2. Capacity and resilience of land users to apply SLM/SFM practices to production systems strengthened	**1a. Number of individuals members benefiting from involvement with project-supported FFS and FFFs** **1b. Of which percentage of women**	**(a) 0 individuals** **(b) 0**	**At least 1925 individuals** **(b) At least 960 women**	**At least 3850 individuals** **(b) At least 1925 women**	**- Stakeholder surveys and feedback questionnaires on capacity building events** **- SHARP Assessment (reapplication during implementation)?** **- Project progress reports (PIR, FAO PPR)** **- MTR and TE reports?**	**Smallholder farmers and forest resource users, individually and collectively, can be motivated and capacitated to develop their skills and adopt SLM/SFM practices that generate tangible benefits, while accepting potential risks from adopting new practices**

	2. Demonstration established (SLM/SFM) to inform government investments (under Outcome 2.1) **(2a) Forest (production and under CBFM)** **(2b) Cropland under SLM** **(2c) Grassland under SLM** **Total**	**Limited scope of existing SLM/SFM practices** **Approx. area in hectares** **0** **0** **0** **0**	**Expanded scope of SLM/SFM practices** **Approx. area in hectares** **5,047** **1,479** **4,196** **10,722**	**Practices apply to at least:** **Approx. area in hectares** **16,825** **4,929** **13,988** **35,742**	**- Field survey reports** **- Analysis of publically available satellite imagery** **- Project progress reports (PIR, FAO PPR)** **- MTR and TE reports?**	**and products (e.g. seeds/cultivars)** **There is sufficient, continuing political support and resources from national and local government to address gaps in capacity for integrated land-use planning and management**
Output 2.2.1) Gender-sensitive SLM/SFM practices identified/developed and promoted in target landscapes through the Farmer/Agro-Pastoral Field Schools network (FFS) **Output 2.2.2) Forest-Farm Facilities established and investments in communal assets identified and delivered?**						

Outcome 2.3 Green value chains to support sustainable drylands products developed or strengthened	**1. Increased percentage of farmers (of which at least 40% women) engaged in sustainable value chains**	**To be determined during project inception.**	**15% increase over baseline in farmers involvement in sustainable value chains**	**30% increase in farmers involvement in sustainable value chains (incl. at least 15% women)**	**- Survey reports of FFS and FFF members - Project progress reports (PIR, FAO PPR) - MTR and TE reports?**	**The private sector is willing to invest in SLM/SFM/LDN activities, encouraged by a supportive regulatory and financial environment**

	2. Number of partnerships/ projects/ business plans to support GVCs developed through the project	**0**	**At least 3 new partnership/project/ business plans under development**	**At least 5 new partnership/project/business plans developed as a result of capacity building provided through the project**	**- Copies of business plans, partnership agreements, project proposals, financial support documentation - - Project progress reports (PIR, FAO PPR) - MTR and TE reports?**	**Market demand for dryland products from southern Angola, coupled with viable ways for local producers to commercialize their surplus production, provide the basis for developing green value chains (GVCs), subject to appropriate inputs and improved organizational support**

Output 2.3.1) Drylands Green Value Chain Strategic Study developed for southern Angola?and strategy for women and youth led rural agri-entrepreneurship developed **Output 2.3.2) The Green Value Chain strategy implemented for selected Value chains** **Output 2.3.3) FBS developed within FFS and FFF to support new value chain enterprises** **?**
Component 3: Strengthening knowledge, learning and collaboration to support progress towards achieving national LDN targets

Outcome 3.1: National land information framework strengthened to inform LDN-related policy, planning, and management at landscape, national and global levels	**1. Publically accessible web-based national LDN platform hosting information on SLM/SFM/LDN operational and reporting on progress towards LDN targets**	**National LDN platform not established/fully functional**	**Each child project design team to complete expected progress by mid-term**	**National LDN platform reporting on LDN targets and feeding information into national LDN reporting**	**- Usage tracking data from platform - Interviews with target stakeholders on use of platform information - Policy, planning and management documents referring to LDN platform - National UNCCED reports - LDN national reports**	**Continued political stability in (country) to ensure institutional framework and capacity able to carry out LDN assessment, monitoring and reporting LDN information framework continues to be used and supported across sectors**

	2. % LDN indicators (defined under the national LDN framework) incorporated into agriculture and forestry sector development plans (or equivalent strategy/programme)	**Each child project design team to complete**	**Set of LDN indicators defined and validated, and process started for their incorporation into targeted agriculture and forestry sector development strategies, plans and programmes**	**At least 80% of agreed LDN indicators incorporated into respective agriculture and forestry sector development plans (or equivalent strategy/programme)**	**- Revised national strategies, plans and programmes and plans with LDN indicators - Reports, publications, on-line information of monitored LDN indicators under revised national strategies, plans and programmes - National UNCCED reports - LDN national reports**	

	3. Number of participatory landscape-level LDN monitoring action plans (LDN-LMAPs) with LDN indicators (defined under the national LDN framework) for target landscapes operational	**No monitoring plans exist**	**Participatory landscape monitoring plans (LDN-LMAPs) under development for project target areas (within the framework of their ILUP implementation)**	**4 participatory landscape monitoring plans (LDN-LMAPs) approved and under implementation (within the framework of their ILUP implementation)**	**- Participatory landscape monitoring plans - Project progress reports (PIR, FAO PPR) - District authority reports**	
Output 3.1.1: National and sub-national LDN assessment, monitoring and reporting systems and tools, including LDN knowledge platform, developed and operational, with relevant reporting to global level **Output 3.1.2: Capacity development program for improving LDN assessment, monitoring and analysis among key stakeholders at national and sub-national levels to support national LDN reporting designed and delivered**						

Outcome 3.2: Knowledge and awareness enhanced to support progress towards achievement of national LDN targets	**4. Number of project knowledge products (lessons learned/best practices, policy briefs, guidelines, etc) accessible through: (a) National (LDN) platform (b) Regional and global platforms**	**None as project yet to begin.** **Information sharing is mainly happening face-to-face between sectors at the national level, and the data available on regional and global platform only covers part of the experience held in the targeted countries, and this information is not visible and accessible enough to many government and non-government stakeholders**	**3**	**10**	**- Annual report of national LDN platform with statistics on downloads of project knowledge documents - Project progress reports (PIR, FAO PPR)**	**Decision-making continues to be informed on evidence** **Willingness of project stakeholders (particularly government authorities) to engage with adaptive management processes and make changes based on lesson learned and best practices for LDN identified by project and DSL-IP**

	5. Child project knowledge products (policy briefs, guidelines, best practice recommendations, etc) referenced/cited in national LDN-related policy and planning forums and decision documents and by stakeholder publications (including government and private sector, CSO/NGO community)	**Each child project design team to complete**	**10**	**25**	**- Policy and planning documents - Minutes of meetings of relevant decision-making forums - Institutional (public and private) press releases, reports, etc. - Reports on events e.g. commodity value chain events**	

	6. Project M&E system established and reporting project contributions to GEF-7, LDN and SDG targets	**No M&E system established as project not yet operational**	**M&E system operational and reporting on results framework targets and Mid-term Review underway**	**Project M&E and reporting on project contribution to GEF-7, LDN and SDG indicator targets**	**- MTR and TE reports - Annual PIR and 6-monthly FAO PPR - Project communication documents and briefs**	
Output 3.2.1: Project knowledge management, communication and dissemination framework and strategy developed and implemented Output 3.2.2: Project M&E framework, supporting lesson learning and guiding adaptive management, developed and operational from national through to community levels						
Outcome 3.3: Collaboration and exchange at regional and global levels enhanced to support national/sub-national efforts to deliver LDN	**7. Number of government-level policy related agreements (e.g. joint declarations) designed to facilitate common action on SLM/SFM and LDN across the Miombo-Mopane ecoregion**	**0**	**Discussions held on potential international agreement designed to facilitate joint action on SLM/SFM and LDN across the Miombo-Mopane ecoregion**	**At least 1 international agreement designed to facilitate joint action on SLM/SFM and LDN across the Miombo-Mopane ecoregion**	**- Letters of Agreement between countries - Joint project proposals - Documents detailing joint management activities**	**Countries continue to commit to regional collaboration, benefitting from both the enhanced LDN agenda across the Miombo-**

	8. Number of new transboundary/ regional or global business initiatives (e.g. public-private partnerships, agreements, contracts), focusing on SLM/SFM value chains developed	**No actions organized by REM so far**	**REM assessment of market analysis and business opportunities for SLM/SFM products**	**At least one transboundary/ regional business initiative from (country)**	**- Market assessments - Strategic documents - Minutes of meetings and workshops - Business proposals - Private sector company reports**	**Mopane ecoregion and strengthened national capacity The private sector across region is interested in collaborating and investing in SLM/SFM/LDN products**

	9. Number of regional and global LDN policy dialogue platforms (SADC, GGWI-S, AFR100 other multi-stakeholder dialogues) to which the Angola project contributes project results and recommendations (lessons learned, best practice etc)	**N/A**	**2**	**6**	**- Minutes of global meetings - Project implementation reports/back to office reports - References to project results (lessons learned, models, best practice, etc) in policy dialogue documents**	
Output 3.3.1: Actions and investments identified to address transboundary land and environmental degradation priorities in Miombo-Mopane ecoregion and bi-/multi-lateral initiatives strengthened/established to progress towards LDN Output 3.3.2: Collaborative actions to support business and market development for SLM/SFM products across the Miombo-Mopane region undertaken Output 3.3.3: Opportunities for national and landscape-level stakeholders to exchange knowledge, experiences, best practices and lessons learnt at regional and global levels identified, developed and supported						

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 C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

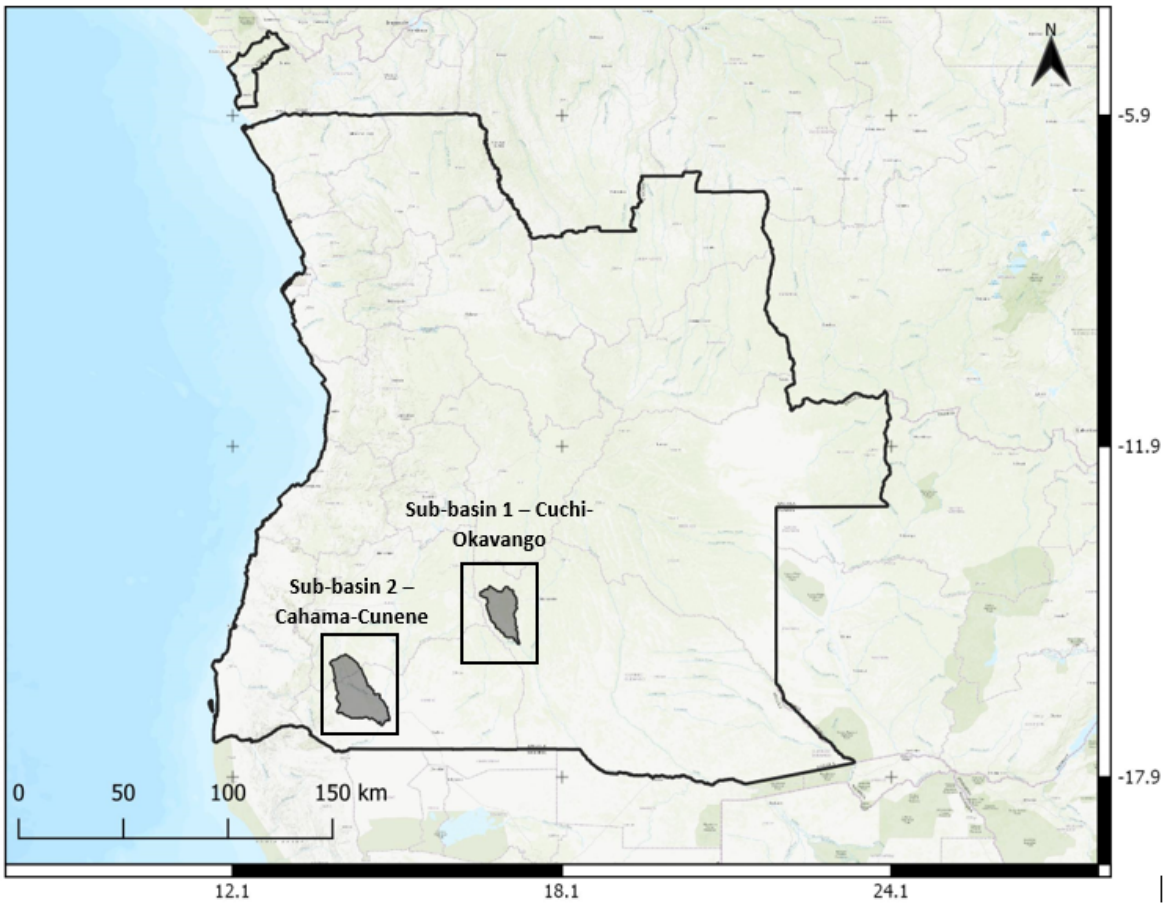
Project Preparation Activities Implemented	*GETF/LDCF/SCCF Amount ($)*		
	Budgeted Amount	*Amount Spent To date*	*Amount Committed*
5011 Salaries Professional	**8,491**	**-**	**8,491**
5013 Consultants	**90,450**	**118,555**	**(28,105)**
5014 Contracts	**5,250**	**-**	**5,250**
5020 Locally Contracted Labour	**12,600**	**-**	**12,600**
5021 Travel	**44,510**	**36,911**	**7,599**
5023 Training	**27,000**	**16,579**	**10,421**
5024 Expendable Procurement	**7,500**	**2,305**	**5,195**
5028 General Operating Expenses	**4,199**	**1,283**	**2,916**
Total	**200,000**	**175,633**	**24,367**

ANNEX D: Project Map(s) and Coordinates

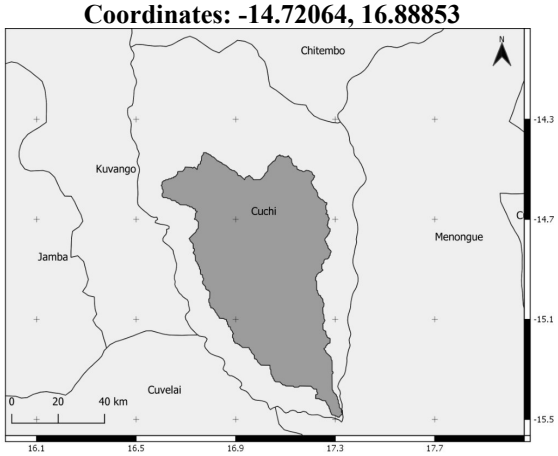
Please attach the geographical location of the project area, if possible.

Project Map(s) and Coordinates

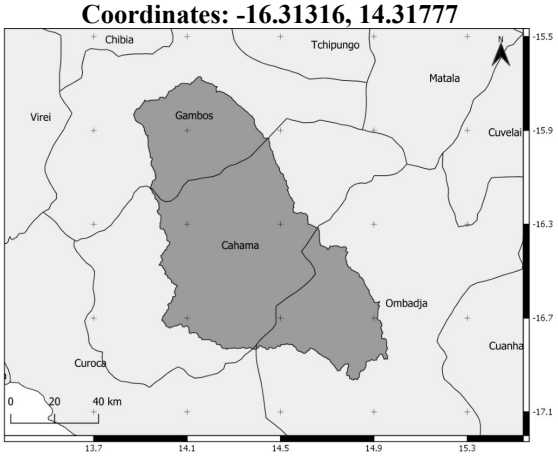
Project location



Sub-basin 1 ? Cuchi-Okavango
Coordinates: -14.72064, 16.88853



Sub-basin 2 ? Cahama-Cunene
Coordinates: -16.31316, 14.31777



For additional information and a detailed description of the of the sites, please refer to Annex X-2.1: Results from the Remote Sensing (RS) Assessment.

ANNEX E: Project Budget Table

Please attach a project budget table.

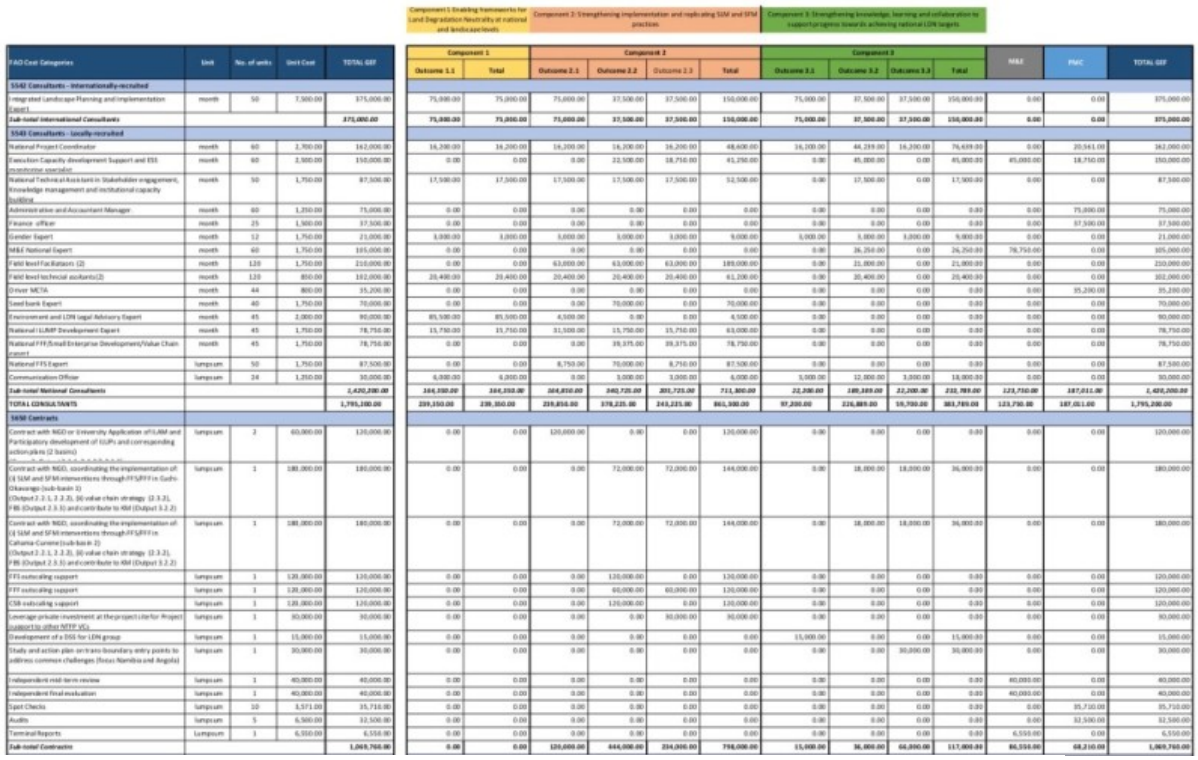
Description, Units and Unit Costs	Total Cost per Component and Project Management					Total
Oracle code and description	Component 1	Component 2	Component 3	M&E	PM	GEF
5570 Consultants	239,350.00	861,300.00	383,789.00	123,750.00	187,011.00	1,795,200.00
5650 Contracts (MoUs)	0	798,000.00	117,000.00	86,550.00	68,210.00	1,069,760.00
5900 Travel	48,285.71	144,857.14	276,857.14	0	0	469,999.99
5023 Training	55,140.80	186,222.40	164,486.80	40,950.00	0	446,800.00
6000 Expendable procurement	32,000.00	1,064,000.00	59,333.00	0	0	1,155,333.00
6100 Non-expendable procurement	31,468.00	221,404.00	124,668.00	0		377,540.00
6300 General Operating Expenses	4,500.00	13,500.00	27,000.00	0		45,000.00
TOTAL	410,744.51	3,289,283.54	1,153,133.94	251,250.00	255,221.00	5,359,633.0

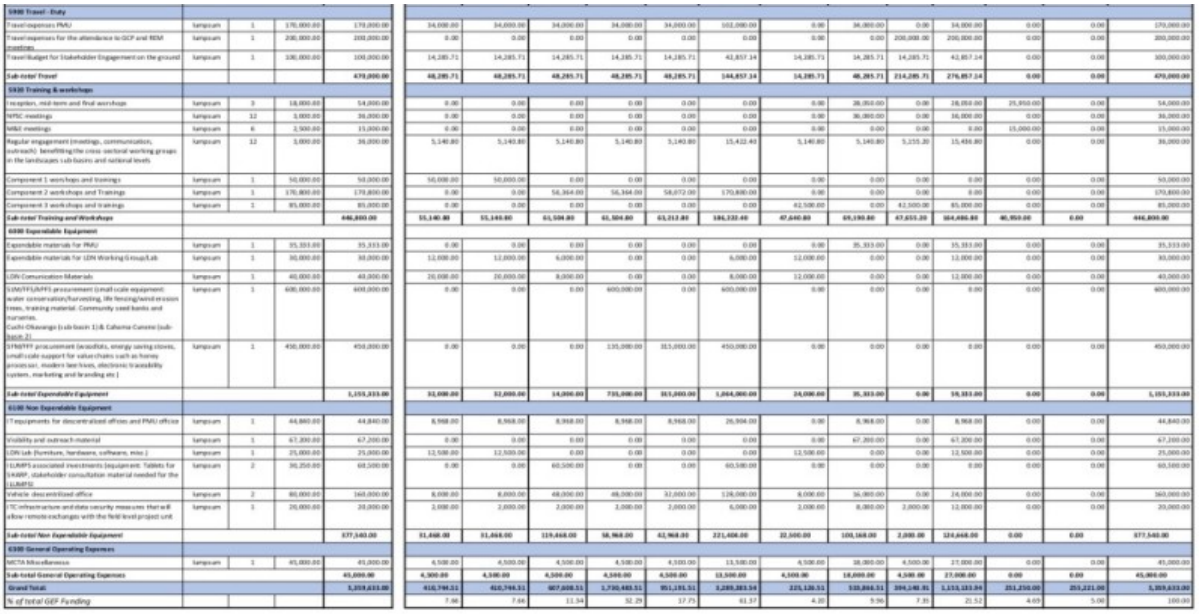
Justification for cars

The Number of cars has been reduced from 3 to 2 after receiving GEFSec first round of comments. The vehicle foreseen in support of the PMU in Luanda was removed and will be covered by co-financing contributions (see itemized co-financing/PMC, Table 1). The two vehicles covered by the project (components) are required to ensure that field interventions can be carried out in efficient and timely manner as logistical support that can be provided by project partners is very limited in the targeted intervention areas. The existing cars of local institutions will support the project as much as possible. However, these vehicles are already assigned to other projects and programmes and are therefore not always available causing possible delays in the project?s field activities. In addition, the geographical focus of the project is very large with difficult terrain, therefore sufficient mobility is needed in each province.

Budget

https://drive.google.com/file/d/1Eg9O7L3nq9fRqbIA5mx9Gdf0sJreAVmm/view?usp=sharing





	Values	%
Component 1	410,745	
Component 2	1,295,284	
Component 3	1,153,134	
M&E	251,250	5%
Subtotal	3,104,412	
PMC	255,221	5%
Total	1,359,633	8.24

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 Agencys 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).